



Colm Kavanagh

Illustrations by
Peter Sheehan, Marc Walsh, Colm Kavanagh

Technical advisors

Mervyn Farrell B.Sc(Sport & Exercise Science) - Bodyworks
Joe Marken - Dining out
Brendan McNicholas - Emergencies

Proof Reading - Jim Goulding, Brendan McNicholas

Readers - Martin Thompson, Enda Farrell, Stephen Marken, Brendan Bohan,
Tony Smith, Pat O'Connor, Kiernan Gildea

Grateful Assistance, Guidance and Support

Sean Farrell, Willie Ahern, Kiernan Gildea, Joe Mc Loughlin,
Damien Scanlon, Jim Holmes, Paul Power

Design and Layout

Colm Kavanagh

Illustrations

Peter Sheehan, Marc Walsh, Colm Kavanagh

Photography

Colm Kavanagh

Celbridge Camera Club - nature photography - birds and animals
Vango UK - tents on location
Petzl - Rock climbing equipment

Published by

Scout Foundation. Larch Hill, Dublin 16

This is the third publication with this title published previously in 1964 and 1979

Copyright

© Scout Foundation 2003

Map reproduction Ordnance Survey Ireland Permit No.7753
© Ordnance Survey Ireland and Government of Ireland

ISBN 0-9546532-0-3

Printed in the Republic of Ireland by Hanlon Printing Works, Dublin

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any way or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the Scout Foundation.

Members of Scouting Ireland and members of WOSM and WAGGGS may photocopy and distribute for training purposes only.

Contents

The Adventure of Scouting

World Scout Badge	006
The story of Scouting	008
Scouting in Ireland	011
Jamboree Badges	012

The World About us

The Circle of Life	018
Chief Settel Letter	019
Experiencing nature	024
Common birds in your Garden	026
Common Birds by the water	028
Common Trees	030
Wild flowers	034
Wild animals	036
Star Charts	038
Clouds	040
Weatherlore	041
Countryside Code	042

Preparing for adventure

Wind chill factor	045
Layers	046
What to wear	047
Protection from the elements	048
Sleeping Bags	050
Sleeping Mats	051
Footwear	052
Rucksacks	054

Packing your rucksack	056
Equipment list	057
Tents	058
Pocket Knives	059
Survival Kit	060
First aid Kit	062
Cooking Equipment	064
Useful extras	066

On the move

Understanding the map	068
Grid references	070
Alining a map	071
Contours	071
The Norths	072
How to use a compass	074
Finding your position on a map	076
Nasmiths Rule	077
Route Cards	078
Walking Speeds	079
Walking the Trail	080
Leading a Patrol	083
River crossing	085
Safety notes	086

Room outside

A Home in the Woods	090
Choosing a campsite	091
Campsite layouts	092
Tent pitching	094
Kit layout	095
Tent repairs	096
Kitchen area	098

Fire area	100
Build an altar fire	102
Conservation stoves	104
Camp ovens	105
Chopping area	106
Saws	107
Dining area	108
Storage	110
Wash area	111
Waste disposal	112
Latrines	113
Patrol Equipment	114

Dining out

A balanced diet	117
Menus	118
Quantities	119
Preparing food	120
Cooking Plan	123
Cooking on fires	124
Wash up	126
Water	127
Equipment	128
Haybox cooking	129
Menu Builders	130
Weekend menu	134

Backwood living

Shelter	136
Tarp sheet	137
Bivvy Shelter	138
Fire lighting	140
Fire by friction	142
Backwoods cooking	144

Fish	146
Foil Cooking	148
Containers/utensils	150
Water still	151
Cordage	151
Finding your way	152
Fishing	154

Ropework

Stopper knots	158
Joining knots	159
Fixing knots	160
Loop knots	162
Friction knots	164
Whipping	165
Splicing ropes	166
Commando rope	167
Lashings	168
Rope management on rock	171

Scout Engineering

Basic structures	177
Ropes	178
Coiling a rope	179
Pulleys	180
Anchorage	182
Rope ladders	184
Getting over	186
Towers	188
Bridges	192
Other challenges	196
Levers and lifting	198
Bamboo& Elastic	199
Rope weave	200
Peg and dowel	202

Bodgers lathe	205
Camp gateways	206

Emergencies

Being prepared	211
Signalling	212
Procedure	213
Breathing	214
Bleeding	216
Broken bones	218
Triangular bandage	221
Burns	222
Poisoning	223
Hypothermia	224
Common ailments	225
Personal conditions	228
Lifting and carrying	230
Rescue techniques	232
Survival in water	234
Fire	235
Survival	236
Shelter	238

On the water

Water safety	242
Buddy system	243
Rafts – small	244
Rafts – large	245
The coracle	248
Sailing	250
Canoeing	252
Swimming	254

Body works

Being healthy and well	256
---------------------------	-----

How fit are you?	258
Test exercises	260
Getting fit	262
Exercising	264
Creative thinking	266
Memory skills	268
Body care	270

Scout stuff

Woggles	272
Decorative knots	274
Camp hammock	276
Scout stave	277
Carving and whittling	278
Sharpening a knife	281
Homemade stoves	282
Estimation	284
Codes and ciphers	286
Orienteering	288
Plane table surveying	289
Tracking	290
Campfires	292
Flags	293
Rope problem	294

Patrol Leadership

The Patrol Leader's job	296
Patrol Organisation	298
Jobs in the Patrol	300
Leadership skills	301
Court of Honour	304
Patrol Activities	310
Patrol Meetings	312
Patrol Branding	314
Patrol Box	318
Scout Prayer	319

The Adventure of Scouting



Welcome to the worldwide movement of Scouting

Congratulations! You have taken the first step along the Scouting Trail.

Scouting is about working and living together with your friends in Scouting. With the other members of your Patrol you will undertake many adventures in the outdoors

'Bí Ullamh' - 'Be prepared' is the Scout motto and this handbook is designed to prepare you for the experience of Scouting. There are many skills to master from



simple knots to cooking a meal for yourself and your Patrol. The longest journey starts with the first step. As you progress through Scouting you will experience many adventures, each requiring the use of your Scouting skills. Read this handbook from cover to cover or drop in and out as you need - it contains all the information you require to enjoy your Scouting.



People who are Scouts are likely to be

- Able to solve problems creatively and effectively
- Capable of being constructive and productive members of a team
- Able to take care of themselves and others
- Able to cope with emergencies
- Aware of and have a deep affinity with the environment and the need to conserve it
- Responsible and capable of assuming leadership with ease
- Able to live and survive in the open
- Capable of undertaking challenging and adventurous activities

The World Scout Badge

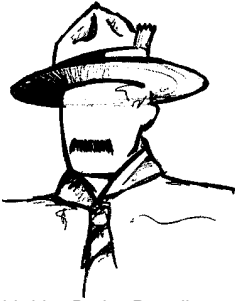


The Scout Badge has been worn by over 250 million Scouts since the movement was founded and is today still used by 28 million Scouts worldwide. Baden Powell, the founder of Scouting stated "our Badge, we took from the 'North point' used on maps. North - It shows the true way". The two five pointed stars stand for truth and knowledge and the rope tied around the basic motif symbolises unity and brotherhood.

The colour of the badge is white on a royal purple background - white represents purity and the royal purple denotes leadership.

Scouting - an idea

Scouting began from an idea conceived by Robert Baden Powell (known as B-P). Baden Powell was an army commander during the Boer War at the end of the 19th century. While in the army he wrote a handbook called 'Aids to Scouting' in which he outlined a way that soldiers could be trained. So successful was the book and



methods used that he turned his thoughts to a similar handbook which could be used by youth organisations. In researching

his idea Baden Powell spent a lot of time investigating the practices of the Native American Indians, the Zulu Tribes of Africa and the adventures of Cú Chulainn and the Red Branch Knights in Ireland. He was particularly interested in the process of young people becoming warriors in their tribes. A young person in the Zulu Tribe was painted white and sent off into the jungle with nothing more than a spear and a shield and had to live there until the white paint wore off -



usually a month. In that time the young person had to survive in the wilds, build a shelter and hunt animals.

By examining these rites and trials of each tribe he began to discover the wonders of nature and the skills that were

necessary to survive in the wilderness. Using this as the base he created the concept of Scouting for young people which includes - adventures in the out of doors, working with friends in small groups, learning by doing, service to others, woodcraft and nature and a Promise and Law.

The Story of Scouting

Scouting began with a camp in August 1907 on Brownsea Island in Poole Harbour, England. The camp was part of an experiment to try out the ideas that would appear in B-P's new handbook for young people entitled 'Scouting for Boys' which was to be published in fortnightly parts in January 1908.

20 boys attended the 10 day camp and were formed into four Patrols - Bulls, Curlews, Ravens and Wolves.

Each Patrol took part in a range of Scouting activities which included camping, observation, woodcraft, chivalry, saving life, boating and games. Memorable items of the programme included wide games, making twists and breads using their coats as mixing boards, and 'whale hunting' in Poole harbour using a log as a whale and trying to harpoon it from a small boat. At night there would be campfires where Baden Powell related stories and yarns of his adventures around the world.

The Patrol System, that unique feature of Scouting, was firmly established and proven on the camp. The experiment was a great success and although the first great adventure of Scouting was coming to a close, an even bigger adventure was to begin.

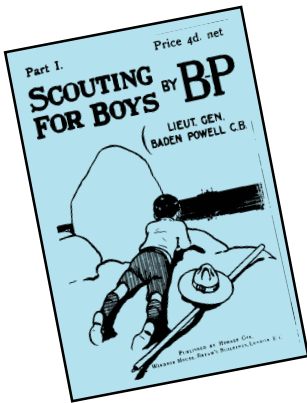


Brownsea Island camp 1907 (pictured from a model on display in Poole Museum).

'Scouting for Boys' was published in January 1908 in fortnightly parts at four-pence a copy. As each issue came onto the newstands it was snatched up by young people eager to try out the game of Scouting. Before long Patrols of young people started to form all over the country. By the end of 1909 there were some 60,000 young people registered as Scouts. A year later there were 100,000.



Baden Powell at the Brownsea Camp 1907



Scouting was formed by young people creating Patrols as a result of reading 'Scouting for Boys'. Soon after, neighbouring Patrols came together to play the game of Scouting. Adults were asked to help organise some of the activities and before long Troops of Boy Scouts started to appear. The first countries outside of Britain to



establish Scouting were those countries that formed the British Empire. Scouting started in Australia, Ireland, Malta, New Zealand and South Africa towards the end of 1908 and in 1909 in Canada, Chile, India and the USA. There is a story told that the founder of American Scouting, W.D. Boyce, was walking through London when



Baden Powell beside his tent on Brownsea Camp 1907

he became lost in a thick fog. Out of the fog came a small boy who brought him back to his hotel. On his arrival he thanked the boy and offered him a reward for his services. The young boy refused, saying that he was a Scout and was doing his good deed for the day, and off he went into the fog again. The next day W.D. Boyce investigated Scouting and brought the idea back to America, forming the Boy Scouts of America.



Baden Powell at the Brownsea Camp 1907



Scout Gatherings

The year 1909 was a remarkable year for Scouting. The first great rally was held at the Crystal Palace in London, and was attended by 11,000 Scouts. Some girls were present wearing Scout hats and carrying staves and insisting they were Girl Scouts. At first girls were allowed to register as Scouts but after a period of time, the Girl Guides came into existence.



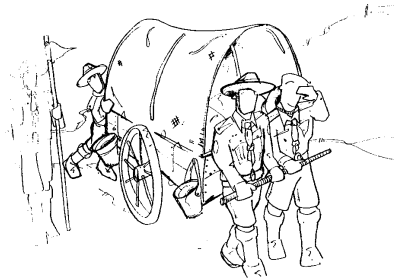
This picture shows perhaps the first girl scout, taking up the position of Patrol Leader at the 1909 rally

A 3 year old Scout, perhaps a child of a Scout Leader, at the salute base in 1909



In 1920 the first World Jamboree was held. 8,000 Scouts from 34 countries attended.

Since then, the World Jamboree has been held every 4 years. It is the highlight of any Scout's life to attend such an event. During the Third World Jamboree in Arrowe Park in Birkenhead, each Scout contributed a penny to a collection to buy B-P a wedding present. From the money collected they presented B-P with a Rolls Royce car and a specially designed Rolls Royce caravan.



Scouting in Ireland



'B.P.Scouts' had come to Ireland within a year or two of the 1907 launching of the movement in Britain. By 1910 several troops were in existence, most of them wearing a uniform of khaki shorts and shirt and the broad rimmed B-P hat. At this time Ireland was part of the United Kingdom. The early Troops were very much attached to the British establishment and Protestant Churches in Ireland. After the Free State was formed many people sought the formation of a truly Irish Scouting Organisation for young people.



In 1925 in Greystones, Co. Wicklow, Fr. Ernest Farrell went into action running a boys organisaion based on camping and hiking and other activities of a Scouting nature. Later, in 1927, with the assistance of his brother Fr. Tom Farrell, and official approval of the Catholic Church, the Catholic Boy Scouts of Ireland was formed.



Fr. Tom Farrell

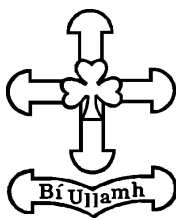


Log book of a Patrol Hike in the 1950's

Throughout the years both Scout Associations have worked closely together, exchanging programme material and attending many International Jamborees. In 1965 the Federation of Irish Scout Associations was formed which allowed international recognition of both Associations by the World Organisaion of the Scout Movement (WOSM).

Scouting Ireland

In 1998, serious talks commenced to seek the establishment of a new Association to be called Scouting Ireland which would comprise the two Scout Associations for the betterment of all young people in Ireland. Both agreed to form a new Association and Scouting Ireland was formed in January 2004.



World Jamboree Badges







Baden Powell was a keen painter and illustrator and his work is displayed throughout his handbooks. This work is entitled 'Scouts of the World'.

A Scout's Anthem - 'A Rich And Rare Land'

She is a rich and rare land,
Oh she's a fresh and fair land;
She is a dear and rare land,
this native land of mine.

Oh, she's a fresh and fair land,
Oh, she's a true and rare land;
Yes she's a rare and fair land,
this native land of mine.

No men than her's are braver,
Her women's hearts ne'er waver;
I'd freely die to save her,
and deem my lot divine.

Thomas Davis (1814-1845)

Thomas Davis was an Irish writer and politician who was the chief organizer and poet of the Young Ireland Movement. While at Trinity College, Dublin, he developed an idea of uniting all creeds and classes in a vigorous national movement.

She's not a dull nor cold land,
No, she's a warm and bold land;
She is a true and old land,
this native land of mine.

Could beauty ever guard her,
and virtue still reward her;
No foe would cross her border
Nor friend within it pine.

The World About us



The World about us

When Mankind first evolved as hunter-gatherers they relied entirely on nature and the world around them for survival and therefore had total respect for it. Pagan worship of the Sun and of Mother Earth were understandable when all life on the planet seemed to be connected to the light of the Sun, and the seasons, and fertility of the Earth.

Man has a special part to play in the circle of life, however his superior intelligence within the animal kingdom has enabled him to exploit nature for his own ends. At first animals provided food and skins for clothing, the earth provided water, timber, clay and flint for tools. Working in harmony with their surroundings each survived. As time went by Mankind has shifted from a position of harmony to a place where he now exploits the wealth of nature for his own ends.

The hunter-gatherer tribes living deep in the jungles of Borneo to the native American Indians understood the harmony that needed to exist between man and nature. These peoples took from the land what was needed to survive. No animal was hunted to excess, the native American Indians hunted only the weak buffalo, imitating the hunting skills of the animals they had observed. Tigers and lions, for example, hunt only the weakest members of a herd and as a result normally the fittest animals survive,



and so the circle of life continues, each animal and plant playing a unique part in the cycle.

The diversity of plant and animal life on this planet have evolved to suit every condition encountered on Earth from the Polar bear to camel. In earlier times man learnt what plants were good to eat and what plants had healing qualities. Cabbage, carrots, and potatoes were once wild plants. Man discovered that they provided good food sources and soon learned to cultivate them. Similarly, the healing power of plants and herbs enabled them to heal wounds and stay healthy and much of this ancient knowledge has been incorporated into many of today's medicines.



Mankind in the civilised world has, over time, lost this deep understanding of nature, often seeing the natural world as a place to exploit for his own ends. Increased industrialisation, hunting animals to extinction, and lack of care for our environment are all symptoms of the greed that exists within our modern society. Even the passive activity of farming can put our rivers in danger due to

over fertilisation of the ground. Each part of the circle of life must be maintained; if one part of the chain is broken, other parts of the circle will fill its place often at the expense of extinction of one or more species. Each action will have a counter reaction.

As Scouts, venturing as we do into wild countryside, we get a unique opportunity to discover and observe nature at first hand. On hikes and camps we are in fact imitating our forefathers as they went out across the countryside in search of food and shelter. Today we carry modern hoop tents, but in the past, nomadic tribes around the world carried their tents with them in search of new food sources, particularly, if they lived in a hostile area such as the desert. Modern hoop tents, for example, are imitations of the traditional yurts used by the nomadic people of Mongolia. We have a compass to find direction but in the past our forefathers used the stars and nature's natural compasses to show direction. They carried with them honey and high energy food such as nuts and fruits. Today we carry snack bars, bars of fruit and nut chocolate. Have things really changed? Today we call it adventure. In the past this was life.

Adventures can take place in any natural setting. All modern adventure pursuits, whether on water, land, or in the air are experienced by placing yourself in 'competition' with nature. Today, modern advances in equipment design, limit, to a certain extent, some of the risks involved. However, wild places should always be respected. Nature has a nasty habit of turning on you when you least expect it! Notice how quickly a sunny day can turn into a thunder storm, sometimes without much warning. This is the challenge of

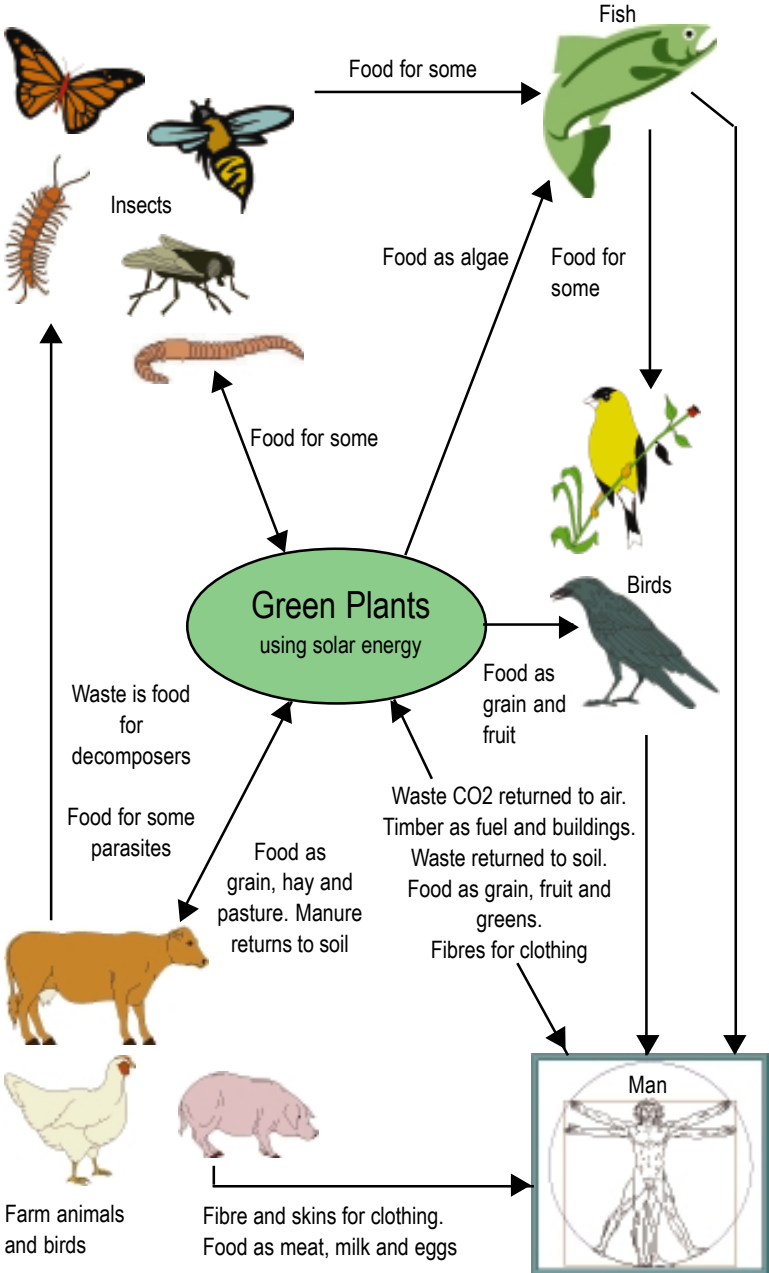
venturing forth into wild places and it awakens in us a deep instinct to discover and explore.

In order to fully understand and experience the world that exists about us, in particular in wild places, some knowledge of the diversity of wildlife that can be found can be useful. Observation and discovery can lead us to experience the wonders of our planet. Wild animals, edible plants and foods exist at our feet or are lurking around the next tree trunk. Real battles and massive killings are taking place all around us, as are unbelievable incidents of survival as the circle of life continues.

It is important to state that in Scouting we are not overly concerned with the learning of the names of plants and animals; this knowledge will come in time. We want you at this stage to explore and discover and open yourself to experience the world around you. Use all of your senses in this discovery, listen to the hum of the bees and the different songs of the birds. Taste the fruits and nuts of the forest from the sweet to the sour. Feel the wind and rain in your face and the mud at the bottom of the stream you are crossing, ooze between your toes, or the smoothness and grittiness of different rocks. See the wonder of the landscape and the hand of God in its creation and smell the freshness of the air and the fragrance of the heather and wild flowers. Once you understand the beauty of our planet and the interaction of each of its elements, it will be easier for you to conclude why we must conserve, why we must protect, and, most importantly of all, why we must live in harmony and not exploit the world around us.

Circle of life

THE WORLD ABOUT US



The Big Chief sends word....

The Red Indians of North America have captured the imagination of the young - and not so young - for generations. Their bravery in war, and their savagery too, has formed the plot for many thrilling stories. The names of the Cherokee, Iroquois, Sioux and

many other tribes are well known. However the author of the address printed here was the chief of a less well known tribe, the Suquamish, from the north west United States: and he is remembered not for his bravery as a warrior, but for his attempts, which were largely successful, to live peacefully alongside the 'Bostons' - the white settlers from the eastern United States. As a small boy Chief Seathl had seen Captain Vancouver sail up Puget Sound. His imagination was captured by this white man whose orders were promptly obeyed by his men, and the ambition to live in peaceful harmony with the white man was born. It was strengthened by the ta - man - a - wis (or vision), that he had as a young man, in the form of a white seagull. The gull was a symbol of peace to the Suquamish, as it was white and it indicated that his mission was to seek peace with the white man.

At the age of twenty - two (1808) Seathl became the Chief of the Suquamish and its allied tribes. He must have been a successful chief, for 43 years later, when the first permanent settlement was made on the eastern shores of Puget Sound, he was still chief. Soon after the settlement was made he persuaded Dr. David S.



Maynard to move his trading post there, from the southern end of the sound. Maynard soon became the first Justice of the Peace of Duwamps, Thurston County, Oregon Territory. He didn't like the name 'Duwamps' and it was suggested by Arthur Denny, one of the Commissioners, that the settlement be named after Seathl, the man who was chiefly responsible for it. Seathl was at first horrified by the idea, but Maynard persuaded him to accept it. As the Indian 'Seathl' was hard to pronounce, it was changed to Seattle, which today is the largest city of the North West. USA. The Chief's 'Testament' was an address given to the tribal confederation, probably at the time when the first Governor of the new Washington Territory, Major Isaac Stevens, was annexing Indian lands - mainly by exterminating the American Indians. The great chief in Washington D.C. was President Franklin Pierce (1853 - 57), part of whose Home Policy was to open up the North West of America. There is wisdom in Chief Seathl words, which is timeless. Many of the things he feared would come about, are with us today, and his words have a great relevance to our modern situation.

Today a statue of Chief Seathl stands at the junction of Fifth and Denny Streets in Seattle, Washington, and the name of his tribe is revered in the Skokomish Indian Reservation

The words of Chief Seathl

"The Great Chief (President Franklin Pierce) sends word that he wishes to buy our land. The Great Chief also sends words of friendship and goodwill. This is kind of him since we know he has little need of our friendship in return, but we will consider your offer. For we know that if we do not sell, the white man may come with guns and take our land. How can you buy or sell the sky, and the warmth of the land?"

The idea is strange to us. If we do not own the freshness of the air and the sparkle of the water, how can you buy them?"

Every part of this earth is sacred to my people. Every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people. The sap which courses through the trees carries the memories of the red man.

The white man's dead forget the country of their birth when they go to walk among the stars. Our dead never forget this beautiful earth for it is the mother of the red man. We are part of the earth and it is part of us. The perfumed flowers are our sisters; the deer, the horse, the great eagle, these are our brothers. The rocky crests, the juices in the meadows, the body heat



of the pony and man - all belong to the same family.

So, when the Great Chief in Washington sends word that he wishes to buy our land, he asks much of us. The Great Chief sends word he will reserve us a place so that we can live comfortably to ourselves. He will be our father and we will be his children. So we will consider your offer to buy our land, but it will not be easy for this land is sacred to us. This shining water that moves in the streams and rivers is not just water but the blood of our ancestors. If we sell you land, you must remember that it is sacred, and you must teach your children that it is sacred and that each ghostly reflection in the clear water of the lakes tells of events and memories in the life of my people. The water's murmur is the voice of my father's father.



The rivers are our brothers, they quench our thirst. The rivers carry our canoes and feed our children. If we sell you our land, you must remember, and teach your children, that the rivers are our brothers, and yours, and you must henceforth give the rivers the kindness you would give any brother.

The red man has always retreated before the advancing white man, as the mist of the mountain runs before the morning sun. But the ashes of our fathers are sacred. Their graves are holy ground, and so these hills, these trees, this portion of the earth is consecrated to us. We know the white man does not understand our ways. One portion of land is the same to him as the next, for he is a stranger who comes in the night and takes from the land whatever he needs.

The earth is not his brother, but his enemy, and when he has conquered it, he moves on. He leaves his father's graves behind, and he does not care. He kidnaps the earth from his children. He does not care. His father's graves and his children's birthright are forgotten. He treats his mother, the earth, and his brother, the sky, as things to be bought, plundered, sold like sheep or bright beads. His appetite will devour the earth and leave behind only a desert. I do not know.



Our ways are different from your ways. The sight of your cities pains the eye of the red man. But perhaps it is because the red man is a savage and does not understand. There is no quiet place in the white mans' cities. No place to hear the unfurling of leaves in spring or hear the rustle of insect wings. The chatter only seems to insult the ears. And what is there to life if a man cannot hear the lonely cry of the whippoorwill or the arguments of the frogs around the pond at night? I am a red man and do not understand. The Indian prefers the soft sound of the wind darting over the face of the pond, and the smell of the wind itself, cleansed with the midday air, or scented with the pinon pine.

The air is precious to the red man, for all things share the same breath - the beast, the tree, the man, they all share the same breath. The white man does not seem to notice the air he breathes. Like a man lying for many days, he is numb to the touch. But if we sell you our land, you must remember that the air is precious to us, that the air shares its spirit with all the life it supports. The wind that gave our



grandfather his first breath also received his last sigh. And the wind must also give our children the spirit of life. And if we sell you our land, you must keep it apart and sacred, as a place where even the white man can go to taste the wind that is sweetened by the meadow flowers.

So we will consider your offer to buy our land.

If we decide to accept, I will make one condition; the white man must treat the beasts of this land as his brothers. I am a savage and do not understand any other way. I have seen a thousand rotting buffaloes on the prairie, left by the white man who shot them from a passing train. I am a savage and do not understand how the smoking iron horse can be more important than the buffalo that we kill only to stay alive.

What is man without the beasts? If all the beasts were gone, men would die from a great loneliness of spirit. For whatever happens to the beasts, soon happens to man. All things are connected.

You must teach your children that the ground beneath their feet is the ashes of our grandfathers. So that they will respect the land, tell your children that

the land is rich with the lives of our kin. Teach your children what we have taught our children, that the earth is our mother. Whatever befalls the earth, befalls the sons of the earth. If men spit upon the ground, they spit upon themselves. This we know. The earth does not belong to man; man belongs to the earth. This we know. All things are connected like the blood which unites one family, all things are connected. Whatever befalls the earth befalls the sons of the earth. Man did not weave the web of life; he is merely a strand in it. Whatever he does to the web he does to himself.

But we will consider your offer to go to the reservation you have for my people. We will live apart, and in peace. It matters little where we spend the rest of our days. Our children have seen their fathers humbled in defeat. Our warriors have felt shame, and after defeat they turn their days to idleness and contaminate their bodies with sweet foods and strong drink. It matters little where we spend the rest of our days. They are not many. A few more hours, a few more winters, and none of the children of the great tribes that once lived on this earth or that roam now in small bands in the woods will be left to mourn the graves of a people once as powerful and hopeful as yours. But why should I mourn the graves of my people?



*Tribes are made of men, nothing more.
Men come and go, like the waves of the sea. Even the white man, whose God walks and talks with him as friend to friend, cannot be exempt from common destiny. We may be brothers after all; we shall see.*

One thing we know, which the white man may one day discover - our God is the same God. You may think now that you own Him as you wish to own our land; but you cannot. He is the God of man, and His compassion is equal for the red man and the white. The earth is precious to Him, and to harm the earth is to heap contempt on its Creator.



The whites too shall pass; perhaps sooner than any other tribes. Continue to contaminate your bed, and you will one night suffocate in your own waste. But in your perishing you will shine brightly, fired by the strength of the God who brought you to this land and for some special purpose gave you dominion over this land and over the red man. That destiny is a mystery to us, for we do not understand when the buffalo are all slaughtered, the wild horses are tamed, the secret corners of the forests are heavy with the scent of many men, and the view of the hills blotted out by talking wires. Where is the thicket? Gone. Where is the eagle? Gone. And what is it to say

goodbye to the swift pony and the hunt? The end of living and the beginning of survival. with all your heart, preserve it for your children, and love it ...as God loves us.

So we will consider your offer to buy our land. If we agree it will be to secure the reservation you have promised. There, perhaps, we may live out our brief days as we wish. When the last red man has vanished from this earth, and his memory is only the shadow of a cloud moving across the prairie, these shores and forests will still hold the spirit of my people. For they love this earth as a newborn

loves its mother's heartbeat. So if we sell our land, love it as we have loved it. Care for it as we have cared for it. Hold in your mind the memory of the land as it is when you take it. And with all your strength, with all your mind, Creator.

One thing we know. Our God is the same God. The earth is precious to Him. Even the white cannot be exempt from the common destiny. We may be brother after all. We shall see".

Experiencing Nature

Woodcraft is not only a knowledge of the names of plants and animals, but a deeper and more meaningful relationship with our surroundings. It is the experience of nature through all the senses that provides the mind with a more intensified picture of the interrelationship between all things on the planet and enable us to harmonise with them.

Have you ever been in a natural situation when you have experienced something wonderful? It could be a simple thing - like sitting on the top of a mountain or perhaps sitting out a storm in your tent. Often these experiences will present to you a realisation of the world around you, the presence of God and the wonderment of God's creation. Such experiences may only happen to you once in a lifetime while others may experience such a thrill every day.

Through the use of all of our senses we become aware, and begin the learning process. Seeing, hearing, feeling, smelling and tasting; each sense provides unique information to the brain. The combination of sensory information greatly increases the experience.

Using all the senses allows a fuller picture to be developed in the mind. A tree, for example, can be seen and recognised. The leaves have their own shape. Are they shiny or furry as you feel them? Do they have a smell and a taste? The bark can be smooth or rough. Could you identify it blindfolded



by touch alone? By using as many of the senses as possible more information is channelled into our memories.

To experience nature you have to get out and explore it fully. Here are some simple exercises that will help you explore and improve your sensory skills.

Hand-Oak

Sit under an Oak tree and compare the lines on your hand with the branch structure and roots of the tree. Before long you will find comparisons between the lines on your hand and your chosen tree - a personal connection.

Mirror walk

Walk along a forest track holding a mirror at your waist, facing up. You will notice many things - tree patterns, birds, stars, cloud formations.

Colour Palette

Collect small specks of colour in the area of your exploration. The specks of colour can be placed on the back of a sticky label. You will notice that many different colours are present and that there really are 40 shades of green!

Time alone

Stand silently and alone for 10 minutes in a forest and listen. How many sounds can you hear. Try and become aware of the noise you make as you travel through the forest, if you can hear the noise so can every animal.

Smell

Smell the air around you and smell every plant you can find.

Lie in the high grass

Lie on your back in long grass and look to the sky. Feel the wind around you and see the waves of wind drifting over the grass.

Nailing jelly

Some things just have to be experienced. How do you describe the smell of an orange, the wildness of the winter sea or the closeness of the stars in the wilderness at night? Why, its easier to nail jelly to the ceiling!

Fuelled

Fuelled by a million man-made wings
of fire the rocket tore a tunnel
through the sky
and everyone cheered

Fuelled only by the thought of God
the seedling urged its way through
the thickness of black
and as it pierced the heavy ceiling of
soil and launched itself up
into outer space
no one even clapped

Marcie Hans

Man's impact on nature

More than 3 people are born every second.

Humans have grown to be the dominant species, forcing nature into retreat everywhere.

The world population increases by over 300,000 people per day.

Deforestation - Deserts spread at 16,000 hectares a day.

5 litres of safe clean water is required per person per day.

Forests are disappearing at a rate of 30,000 hectares per day.

500,000 plastic items are dumped into the sea every day.



It takes about 450,000 litres of water to make a car, 160,000 litres to make four tyres, 1000 litres to make a litre of petrol, 700 litres to make a single newspaper, and 300 litres to make a single canned drink.

Every form of life is unique, warranting respect regardless of its present worth to man.

United Nations: World Charter for Nature

Common Birds

In your garden

THEWORLD ABOUT US

Robin



Great tit (chick)



Chaffinch



Greenfinch



Wagtail



Raven



Thrush



Blackbird



Wren



Goldfinch



Sparrow



Magpie



Starling



Bluetit



Jackdaw



Common Birds

on the water or seashore

THEWORLD ABOUT US





If the earth were only a metre in diameter, floating a few metres above a field somewhere, people would come from everywhere to see it. People would walk around it, marvelling at its big pools, the bumps on it, and the holes in it. They would also be amazed at the very thin layer of gas surrounding it and the water suspended in the gas. The people would marvel at all the creatures walking around the surface of the ball, and the creatures in the water.

The people would declare it sacred because it was the only one, and they would protect it, so that it would not be hurt. The ball would be the greatest wonder known, and the people would come and pray to it, to be healed, to gain knowledge, to know the beauty and to wonder how it could be. People would love it, and defend it with their lives because they would somehow know that their lives, their own roundness, could be nothing without it.

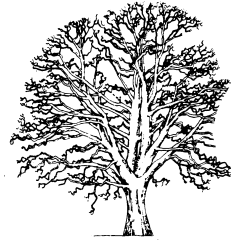
If the Earth were only a metre in diameter.

Common Trees

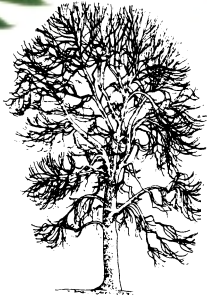
THEWORLD ABOUT US



Ash



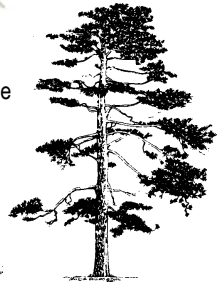
Oak



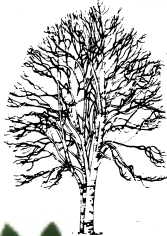
Hawthorn



Scots pine

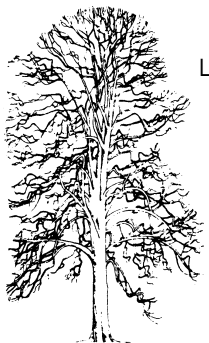


Rowan or Mountain ash

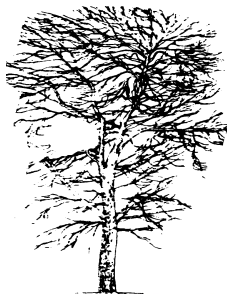


Sycamore





Lime



Hornbeam



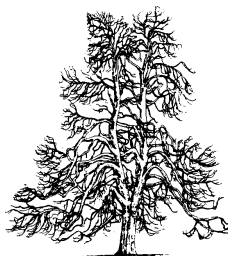
Yew



Spruce



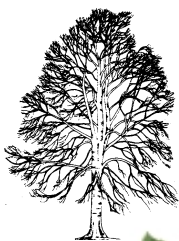
Silver birch



Horse Chestnut

Larch

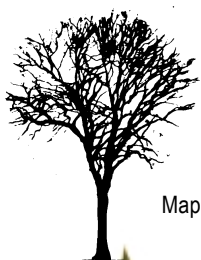




Beech



Holly



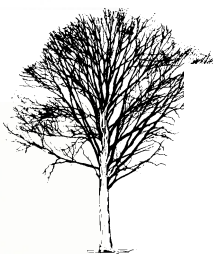
Maple



Willow



Sessile Oak



Hazel



The Oak

Trees and woodlands are a vast living habitat for all kinds of insect and animal life and act as a refuge in open areas for small animals.

Hedgerows, for example, are great storehouses of wildlife activity from insects to wild flowers.

The Oak tree can grow up to 45 metres high, 15 metres in girth, sink its roots up to 4 metres into the ground and weigh 100 tons.

It drinks 400 litres of water a day, has 200,000 leaves and grows 10,000 acorns a year.

The oak is home for 500 species of insects and provides nests for 20 species of birds.

Caterpillars swing on threads, devastate leaves and grow into Oak leaf roller moths

Squirrels rear their young in branches and bury acorns for winter.

Wood mice live in root tunnels.



Earthworms enrich soil by digesting fallen leaves.

Blue tits nest in holes in the trunk and branches whereas wrens build several domed nests in the branches.

The Oak supports 22 different weevils some of which bore into the acorns.

Gall wasp eggs are hatched in knob like apples on twigs and roots.

Bettles and woodlice live in decayed wood and fallen leaves.



Wild Flowers



Daisy



Dandelion



Foxglove



Hogweed



Buttercup



Poppy



Wild Garlic



Wood sorrel



Bindweed



Speedwell



Plantain



Thistle



Yellow Iris



Chickweed



Bird's foot trefoil



Clover



Wild Rose



Tormentil



Bluebell



Primrose

Wild Animals

Deer



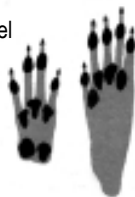
Fox



Hare & rabbit



Squirrel





Hedgehog



Bat

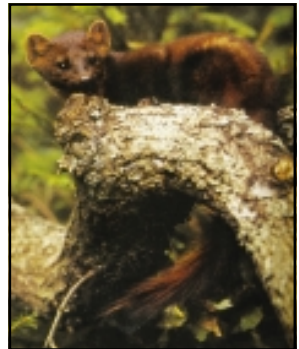


Badger



Otter

(Hard to observe)



Pine Martin



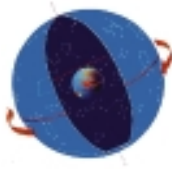
Frog



Rat



Star Charts



For thousands of years mankind has been amazed and fascinated by the night sky. Some cultures base their whole existence on the movement of the night sky. When you are out camping or bivouacking it is an ideal opportunity to spread out your groundsheet or bedroll under the skies, and lie back and observe the heavens above.

The earth is constantly moving so the stars visible in the sky are determined by the position of the earth in relation to the heavens. Some star constellations are only visible at certain times of the year. The planets are also visible and tend to appear lower on the skyline and be brighter.

Look out also for shooting stars. Also spot satellites as they move around the earth. Discover our own galaxy, the Milky Way.

The charts illustrate the many constellations visible in summer around July and in winter around December. Use them as a general reference. For a more precise map of the night sky, you will need a rotating star map.



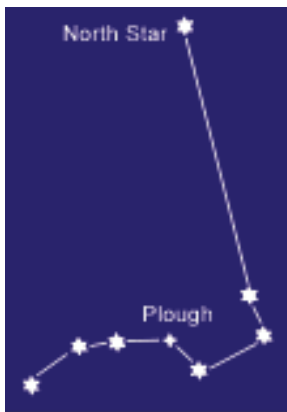
To get a clearer view of star constellations you can use a telescope or a pair of binoculars. Binoculars are a good choice if you are a casual watcher as they allow a wide field of view. They are particularly good for looking at the moon.

The power of binoculars is not important, the standard 7 or 10 power will do the job. You will probably need a tripod or a cushion placed on a fence or wall to steady your binoculars.



The Moon

The Moon is the biggest object in the night sky and on a frosty night it can be seen at its best. Each of the areas of the moon has been mapped and you will find it easy to identify each area with the aid of a telescope or binoculars.



Use the stars to find direction.

Clouds



High level - Cirrocumulus and Cirrostratus clouds (5,000 metres)



Medium level - Altocumulus and Altostratus clouds (3,500 metres)



Low level - Strato-Cumulus Clouds (500 metres)

Clouds form in a number of ways depending on wind conditions at different heights, and the weather system following behind. Clouds can be either fluffy, fibrous or flat in shape. Their names are in Latin and they indicate the type of cloud; Cumulus - Heap, Stratus - Layer, Cirrus - Tuft of hair, Alto - Higher, Nimbus - Rain.

High level clouds usually indicate good weather and calm conditions.

Middle range clouds usually indicate changeable conditions with darker type clouds in this range indicating rainy conditions.

Low level clouds usually indicate drizzle, fog and low wind conditions.

Weatherlore

Weather lore is almost as old as the human race. However its scientific use is doubtful. Some of the old sayings can be useful indicators, but always rely on the scientific method, the weather forecast.

Rain before seven, fine before eleven

Four hours of continuous rain occur occasionally when a weather front becomes slow moving, but periods of rain are usually shorter.

Long foretold, long last; short notice, soon past

This is true insofar as the slow advance of a depression with falling pressure and thickening cloud brings bad weather often lasting a day or more, whereas rapid clouding over is more likely to be the precursor of a single shower or a smaller fast-moving depression.

Red sky in the morning, shepherd's warning; red sky at night, shepherd's delight

Mackerel sky and mares'tails, make tall ships carry small sails

High level clouds often form well ahead of depressions and their associated fronts. Mackerel skies and mares'tails describe forms of cirrocumulus and twisted sheaves of cirrus respectively, implying strong high-level winds. In the days of sailing ships they may have been rightly viewed as likely forerunners of stormy weather.

If clouds be bright, it will clear tonight. If clouds be dark, it will rain by dark

Bright clouds suggest sun shining through gaps between and on to cumulus clouds. These clouds often dissolve towards sunset to give a clear, cold night. Dark clouds are usually deep and more extensive.

A bright circle round the sun denotes a storm and colder weather

Thin high level cloud often produces both solar and lunar halos. It precedes depressions which bring rain and strong winds, and eventually colder weather to the rear.

Always a calm before a storm - This is frequently true but not always.

The sudden storm lasts not three hours. The sharper the blast, the sooner it will past

These both truly reflect the difference between the sudden heavy deluge and squally winds with a heavy shower or thunderstorm, and the generally steadier and often prolonged frontal rain associated with depressions.

Countryside Code

Respect the people who live and work in the countryside.

Respect private property, farmland and all rural environments.

Do not interfere with livestock, machinery and crops.

Respect, and, where possible, protect all wildlife, plants and trees.

When walking, use the approved routes and keep as closely as possible to them.

Take special care when walking on country roads.

Leave all gates as you find them and do not cause damage to property.

Do not enter farmland if you have dogs with you, even on a leash, unless with the permission of the landowner.

Guard against all risks of fire, especially near forests.

When travelling in large groups try to maintain a low profile.

Take all your litter home, leaving only footprints behind.

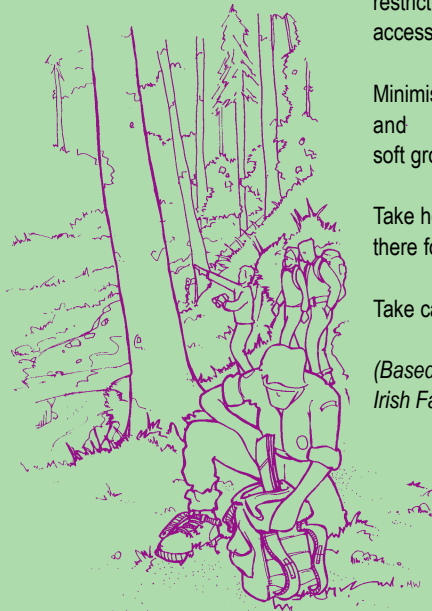
Keep the number of cars used to a minimum, park safely and do not restrict access.

Minimise impact on fragile vegetation and soft ground.

Take heed of warning signs - they are there for your protection.

Take care not to pollute water sources.

(Based on the Farmland Code of the Irish Farmers Association.)



Preparing for Adventure



Preparing to Explore



Wild and open spaces are exciting areas to explore. In order to enter these places you must prepare yourself both in terms of equipment, to protect you from the elements, and the necessary skills, to enable you to survive.

The equipment needed to enter the wilderness is determined by many things - the prevailing weather conditions, the nature of the terrain which you choose to

enter and the length of time you wish to stay there. In open countryside weather conditions play a major role in determining our reaction to hot and cold. The type and quality of the clothing you choose to wear will ensure your comfort or add to your misery.

Normal body temperature is approx. 37 degrees centigrade. Our clothing therefore must be capable of maintaining this temperature. When we get hot, we tend to remove clothing and as it gets cool we tend to put on more clothes.

This method is okay under normal conditions, however when in the open other factors can upset this practice.

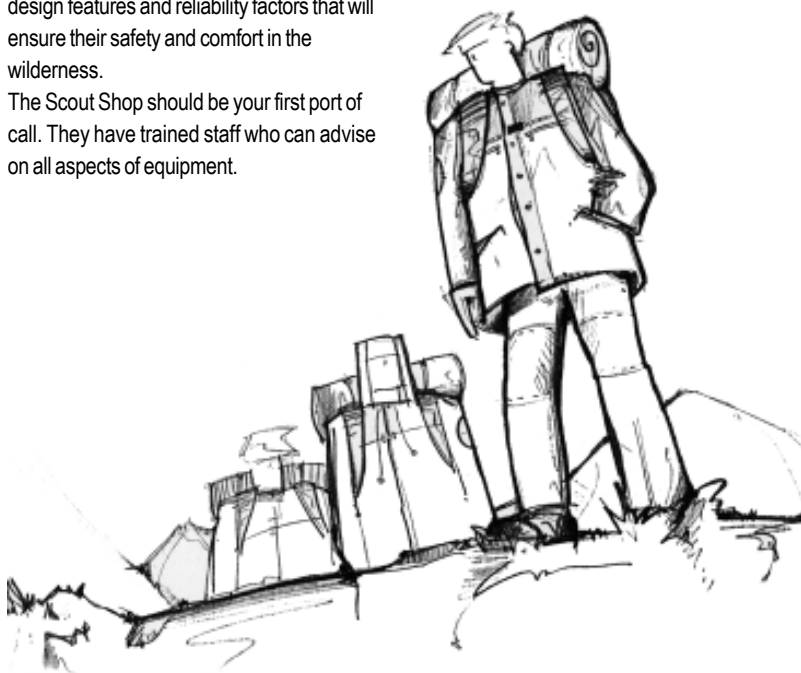
Wind, rain, and in cold weather, snow, attack the body's ability to maintain its normal temperature. Wind has the ability to rob heat from your body as it can penetrate through the layers of your clothing. Likewise rain can soak your clothing and prevent it from keeping you warm. If you add cold with wind and rain then the cooling process can be rapid and can lead to the onset of hypothermia (see Emergencies Chapter) very quickly.

Modern outdoor clothing manufacturers design equipment to a standard that will protect you from the elements of weather in comfort. The problem for anyone entering an outdoor shop is the vast array of equipment available - waterproof jackets, breathable fabrics, leather boots, fabric boots, two season or 4 season sleeping bags, day sacks and expedition sacks. In the pages that follow we will provide you with detailed information about the type of equipment you need. What are the key features you should be looking for when you go shopping?.

Wind Chill Factor								
Air Temperature (centigrade)								
Wind speed	20	15	10	5	0	-2	-4	-8
10KM	18	13	7	2	-3	-5	-7	-11
20KM	16	10	3	-2	-9	-11	-14	-19
40KM	13	6	-1	-8	-15	-18	-21	-27
60KM	12	5	-2	-10	-18	-21	-24	-30
80KM	12	4	-3	-11	-19	-22	-25	-31
100KM	12	4	-3	-11	-19	-22	-25	-31

Reliability, quality and essential features rather than price should be your rule of thumb. There will always be nice fancy equipment with a big price tag for those who have more money than sense but in every market place there are the quality companies who provide equipment at a realistic price that is well designed and targeted at real enthusiasts who understand the nature of the design features and reliability factors that will ensure their safety and comfort in the wilderness.

The Scout Shop should be your first port of call. They have trained staff who can advise on all aspects of equipment.



Layers

To keep warm you can either have one big heavy outercoat or a number of different items of clothing each adding another layer to the heat retaining properties of your body. The outercoat idea is obviously impractical so those who venture into the open should use the layering method to maintain and control body temperature.

There are 4 different layers to consider which can be combined depending on weather conditions. Each layer has a unique role to play in the combination. The object of each layer is to provide and retain heat, trapping a layer of air that can provide insulation and allow excess body heat and perspiration to escape.



The first layer which is next to your skin should consist of a thermal vest with long sleeves in winter or a plain cotton T-shirt in summer. This layer should be close fitting but not too tight. The idea of this layer is to absorb perspiration and allow it to pass to the outer layer



The second layer could be a wool shirt or a polo neck shirt or pullover. It should be loose fitting and provides protection for both the neck and the wrists. Sleeves should be capable of being rolled up so that in warm weather the body temperature can be controlled with ease. In warm weather this layer could be replaced by the outside layer.



The third layer needs to be 'woolly' such as a woollen pullover or a fleece jacket. The main features are heat control so a zip front is ideal for this purpose. The idea of this layer is to trap large pockets of warm air and insulate your body from the cold.



The outer layer should be a jacket that will protect you from the wind and rain, ideally made of breathable fabric.



The extremities of the body, the head, hands and feet also need protection. A large proportion of your body heat is lost through the head.

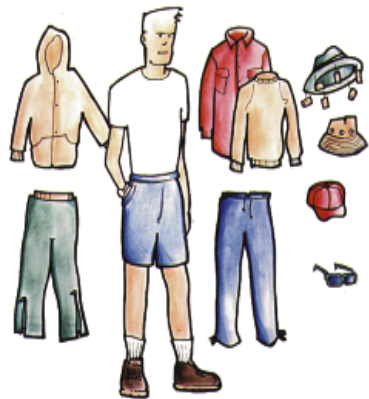
What to wear



Summer

- Shorts
- Shirts
- T - Shirts
- Hat - baseball or floppy
- Sunglasses

- Wind proof jacket
- Light waterproof jacket
- Light fleece or sweatshirt
- Light track suit bottoms
- Boots



Winter

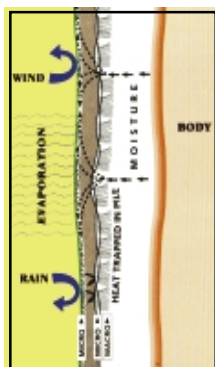
- Various clothing options following layer principle.
- T- shirt and long johns or tracksuit bottom.
- Shirts/sweatshirts
- Fleece or pullover
- Waterproof jacket and over trousers
- Balaclava and scarf
- Mittens/gloves and overgloves
- Boots and gaiters

Qualities of different fabrics used in clothing

Cotton	This is excellent for 'drawing away' moisture from the body.	Used in the making of T-shirts and thermal vests
Wool	This is a natural material and excellent for trapping air pockets. Can be bulky and heavy	Used in shirts and pullovers, gloves, hats and socks
Fleece	A manmade fabric that has the same qualities as wool. Like wool it is not windproof. Works well even when wet	Used in a variety of products usually in fleece tops and jackets but also in gloves and hats
Nylon	A manmade fabric that has excellent windproof and waterproof qualities. Its biggest disadvantage is that it does not allow moisture out so the inside of the fabric becomes sweaty with condensation	Used in jackets and raincoats usually in the budget end of the market.
Breathable Fabric	Unlike Nylon this manmade fabric allows moisture out and is also waterproof.	Used in jackets in the middle to top range of the market

Protection from the elements

The outer shell that consists of jacket, overtrousers, boots and gaiters is your main protection from the elements. When kitting yourself out in this equipment spend your money wisely. A jacket will be expensive and it will have an everyday use as well as protecting you on your ventures into the wilds. Nylon is waterproof and will keep you



dry, however if you can afford it opt for breathable fabric for comfort. Be warned however that it will need to be kept clean as any dirt on the fabric will prevent it 'breathing'. The jacket will only protect the upper body and it will need to be supplemented with a pair of overtrousers. Again the same advice applies - nylon is less expensive and functional but if your budget allows opt for breathable fabric.





Waterproof



Warm



Windproof



Light to carry

When you are travelling in open countryside you will constantly be changing your clothing layers as the weather changes and as you ascend or descend mountains.

Choose the clothing you pack with care. You will want the best protection from the elements and often it is best to have a number of different layers of clothing rather than one heavy jacket. A good fleece jacket is ideal for warmth but useless in the rain. Perhaps a lighter rain jacket can also be used in such circumstances or perhaps an poncho, which can also double as a ground sheet or shelter.



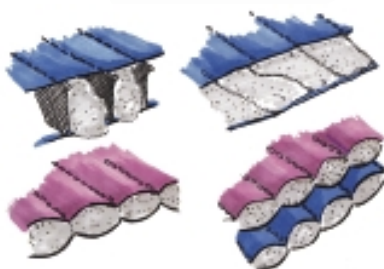
Most of your body heat is lost through the head so don't forget the woolly hat. On day hikes don't discard spare clothing just because the rucksack is smaller.



Sleeping bags

Sleep is essential to revive the body after a hard day in the open and perhaps one of the most important items of equipment you require is a sleeping bag. Warmth is the key word to remember and with regard to sleeping bags you must spend some money to achieve it. Forget the cheap sleeping bags that have a zip all around. They are ideal for hostelling or for use in warm climates but for Irish conditions buy the best bag you can afford.

Mummy shapes hug the body but if you find that too restrictive then you can buy the traditional square shape. A zip is required for ease of entry into the bag and for controlling the heat inside your bag. Opt for a double zip that can be opened from the bottom as well as the top to aid air flow. Look out for a protective flap covering the zip on the inside to prevent heat loss through the zip and prevent cold spots.



The most expensive sleeping bags will be filled with down or a special ultralight filling that can be compressed to a small size. Most bags are filled with hollow fibre which is a manmade fibre imitating the qualities of down. In general opt for a 2 - 3 season bag and read the product literature before you buy for full specification of the design in particular temperature range. Choose an adult size so that you can get maximum life from your bag.

Sleeping bags are constructed using a number of methods. The more expensive tend to use the double layer construction

Sleeping Mats

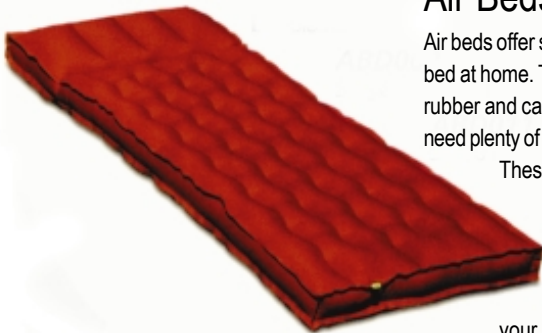
The purpose of a close celled foam sleeping mat is to provide insulation from the ground and protect the life of lightweight groundsheets, rather than to cushion the effects of hard ground. A comfortable nights sleep is determined by the warmth and comfort of your sleeping bag. Cold rising from the ground through the groundsheet of your tent will draw away the warmth of your sleeping bag leading to a restless nights sleep. The sleeping mat prevents this transfer of heat by acting as an insulation layer between you and the ground. Sleeping mats have different levels of quality and effectiveness. The cheaper mats have a loose cell structure and will compress easily so that the insulating layer can be quite thin and offer little protection. The denser cell format of the slightly more expensive mats is preferred and offers better protection both to the sleeper and the life of your groundsheet.



Air Beds

Air beds offer some of the comfort of your bed at home. They are however made of rubber and can be heavy to carry. You also need plenty of puff or a footpump.

These are excellent for family camping or when your equipment is being transported in a car but when you have to carry your pack on your back a sleeping mat is a better option



Camp bed

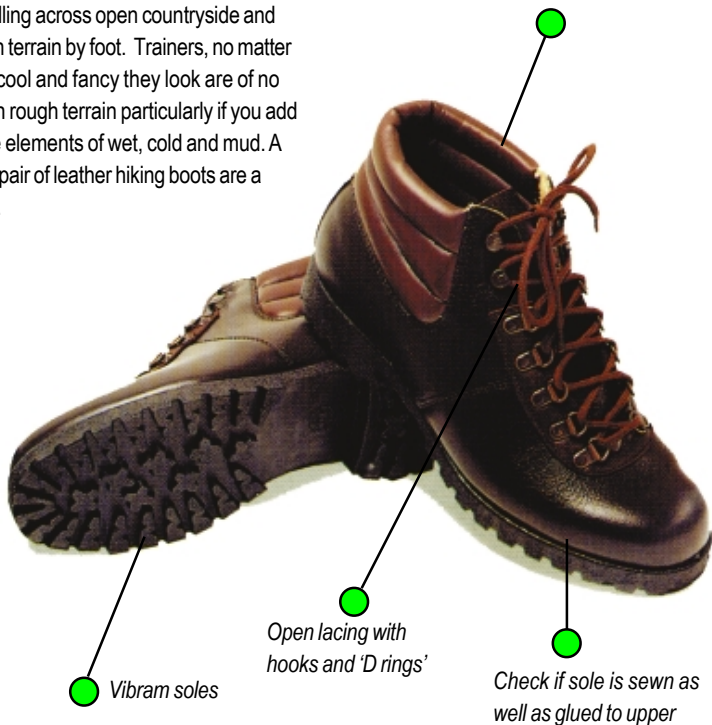
Camp beds have the same advantages and disadvantages as air beds, weight being one of its major disadvantages. Camp beds also offer little insulating qualities as the space under the bed allows an air flow to draw away warmth. Their structure also makes them unsuitable for use in lightweight tents as the legs will 'dig into' the groundsheet. Use only in large tents with heavy groundsheets or wooden flooring



Footwear

Comfortable footwear is a must when travelling across open countryside and rough terrain by foot. Trainers, no matter how cool and fancy they look are of no use in rough terrain particularly if you add in the elements of wet, cold and mud. A solid pair of leather hiking boots are a must.

High collar provides protection of ankles from injury. Cushion collar adds to comfort and prevents chaffing of ankles.



The design of hiking boots has changed little over the years. A sole normally bearing the 'Vibram' logo is a good indicator of a sole that will protect your foot from sharp stones, provide grip on slippery rocks, and distribute your weight evenly. The more expensively priced ranges of boots will have the sole stitched as well as glued to the upper boot. The sole should be relatively stiff when you buy the boot. This will become pliable with use. A sole that is too soft, indicates a boot that is designed for casual street wear rather than open countryside.

The high collar of the boot provides support around the ankle and provides a collar to prevent loose stones and grit from getting into the boot.

The tongue of the boot should be one piece and sewn all around so as to provide protection from water.

Lacing is normally done by 'D rings' at the lower end of the lacing and by way of hooks at the top. This allows the boot to be undone with ease and also allows the boot to be tightened easily.



Normally, it is advisable to wear two or three pairs of socks with your boots for comfort. A thin pair that you would wear with normal shoes and two pairs of thick wool socks. If you are not used to wearing wool socks they can be rough on your feet so you need to wear a thin pair of socks. If your feet are prone to sweating then you may have to rethink this method. A long and short pair of wool socks are preferred. A long pair of socks can be used over trousers to protect them from briars and brambles, the short pair being folded down over the top of your boots to prevent grit and dirt getting into them. It is advisable to wear gaiters over your boots and socks to provide protection from the terrain and give extended life to your socks and boots.

Tips when buying

- Buy your boots in a specialist camping and hiking shop so that you get expert advice.
- Bring two pairs of heavy socks (the socks you intend wearing with your boots normally) and put them on before fitting.
- Normally you will be looking for a boot one size bigger than your normal shoe size.
- Wearing your choice of boot - push your foot to the top of the boot - you should be able to put your finger down the back of the boot. You will need this space for your foot to move and prevent blisters
- Walk up and down the shop. The boot will be stiff but will soften up when it goes through a process of 'breaking in'.
- However, there should be no feeling of tightness across the broad part of the boot, and you should be able to wiggle your toes.
- Choose a boot that will survive the rigours of the terrain you are likely to travel. Suede and canvas boots are normally designed for trail walking whereas standard leather boots are more likely to survive the battering they will get in bogs, water, and rough mountain terrain.

Rucksacks

When you embark on an adventure into wild countryside everything you need must be carried on your back.

Rucksacks come in all makes and sizes and it is important that you have a rucksack that will be able to fulfil your needs. For short day hikes you will only require a small day sack, it may be possible to use the same daysack for carrying your books to school so saving on expense. For backpacking and camping however you will need a bigger size. Rucksacks are sold in various sizes and are measured in litres - 55 litres, 65 litres, 85 litres.

A suitable size for Scouts is a sack of from 55 - 65 litres. The 85 litre sack is designed for expeditions and is generally too large in length of frame to suit a young persons body frame. (see illustration) Designs vary as do prices and it is wise to consult catalogues and specialist

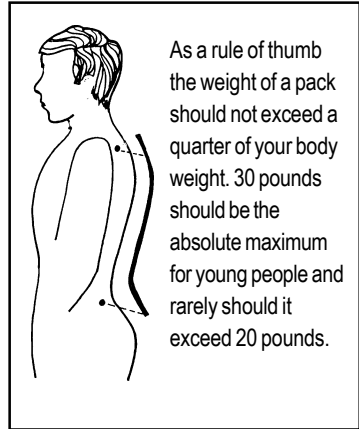
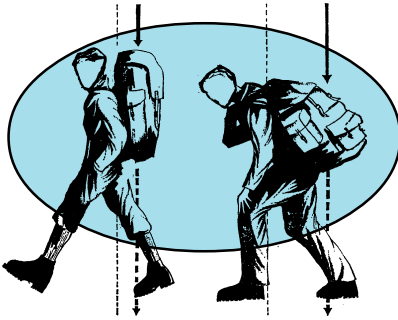
camping shops before you buy, for expert advice. In general it is best to stick to well known brand names as the quality of the workmanship tends to be better. Branded and bargain rucksacks are often made in the same factory. Compare the packs, often there is little or no difference in design but maybe in the quality of the workmanship. Generally, the stopping points on bargain rucksacks are weak.

Load carrying

The rucksack is designed to carry all your essential items along the trail or to camp. This means you have to carry them on your back. Keeping the load as light as possible is therefore a major consideration. For that reason an equipment list is a useful aid when packing to ensure that the essential items are packed and those non essential items like the 'kitchen sink' and heavy extras that you may pack - just in case, are left at home. A heavy load is best carried vertically above the centre of gravity of the body. Modern rucksacks are designed with this principle in mind. An internal or external frame helps to align the rucksack to your line of gravity and with careful packing to ensure even weight distribution, the pack can be comfortable and easy to carry.



With time and experience you will learn what needs to be packed and those things that are best left behind. For example:- a half tub of toothpaste instead of a full one. A selection of light interchangeable clothing instead of a number of heavy sweaters. One deep plate rather than a plate and a bowl. Share equipment between your Patrol rather than each carrying the same equipment.



As a rule of thumb the weight of a pack should not exceed a quarter of your body weight. 30 pounds should be the absolute maximum for young people and rarely should it exceed 20 pounds.

Tips when buying

Measure your torso

To get a proper fit, you must know your torso size. To find out, drape a soft tape measure from the base of the neck along the contour of your spine to the low point between your hipbones.

Check those hips

When trying on packs, make sure you get the hipbelt positioned properly, that is, directly on the crest of the hips, not around the waist. The majority of the load will be carried by the hipbelt, so make sure it's comfortable and fits snugly, without slipping.

Treat yourself

Buy the best pack you can afford, as long as it fits. Durability and quality rank right behind 'fit' as important considerations.

Branded and bargain rucksacks are often made in the same factory. Compare the packs, as often there is little or no difference in design but maybe in the quality of the workmanship.

Know your load

Determine what and how much you'll be carrying. Are you planning to spend, at most, 1-2 nights out at a time with an annual standing camp once a year? Will you be hiking in the winter? For short outings in the summer a smaller pack is better.

Pockets and attachments

Various sized pockets are useful for all those small items that you need to put your hands on without pulling your pack apart. Check also for attachment rings and plastic buckles that allow you to attach stuff sacs, ice axes, sleeping mats, tent poles etc.

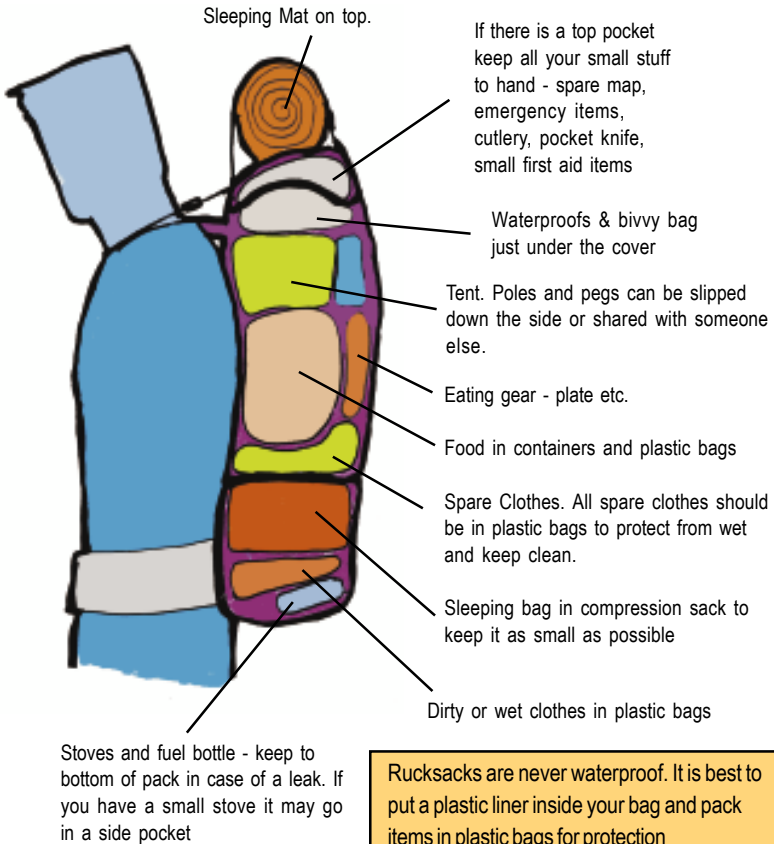
Packing your Rucksack

Start packing by placing all the items to be packed on your bed and check off the list. When all items are present then pack. Work on the principle of *LAST IN FIRST OUT* and *IF IT DOESN'T FIT IN THE SACK IT'S NOT GOING* don't carry anything that you don't need and keep items on the outside of the pack tied down and tidy. Make sure however that you

have all the essential items. Use your own judgement as to whether you really need that campfire blanket on an overnight bivvy. Another consideration when carrying your pack is to distribute the weight in the bag so that the heavier items tend to be near your back in the middle to bottom of the pack. This will help to stabilise your pack particularly when travelling over rough terrain.

General Guide to Packing a rucksack

PREPARING TO EXPLORE



Tents

There are many types of tent

Lightweight, one person tents
2/3 person Dome tents
Heavy canvas, standing camp tents

In general a Patrol will camp in dome tents on weekend adventures and heavy canvas tents when on a longer standing camp. It is not necessary to buy a personal tent as most of the time your Patrol will have tentage from the Troop. As you get more experienced you may want to explore lightweight camping and backpacking. You might then consider buying your own tent.

Tents come in all sorts of shapes and sizes. Weight, ease of erecting the tent and wind stability are major design considerations. For expeditions and adventures in wild countryside its performance in heavy weather is also a factor. Studying product catalogues will allow you to discover the value of each



tent. In general it is better to share your tentage with others. The elements of the tent can then be split up, flysheet, tent, poles and pegs so each has an equal weight to carry.



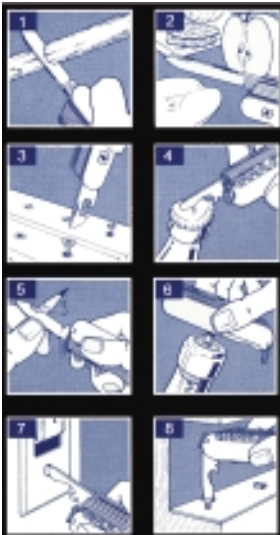
Knives

Scouts are discouraged from owning a sheath knife and in practical terms a penknife is a much better tool for Scouts. A Swiss army knife is considered to be the best option, it is a multi purpose tool that can be used in many situations. There are many imitations but spend your money carefully and buy an original made by Victorinox. The 'Camper' is perhaps the best design for Scouts as it offers the best range of practical tools.

Two knife blades; Can opener; Screw driver
Saw; Punch; Corkscrew
Toothpick and tweezers in handle



A penknife is a tool and not a toy. It should only be used for the job it was intended for. The knife should always be carried in your pocket or in a suitable pouch on your belt. In order to be allowed to have a penknife a Scout must pass the required part of the Scout Badge Scheme which explains the rules for using a knife and the care that must be taken. As a Scout you need to be responsible and displaying these attributes will enable you to carry a knife in your kit.



A knife needs to be kept sharp (See Scout Stuff Chapter) a blunt knife will be dangerous to use as the extra pressure required to cut can cause the knife to slip. Sharpen your knife after each adventure and occasionally oil the parts.

Using your knife to whittle a Scout stave or piece of camping equipment is an excellent way to pass the evening on camp around the campfire (See Scout Stuff Chapter)



Personal Survival Kit

A small tin is required in which to pack your survival kit. The tin is also useful, and can be used to signal using the lid as a mirror. It will also hold a cup of water and can be used as a pan or pot on a fire



The tin when open. Use insulation tape to hold the box closed. It is also useful as a survival item



Firelighting

Being able to light a fire is one of the main survival skills you need to know. In this kit we have matches which can be waterproofed by covering them in wax or nail varnish. A disposable lighter and a small candle

Survival kit contents

Box to hold items	Plastic bag
Compass	Water purification tablets
Whistle	Steri-wipes
Knife	Wound closures
Matches(waterproof)	Scalpel blades
Candle	Needle and thread
Lighter	Selection of plasters
Mirror	Dental floss
Wire saw	Fishing line
Pencil	Fishing hooks
Paper	Fishing swivels
Elastic bands	Fishing weight
Glucose sweets	Safety pins
String	



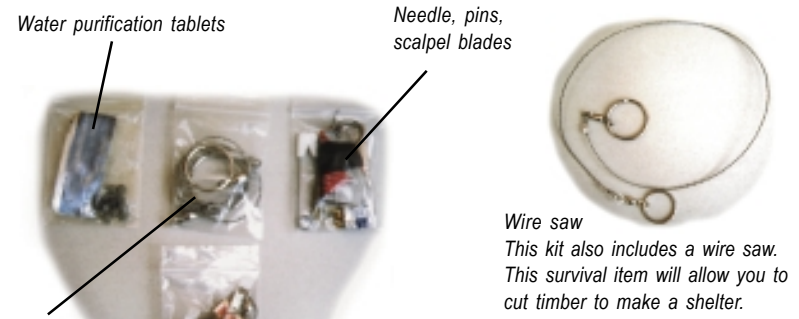
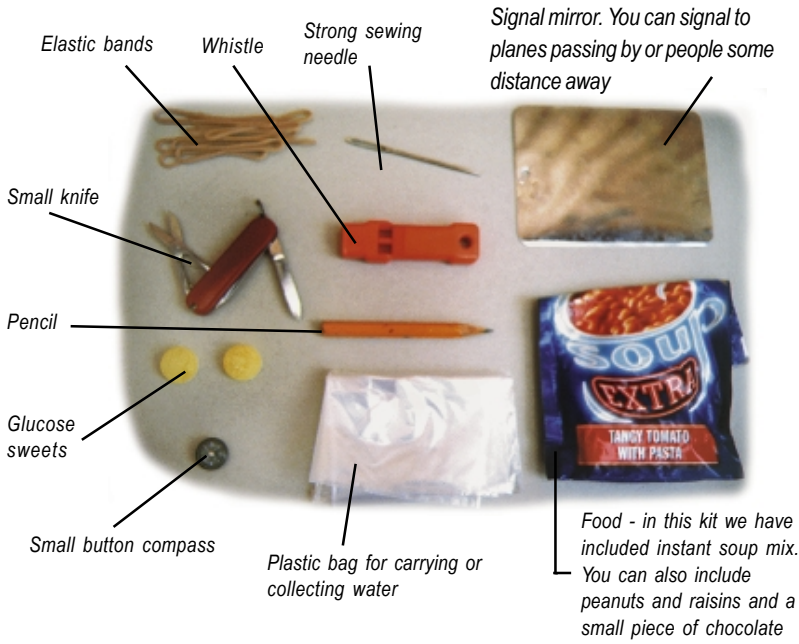
Needle and thread. Needle should be magnetised so it can be used as a back up compass

Dental floss is very strong and can be use as fishing line or to tie your shelter together

Fishing gear

Fishing line at least 30 metres





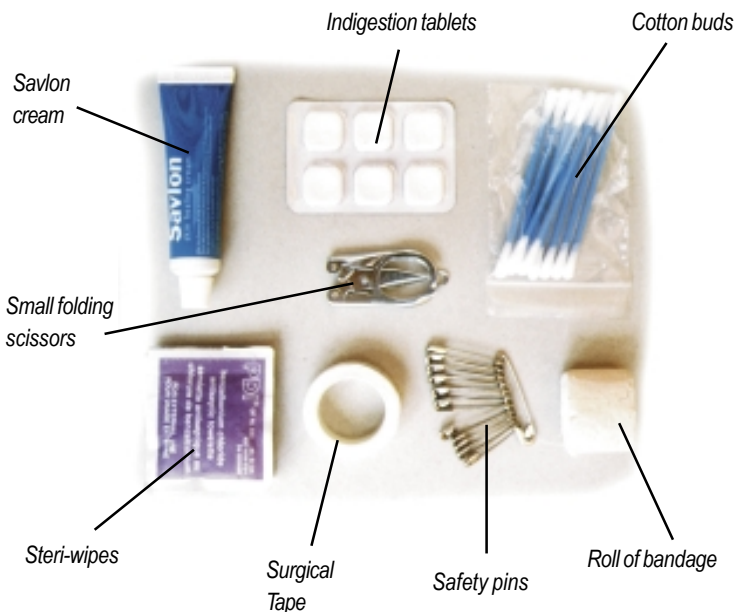
Personal First Aid kit



Every Scout should have his/her own personal first aid kit. This kit is packed into an old pencil case. The kit does not need to be very big so that it can be packed in your rucksack everytime you go out. As well as the standard items in this kit you should also make sure you have any personal medication you require such as inhalers etc.

- ### Personal First Aid Kit

 - Plasters
 - Wound Closures
 - Plastic bag
 - Cling Film
 - Mole skin
 - Savlon Cream
 - Indigestion tablets
 - Small scissors
 - Roll of bandage
 - Surgical tape
 - Tweezers
 - Steri-wipes
 - Safety pins
 - Sting relief pads
 - Water purification tablets



Plastic bags - for use with burns

Wound closures. Steri - strip

Cling film - for use with burns

Selection of plasters



Plastic bag for use on foot blisters and friction points

Mole skin and padding for foot blisters

Water purification tablets in protective plastic bag

Sting and insect bite relief pads



Tweezers

Personal Mending and repair kit

On camps and hikes things will break and need temporary repair until you return home. This kit contains a selection of items to enable you to undertake these repairs.

Carpet or duct tape for repairing tents and groundsheets

Spare air bed plugs

Spare laces

Heavy duty elastic band

Jubilee Clip - mending tent poles



Sewing kit



Insulation tape

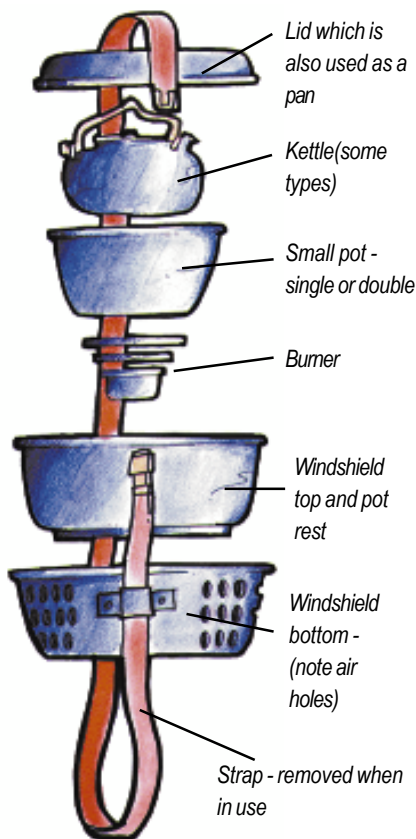
Waxed Thread

Glue

Cooking Equipment

When travelling light across wild countryside cooking is done on a stove rather than a fire. It will be necessary to have a stove of some kind and a set of cooking pots and utensils. The Trangia stove is a Swedish made spirit stove which has been tried and tested by many Scouts worldwide and is generally the preferred option. The stove comes complete with pots and pan and the whole lot packs together into one unit.

The stove is fuelled by Methylated spirits which is easy to light and clean to use. These stoves have a unique design that provides a stable cooking base and will work in all weather conditions in fact it works best in windy conditions!



All fuels are dangerous so take care. Fuel should be carried in specially designed fuel bottles which do not leak.



Many other stoves are available on the market and each has its own qualities. The small camping gas stove is common, however in wild countryside it can under perform in windy conditions. The design of the basic model - burner on top of the canister - can be unstable and requires a level place to set up your stove. More expensive models use a separate burner and fuel supply concept and these are worthy of consideration.

Also available are petrol and pressure stoves. These work very efficiently and burn with very hot flames resulting in faster

cooking times. They tend to be expensive and a little more dangerous to use.

The small commando type stoves are cheap and are an excellent back up to any stove system. They fold down to the small size and can slip into a rucksack pocket. They are slow burners and take some time to boil water. They are best used to keep food hot or to reheat food.

Self contained solid fuel stove with basic pot and pan



Knife, fork and spoon kit - each items locks together for ease of carrying



Commando type solid fuel stove

Gas canister stove



There are many types of personal cooking kits available. Generally you will not need personal cooking pots etc. if you are working in a Patrol. If you decide to backpack with a partner then they are a consideration. The Trangia stove has built in cooking pots and utensils.



Commando style cooking pan/pot are a great piece of kit. They are robust and inexpensive to buy, and can be used as a bowl or plate.



Useful extras

Below we have illustrated a number of useful extras which you can include in your kit. For some adventures you will require most if not all of this extra equipment. If you are travelling as a Patrol or with another person then equipment can be shared.



Bungee cords

There are numerous uses for the bungee cord on camp. They are particularly useful for securing bivy sheets and attaching items to your rucksack.



Balaclava - a warm useful hat tried and tested on many expeditions.

A Compass and Whistle



A compass and whistle are really essential items rather than extra equipment. However your Patrol may have a compass so you do not need one immediately.



Folding handsaw

This useful tool is cheap to buy and will cut up most small timber. The saw will slip into a side pocket of your rucksack



Headtorch - more practical for hiking and camping than the traditional torch



30 metres of walking rope and a karabiner - many uses and especially as safety equipment

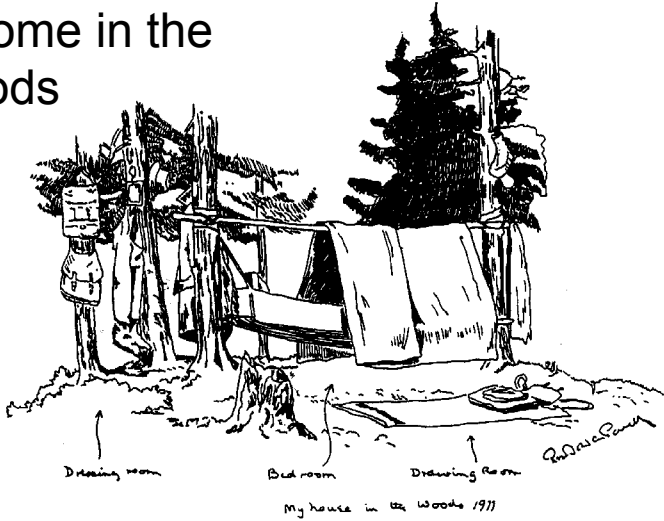


30 metres of rock climbing tape. As strong as rope but easier to carry.

Room Outside



A Home in the Woods



Extract from an article for 'The Scout' Magazine written by Baden - Powell from his campsite in Canada in September 1911

ROOM OUTSIDE

"Here I am camped by a rushing river between forest-clad hills. It is close on ten in the morning. I turned out at five, and yet those five hours have been full of work for me, albeit it was no more than little camp jobs.

The fire had to be lit, coffee and scones to be made. Then followed boiling -and sand-scrubbing the cooking utensils; collecting of firewood for the day (both kindling and ember-forming wood) ; a new crossbar and pot-hooks had to be cut and trimmed ; a pair of tongs for the fire, and a besom for cleaning the camp ground had to be cut and made. Bedding had to be aired and stowed; moccasins to be greased; the camp ground swept up and rubbish burned; the trout had to be gutted and washed. Finally, I had a shave and a bathe; and here I am ready for the day's work whatever it may be. But this took five hours to do.

My comrade went in yesterday to the nearest hamlet, and will be back to-day with our letters and supplies. He will find me away fishing or sketching, and gathering berries for our "sweet" of stewed fruit at dinner; but he will find the camp swept and garnished, fire laid ready to be lit, cooking pots, cups, and plates all ready and clean for his use, and food handy.

We may probably "up-stick" and travel on later in the day, and see some more of the beauties of the land, as we "hump our packs" to the next nice-looking site for camp.

Then comes all the business of pitching camp, getting water and firewood, cooking food, and making oneself comfortable. All a succession of very little jobs, but which in their sum are important. They all give enjoyment and satisfaction to the older man, while to the young person they bring delight, experience, resourcefulness, self-reliance, thought for others, and that excellent discipline of camp-tradition"

September, 1911

Choosing a campsite

The choice of a campsite is determined by a number of considerations:-

A clean water supply

Protection from the elements - wind / wind direction and rain

Level ground for tent pitching

Drainage of the site

Availability of wood and food supplies

The site should, as far as possible, be an interesting and picturesque place to camp. The kind of place where you can forget about the city, town and civilisation and where you can feel like real pioneers and explorers of the frontier.



In general the site should be on high ground, rather than in a dip or lower ground that will collect water in wet conditions. The site should be sheltered, perhaps with a forest or wood to the back of it. Be careful to keep away from overhanging branches which can fall in stormy weather or more seriously will drip water long after the rain has stopped and leave sticky insect larvae on the tent.

What is the nature of the ground you will be camping on? Is the grass very long, is it possible to hammer in tent pegs or is the soil sandy or very soft so that you will have difficulty getting pegs to hold - a serious

consideration in bad weather conditions. Check also for insect life. Some campsites, particularly those near damp ground or close to scrub or fern undergrowth can attract flies and midges which can be extremely annoying, especially in the evening.

The business of Scouting is the programme of the camp. What do you plan to do on camp? The basic living on camp will require such items as food, water and wood for fires etc., whereas the programme will require forests, open ground for games, places to hike to and

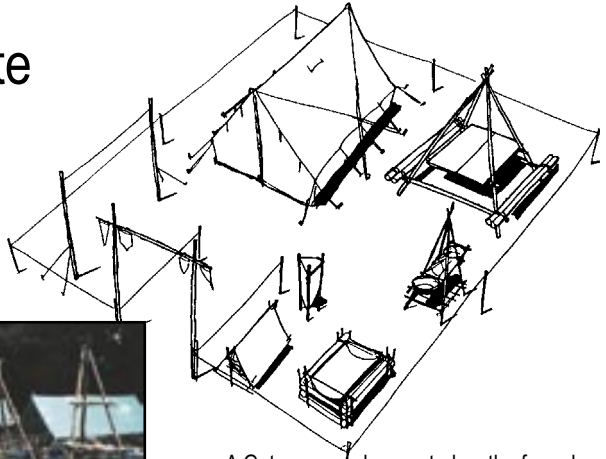


explore and a safe place to swim.

Don't forget to find out about camp fees and if the Patrol are required to undertake a service project during your stay.

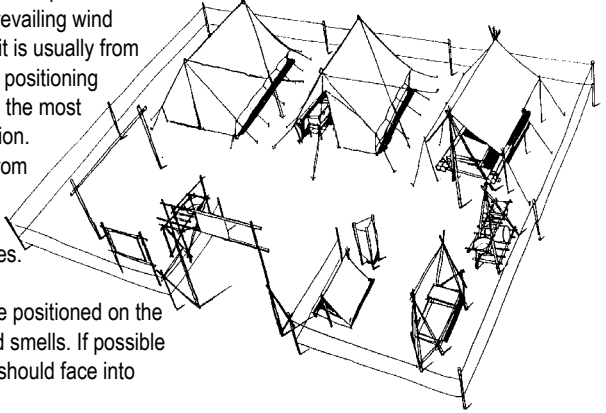
Remember, to leave nothing but your

Campsite Layouts



A Gateway can be erected as the formal entrance to the site rather than the 'hopping over' site railings.

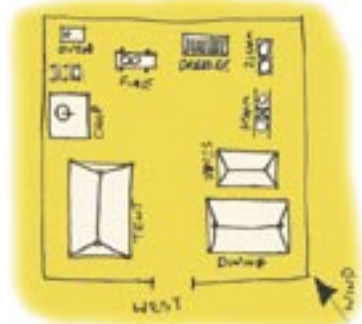
The layout of a Patrol campsite is determined by the prevailing wind direction, (in Ireland it is usually from the South West), the positioning of the fire area being the most important consideration. Smoke and sparks from the fire should be blown away from tentage and woodpiles.



ROOM OUTSIDE

Waste bins should be positioned on the leeward side to avoid smells. If possible the rear of your tent should face into the wind.

Patrol sites are usually railed off (sisal fence) to show the extent of the site. This is important as it contains the area and aids in cleaning up and maintaining the site.



You should draw up a site map before you create your site using wind direction as your guide to place the areas on your site.

Tents for Standing Camps

The tentage required for a standing camp is normally heavy canvas tents such as icelandic tents, small marquees and dining shelters. These tents are designed for long term camping and will withstand the rough treatment and the rigours of Patrol camping. Small dome tents are not usually suitable for long stay camping due to their small internal space and the lightweight materials used in their construction. However, if you have a mixed Patrol of boys and girls you may have a number of dome tents in place of an icelandic tent.

In general a dining shelter is not erected for a weekend camp, rather it is used for camps in excess of 3 days. Small marquees are normally used by Leaders, as store tents or as back up in case of bad



Tent Pitching



Place tent pegs at an angle of 90 degrees to the guy rope



ROOM OUTSIDE

Care of your Tentage

Your tent is your home for the duration of the camp and should be treated as such. A tent properly pitched and a routine of care and maintenance will ensure that it performs well when it is required to - usually in severe weather conditions.

Some points to remember

Keep your tent neat and tidy at all times. When you rise in the morning, sleeping bags should be left out to air for a short period of time, then taken into the tent and rolled up. All clothing should be placed in your rucksack.

Each morning the walls of the tent should be hung up and the doors opened to air the tent.

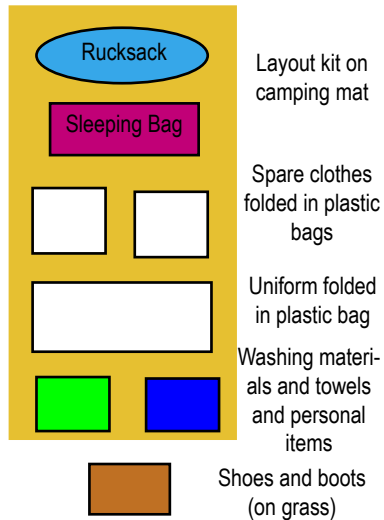
Heavy canvas tents react differently to nylon tents. Canvas is a natural material and when it gets wet it shrinks. Last thing at night, or if rain is suspected, the guys of the tent should be slacked. In the morning when the tent has dried out they can be tightened again.

The groundsheet should be turned back at the doorways during the day to prevent muck and dirt being brought into the tent. At night or in bad weather you should ensure that the sod cloth is placed under the edges of the groundsheet and not projecting out under the walls of the tent. This will prevent water entering the tent. The groundsheet should be removed from the tent every second day on long camps to allow the grass to breathe and prevent the grass under it from dying.

The tent should be pitched in such a way that the doors can be closed easily, using the loops provided. Sometimes it will be



Kit Layout for inspection



necessary to dig a small hole so that the tent pole can be dropped. This is done in the case of uneven ground, to allow the door flaps to be closed properly. Lighted candles should not be used inside the tents and cooking on stoves should be avoided unless weather conditions are extreme. If cooking inside the tents is necessary, it should be done with the utmost care, with the stove positioned close to the door and the door flaps open.

At night, tidy away dirty clothing in your rucksack and arrange fresh clothing at the top of your rucksack for the following day.

At night a tent should not be fully locked up to the extent that no fresh air can get into it. Leave a number of the door loops unlocked near the top of the door,

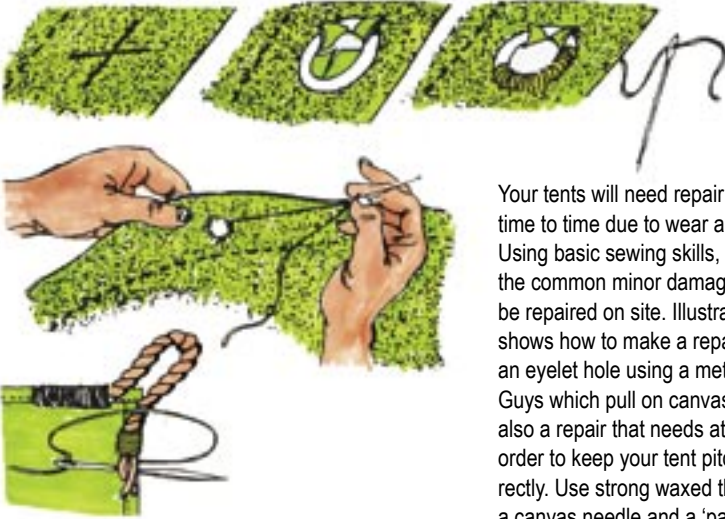
perhaps using a small stick to keep the canvas apart, so that air can enter the tent freely.

Any damage to tentage should be reported to the Troop Quartermaster so that repairs can be undertaken. Small repairs should be undertaken immediately to prevent further damage due to wind or strain on the damaged part of the tent.

When breaking camp ensure that all tents are thoroughly dry before packing. If it is necessary to pack tents when wet, ensure that they are allowed to dry out properly on your return home. Pegs should be cleaned before packing and a note made



Tent repairs



Your tents will need repair from time to time due to wear and tear. Using basic sewing skills, most of the common minor damage, can be repaired on site. Illustration shows how to make a repair to an eyelet hole using a metal ring. Guys which pull on canvas are also a repair that needs attention in order to keep your tent pitched correctly. Use strong waxed thread, a canvas needle and a 'palm'. The 'palm' is a device which allows you to push the needle through the canvas with ease and safety.



Canvas is sewn in a number of ways as shown. These folding seam methods give strength to the joint and prevent water seeping through the joint.

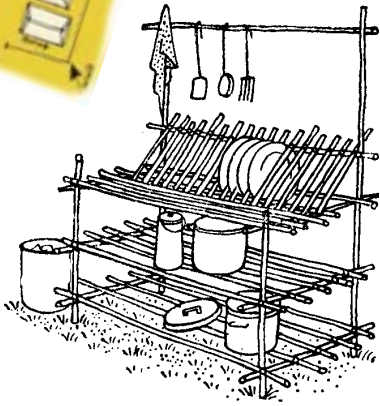
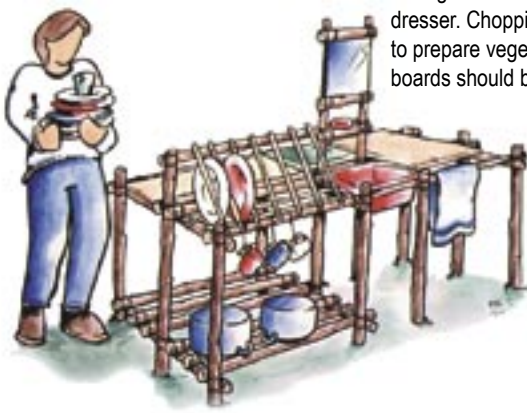
Kitchen Area

The kitchen area of your site is the place where food is prepared for cooking. This area is situated close to the fire and the dining areas.

Cooking on camp should not be an opportunity to abandon cleanliness and hygiene but rather an opportunity to display your cooking skills in the open air- anyone can prepare food with ease in their home kitchen. A preparation table and a dresser are required to allow you to do this task with ease. Basins and water should be at hand to clean vegetables and utensils.

Utensils such as billies, pots and pans as well as plates, sharp knives, mixing spoons and bowls need to be at hand much as they are in your kitchen at home.

Some simple and more advanced



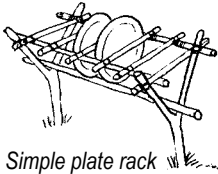
Traditional Camp dresser design

gadgets are illustrated to provide examples of the type of structures you can build in your camp kitchen.

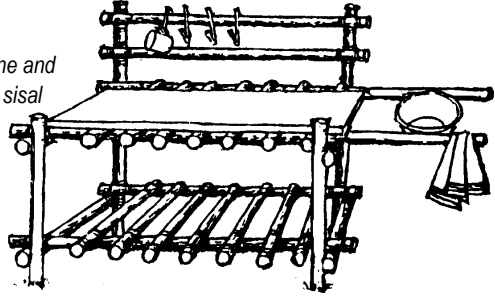
It is better to have a flat solid table top on your gadget rather than an open pole arrangement like that on a traditional camp dresser. Chopping boards should be used to prepare vegetables and meat and these boards should be cleaned thoroughly in hot water after use. Chopping boards should be part of your Patrol equipment. You may wish to have a small box containing such items as salt, pepper, herbs, and spices commonly used for seasoning, at hand on your table/dresser



Plate rack detail using bamboo cane and elastic bands as well as traditional sisal lashings for main structure



Simple plate rack



Simple Kitchen table. Billies stored underneath



Free standing pot and plate structure using tripod construction



T- cloth clothes line using bamboo



Plate detail - using bamboo



Dresser detail - hanging cups

when preparing your food.

A basin should be provided in your kitchen area (other than the basin used in washing area) as well as wiping cloths and drying cloths.

A good idea for Patrols is to construct a fold down table top made of two pieces of wood hinged in the middle, that can be placed in your Patrol box. It is also a good idea to use bamboo garden canes, cut to size to make such things as plate racks.

Strong elastic bands are excellent for fixing these bamboos to a stronger frame of larger spars.

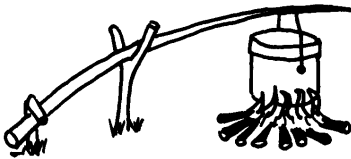
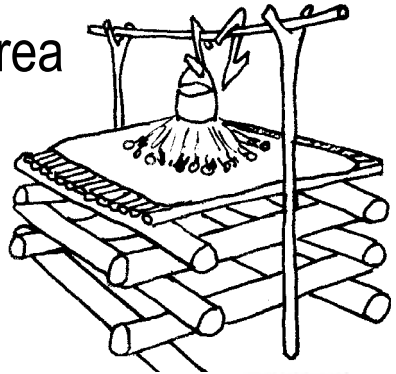
The disposal of waste - water, vegetable and wrapper waste - (see Waste Disposal) also needs to be considered in the design of your kitchen area. The waste disposal gadget can form part of your table/dresser or be a separate gadget.

Only make gadgets that are practical and

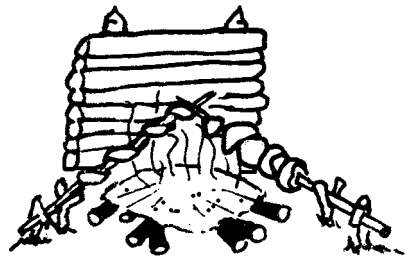
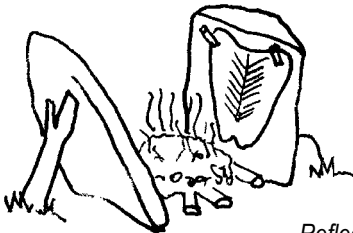


Fire Area

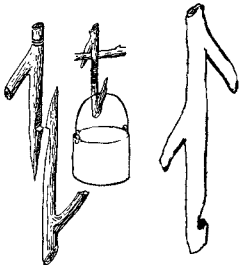
Fire types



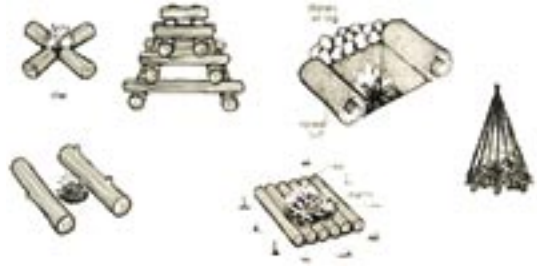
Hunter's Fire



Reflector fires



Pot hooks



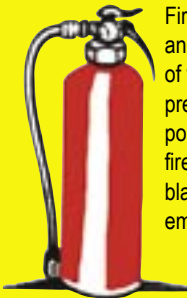
Ground fires can damage the ground. If you have to make a fire on the ground then remove the sod and prevent the fire from spreading by using rocks or logs to surround the fire area.

Hot Water Boiler



Hot water boilers are an excellent idea for a standing camp. The boiler and oven shown have been constructed from old beer barrels, you can also use other containers. Water is poured into the funnel that delivers water to the bottom of the boiler and pushes the hot water to the top. Hot water can then be poured from the tap mounted on front panel.

FIRE PRECAUTION



Fires can flare up if left unattended and sparks may travel on a gust of wind, therefore it is a wise precaution to set up a fire point on site. Have small fire extinguishers or fire blankets nearby in case of emergency.



Building an altar fire



Fires built directly on the ground are normally discouraged due to the damage that is caused to the ground as a result of burning. Scouts are encouraged to construct altar or raised platform fires which are more environmentally friendly. Altar fires are also easier to cook on and because of their size result in the burning of smaller and more controllable fires.

There are many possible designs and the guiding factors in building an altar fire are:-

The platform must be stable and solid. The platform is made with timber or stones and a metal fire box.

The fire box can be made using a cut down barrel or a metal plate. You can also make a firebase using mud and clay on a wooden



base.

It is a good idea to cover the metal fire box with a layer of mud and clay to prevent heat transfer to wooden structure.

The platform should be high enough to cook safely and in comfort.

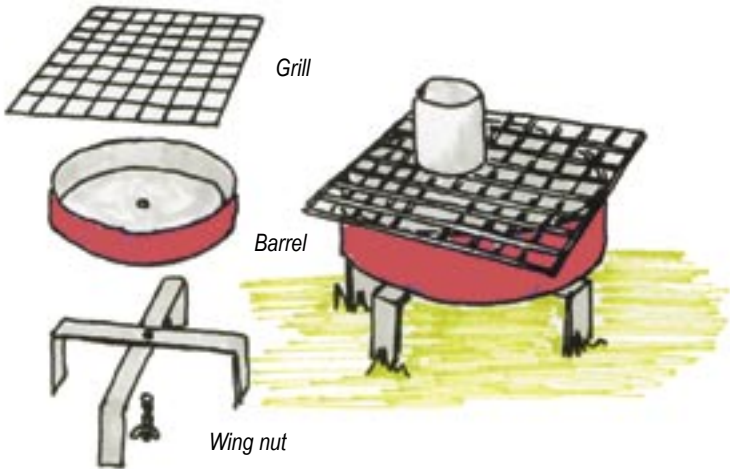
The timber used in the construction of the fire can be protected by wrapping the



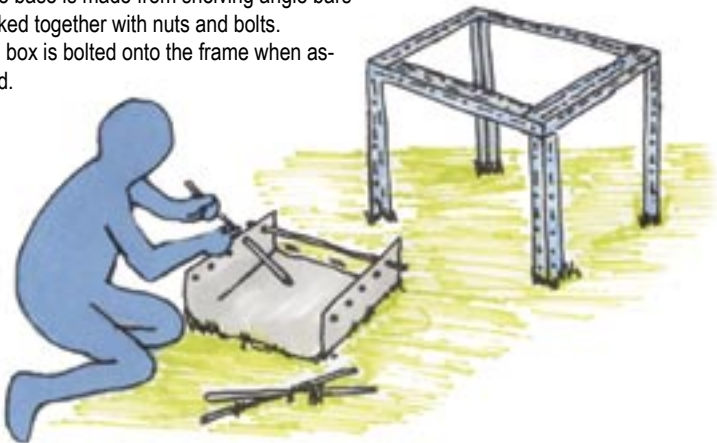
Fold down altar fire

This fold down altar fire was made from the bottom of a barrel that has been cut down. The sides of the barrel are 15 centimetres high. The legs are constructed

from steel bars which are bent to form legs which can be pushed into the ground. A wing nut and bolt are used to join the legs and barrel together to form the fire. A piece of wire mesh is used to form a grill



This fire is made from a piece of bent metal plate. Holes are drilled near the top of the plate in which metal rods are placed. The rods from the cooking grill. The base is made from shelving angle bars and locked together with nuts and bolts. The fire box is bolted onto the frame when assembled.

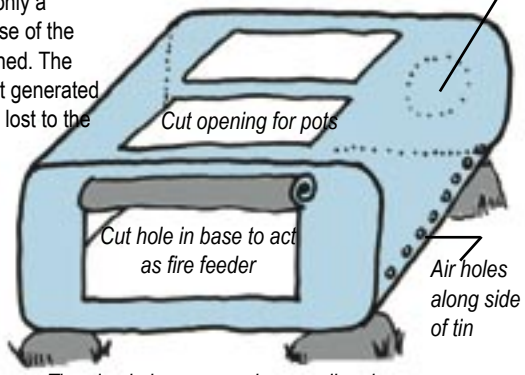


Conservation Stoves

Simple fuel efficient stoves can be made easily using old drums and tins. These stoves require only a small amount of fuel because of the efficient way the fuel is burned. The container channels the heat generated to the pot rather than being lost to the

surrounding air. Many designs are possible and two are illustrated, a 5 Litre tin and a larger barrel stove. Tins should be thoroughly cleaned

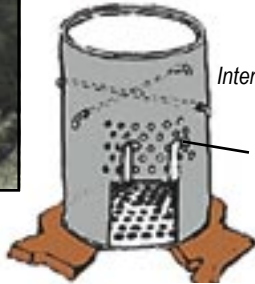
Leave lid of tin to act as a chimney



Tin raised above ground on small rocks to protect grass



Billy placed inside barrel stove



Internal wire supports

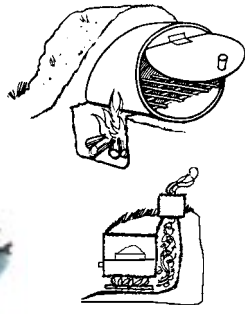
Toast rack



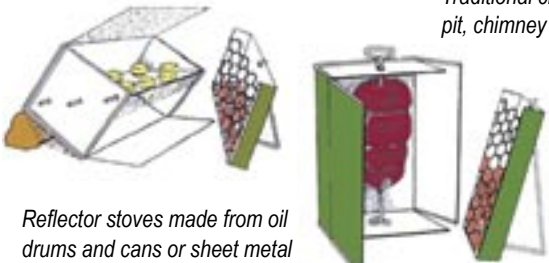
Bucket Stoves

ROOM OUTSIDE

Camp Ovens

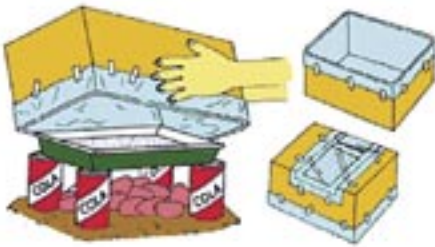


Traditional clay oven - barrel bridges fire pit, chimney constructed of tin cans

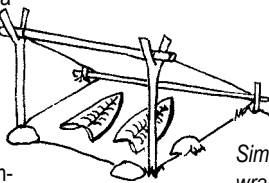


Reflector stoves made from oil drums and cans or sheet metal

Turkey bag stove works on the same principle as cardboard box stove and uses charcoal



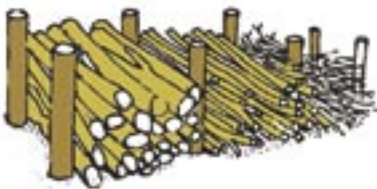
Cardboard box stove.
Line a box with tin foil. Leave a small gap under edge of box to allow air in. The average temperature of an individual coal is 20 degrees. Place inside the box the number of coals required to make up temperature as stated in recipe.



Simple reflector stove using foil wrapped around a simple frame

Chopping Area

The chopping and cutting area is a controlled area on camp. Only one person can work in safety within this area due to the nature of the work. Axes and saws will be in use. Onlookers should be discouraged and be a minimum of 3 axe lengths away where they are not in danger of being injured by tools or flying woodchips.



Simple and tidy wood pile with timber to a manageable size and graded for

Scout at work in chopping area.

Note neckerchief tucked away safely, ground sheet and



Before work commences in the area the ground should be cleared of any branches or other obstructions.

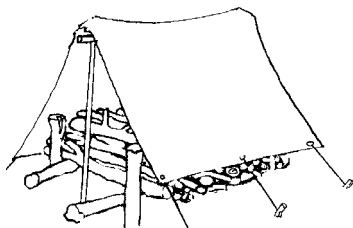
Any loose clothing or attachments such as lanyards or neckerchiefs should be removed.

Always wear strong boots and never sports shoes or trainers.

Check all tools before use to ensure blades and heads are secure and safe to use

Use a chopping block

It is a good idea to place a piece of plastic



Construct a simple shelter using plastic sheeting or piece of old canvas to keep your firewood dry.

Saws



The cutting of timber on camp is best done with a saw. Although it does not have the same appeal as an axe, a saw cuts wood with greater economy. The bush saw is ideal for working on small timber in camp because it leaves no wood chips.

Some rules to remember

When a saw or axe is not in use it should be put away safely. An axe should be securely placed in a chopping block. The saw should be masked and left in a safe place.

When cutting timber start off slowly until the cutting edge has a firm grip in the timber. Keep the blade straight and cut

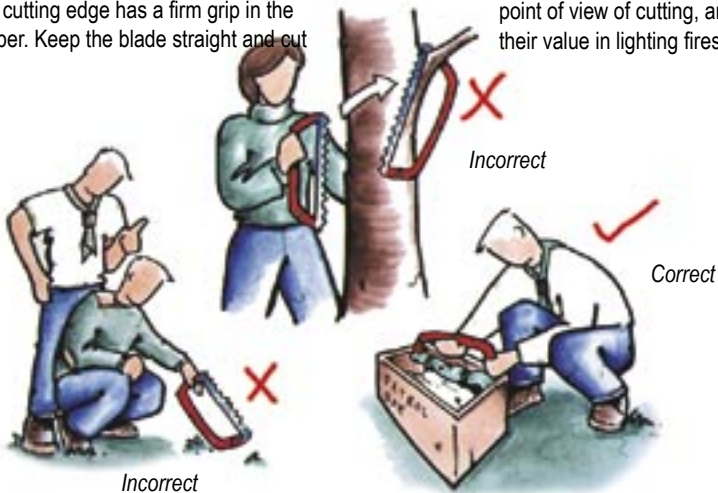
through timber at a steady pace. It is a wise precaution to wear a pair of industrial gloves to prevent serious cuts if the saw blade should slip.

The construction of a saw horse for holding logs steady when cutting is another safety measure worth considering on long term camps.



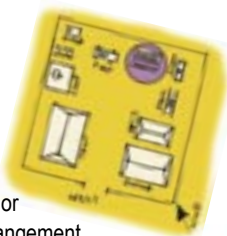
When a saw is not in use or being put away after camp, remove the blade, wrap it in paper or sacking and secure it with sisal.

A small bush saw is just as good as a large saw and easier handled by most Scouts. In general we should not be cutting large diameter timber in camp, pioneering timber being perhaps the thickest. The cutting of large logs is not advisable, both from the point of view of cutting, and their value in lighting fires.



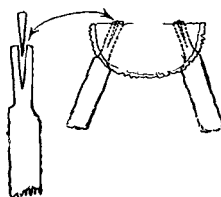
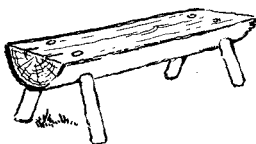
Dining Area

A table and chairs are necessary gadgets for long term camping. On a weekend or lightweight camp a simple arrangement of logs or rocks can provide a dining area. However in a standing camp situation a dining area is needed on your site. Some ideas are presented here, and there are many more possibilities. Some dining shelters have their own poles so the table and chair arrangement needs to be created independently of these poles. The examples show dining shelters that are constructed using pioneering spars with

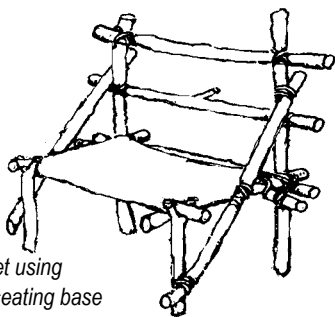
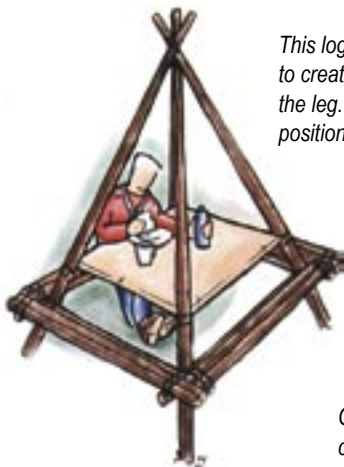


a canvas covering. The use of side poles at the corners of the canvas sheeting can provide more headroom inside the shelter.

Within your dining area you may create a number of gadgets to store plates and



This log bench is constructed using an auger drill bit to create holes. A split or cut is made in the peg end of the leg. A wedge is driven into the cut, after the leg is in position. (see Scout Stuff Chapter)



Chair gadget using canvas as seating base



Wash stand built in tripod section of shelter



Plate, cup, knife and fork holder



table top created from bamboo cane



Wash stand and plate holder created as an extension

Alternative table top construction using logs.



Simple storage solution for cutlery



Simple mug hanging solution



Alternative to hanging log - placing log in

Storage

On camp the safe storage of foodstuffs is very important. All foodstuffs should be placed in secure containers, in particular such items as sugar, cereal, bread, in fact any food item that does not have a resealable packaging. In general it is better to buy perishable foodstuffs such as milk, meat and bread on a daily basis.

It is not a good idea to store foodstuffs in your sleeping tent so a small store tent needs to be erected to store foodstuffs, and camp equipment. The tent should be laid out in an orderly fashion so that it is easy to find what you want. It is the job of the Patrol quartermaster to keep the tent in order.



Camp Cooler

Billy contains salt water in which the water is drawn from billy onto the muslin by capillary action. Evaporation process causes the temperature inside the cooler to drop dramatically. Water needs to be replenished as required.

Billy is covered by (wet) muslin cloth to create cooler and tied at bottom with sisal.

Small shelves are hung by sisal to hooks which clip

ROOM OUTSIDE



Some points on storage

All foodstuffs should be stored in sealed containers within a wooden box or other large storage box. These boxes should be raised off the ground.

All packaging should be disposed of and not allowed to clog up the store. Spillages should be cleaned up immediately so as not to attract flies and insects.

All fuels and lanterns should be stored outside the store under their own cover.

Never change gas cylinders or allow methylated spirits or other fuels to be filled from one container to another inside the store tent.

Don't use the store tent as a meeting

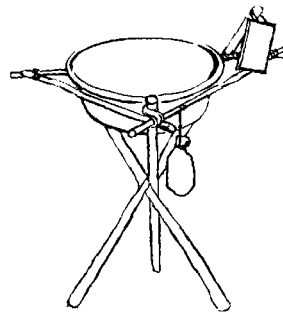
Wash Area



A wash area is needed on your site for health and general cleanliness, as well as preparing food and cleaning utensils. You may choose to have just one general wash stand or construct two, one for personal use - washing of hands at meal times, before preparing food etc., and one for

shower facilities are available on site then these should be used on a regular basis for general bathing and hair cleaning.

Living in the open exposes your foodstuffs to insects and wind borne dust particles even if they are carefully stored, as a precaution, food should be cleaned before



Basic washstand

general use. Everybody on camp should wash every morning when they get up. This is the same routine as would be practised at home - face, hands, teeth and the combing/brushing of hair. Scouts should use their own personal towels and T cloths for drying plates etc. These can be placed on the Patrol clothes lines to dry out after use, before being put back in rucksack. If

use. Likewise, all plates and cutlery should be cleaned properly after use, in hot water. Insects and indeed wild animals will be attracted to your site if food pickings are easily available.

Waste water from washstands should be

Waste Disposal



Camp incinerator

Once you start to live on camp you will generate waste of all kinds -water waste, wrapper waste and bodily waste. Each is dealt with in its own special way.

All paper and food waste should be burned on the Patrol fire or in a special incinerator as shown, constructed from an old barrel. Tin cans and containers should be rinsed out, burned and bashed flat and then placed in a rubbish bag, recycle if possible.



Waste and rubbish

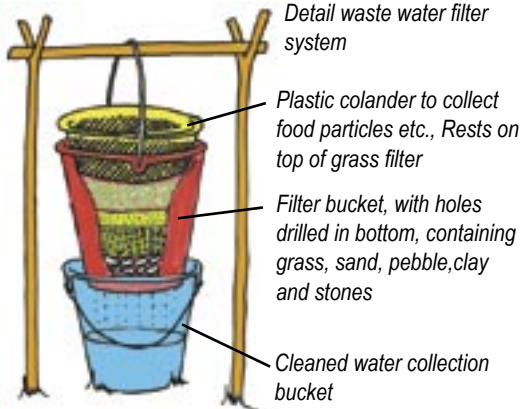
Waste water needs to be filtered before it is returned to the earth, to remove food debris, soap and grease. This filter system is constructed above ground and the filter water collected before spreading it over waste ground away from the site. The filter system will contain grass or straw to trap the particles and this must be replaced daily.

Waste water filter system



The above will be necessary on all campsites even if the campsite has a refuse facility on the site. Waste that is burned, bashed and bagged should be placed in the campsite bins for transport to the local dump, or recycling centre.

In the case of bodily waste, it is best to seek a campsite that has toilet facilities. However, in remote locations, while



Latrines

If the campsite has no permanent toilet facilities then it will be necessary to construct latrines for the duration of the camp. The latrines are sited on the leeward side of the camp and a reasonable distance from the site. A small toilet tent with a chemical toilet is the ideal.

The condition of this toilet tent will determine its use. It should be clean and private and have washing facilities available outside the tent.

Dig a dry pit (100cm X 30cm X 60cm deep) line with stones or pebbles, near to the toilet tent for wet waste. Have a small trowel nearby so that some soil can be thrown into the pit after each visit.

Construct a wash stand, with water and soap provided for hand cleaning.

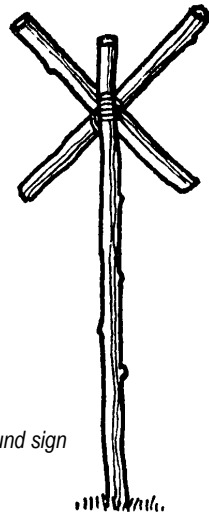
The toilet on camp is different from that at home. Special chemicals have to be mixed according to instructions and placed in the toilet container to control smells and act



Toilet tent and chemical toilet

as a disinfectant. Each day the contents of this container must be emptied into a pit (100cm X 60cm X 60cm) especially dug for this purpose. The container should be cleaned with water and fresh chemicals mixed and replaced. The pit should be marked with a foul ground sign to warn other campers.

This is not a pleasant job but it should be treated in a serious manner and must be done correctly to prevent the spread of germs and infection on camp. The use of masks and rubber gloves, thoroughly cleaned in disinfectant afterwards, can make it easier.



Foul Ground sign

On a Troop Camp, it is normal to appoint a Duty Patrol to carry out a number of duties on camp each day. This can include the cleaning of toilets. The Patrol are assisted in their duties by a Scouter.

PATROL EQUIPMENT

Tentage

There should be enough tentage to accommodate the Patrol
 Sleeping tents – Icelandics or Domes
 Store tent
 Dining shelter
 Tarpaulin sheet
 Pegs, guys, poles, groundsheet and mallet

Patrol Box

Four basins – washing and food preparation
 Buckets & plastic colander – for waste water gadget
 Bucket – two for general use
 Water container.
 Gas Stove and gas cylinder.
 Meths Stove and fuel.
 Axe and saw.
 Lantern – spare gas cylinder, mantles or batteries.
 Muslin or nylon netting for food storage.

Small tool box

Hammer, pliers, hacksaw, vice grips, sharpening stone.

Cleaning

Mirror, shoe polish, cleaning cloths, pot scrubbers, sponge, plastic bags, toilet paper, washing up liquid.

Cooking equipment

Two chopping boards.
 A selection of wooden spoons.
 Whisk.
 Ladle.
 Large lifting spoon.
 Large perforated lifting spoon.
 Knives – chopping and cutting.
 Egg lifter.

Tin Opener
 Potato peeler.
 Potato masher.
 Sieve.
 Colander.
 Cooling rack - metal.
 Two plastic mixing bowls.
 Measuring cup and spoons.
 Plastic containers - various sizes.
 Selection of herbs and spices.
 Salt and pepper shaker.
 Two sets of billies.
 A large pan.
 A small pan.
 Oven gloves.
 Two baking tins.
 Baking trays – camp oven.
 Roll of aluminium foil.
 Plastic table cloth.
 Two large serving plates.
 Tea tray.
 Tea pot.

Eating

Table and benches.
 Table top - if making gadget.
 Altar fire base.

Safety

First aid kit.
 Fire blanket.
 Fire extinguisher.

General

Rope and pulleys – for pioneering.
 Rope and sisal – for gadgets.
 Bamboo and elastic bands – for gadgets.
 Patrol flag.
 Note paper and pens.
 Log Book.
 Map and compass.
 Mending kit.
 Matches, disposable lighter, candles.

Dining out



Cooking

Cooking on camp is neither a complicated art nor a 'knack', with practice any meal is possible. Simple straight forward cooking should be the norm. Most camp cooking will be on open fires, stove cooking is more common on expeditions and in wet weather on camp. It is a good idea to practice cooking simple meals to fine tune your cooking skills. Likewise, the preparation of menus and the listing of quantities should be completed by Patrols before camp. 'Too many cooks spoil the broth' as the old saying goes, but it will be necessary for members of the Patrol to work together in order to gain a competent level in camp cooking.

Hygiene

Areas where food is prepared should be kept as clean as possible, otherwise there is a risk of food poisoning. On camp the risk is even higher.

Always wash your hands before you start preparing and cooking any food.

Keep all food under cover. When preparing food, it should be placed in a plastic container or under cling film until ready to cook.

Clean up all spillages immediately. Keep all sauce bottles and jam jars clean.

Wash up as soon as possible after the meal, using hot water and washing up liquid.

The Camp Menu

Balanced diet

The camp diet should contain an ample



selection of eggs, cheese, milk, fresh fruit, fresh vegetables and salads, meat and fish. It is best to avoid eating large quantities of white bread, cereals and potatoes,

Variety in food

Variety results from a balanced diet and the way in which it has been prepared. Some meals are simple to prepare, while others demand a higher standard of cooking. This enables a varied programme to be run and also helps to make eating itself an adventure. The time element needs to be watched.

Scouts do not go to camp solely to cook and eat.

Sustaining food

Food gives energy, but this depends on the quality of both the ingredients and the cooking. Energy comes from most of the foods listed in a balanced diet and this should contain plenty of vitamins and fresh natural foods. Packed lunches should contain foods which give a quick source of energy such as wheatmeal bread, meat, cheese, raisins, chocolate and fruit.

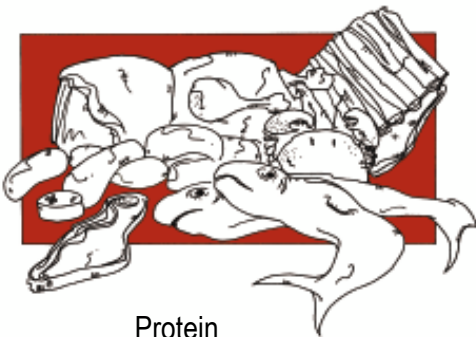
A balanced diet



When you are on adventures in the out of doors you will need to eat properly to maintain your health and strength. The quantity of food you normally eat will increase because you are likely to be more active. The best way of keeping hunger at bay is to eat the correct food. Sweets and crisps are only short term energy boosters and will not sustain your body for a long period of time.

Carbohydrates

We get most of our energy from carbohydrates, foods such as potatoes, pasta, bread, rice, cereals, fruit and vegetables. You should eat at least 4 helpings of these food types a day



Protein

Protein is found in such foods as meat, fish, nuts, dairy products, beans and eggs. You should eat at least 2 helpings of this type of food a day, and 3 or 4 eggs a week.



Fats

There is a lot of fat in butter, cheese, milk and meat. We only need small amounts of fat in our diet. Milk and cheese are good.

Fibre

Fruit, wholewheat bread, vegetables, porridge and potatoes contain bulky material called fibre which fills you up and speeds up digestion and prevents constipation. Eat at least two helpings of fibre a day.



Menus

Eating on camp is not a free for all, the compiling of menus allows you to plan meals, accommodate likes and dislikes and provide variety.

Menu planning is a step by step process.

Decide what you would like to eat.

Work out the quantities you need.

Write up a shopping list.

Work out a cost per person.

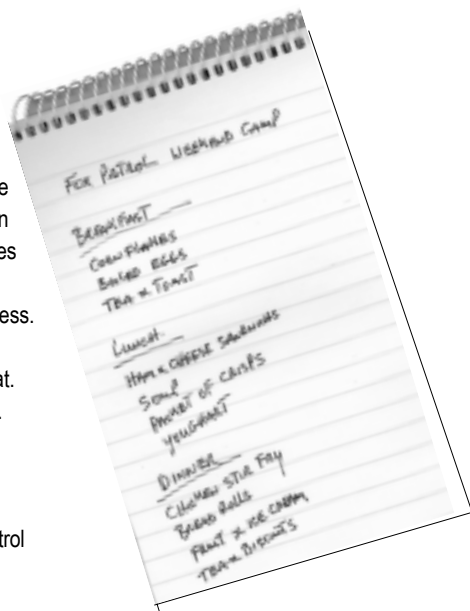
This process is completed at your Patrol meeting before you head off on your adventure.

If you are travelling light then you need to consider your menu in view of the fact that you may only have one stove, and that you will have to carry everything with you.

What would you like to eat?

Have a brainstorming session and seek ideas, likes and dislikes. The recipe section will give you some ideas to try. If possible try to get agreement. If some of your Patrol have special needs then these needs will have to be accommodated into your menu. Build up your menu step by step - Breakfast, Lunch, Dinner, Supper and Snacks.

In planning your menu try to keep the food groups in mind and also the cooking process. Fancy recipes require skill and practice. Keep it simple, stick to the recipes you know. Experiment now and again and if necessary practice at home first.



Work out quantities

Trying to work out how much you need is perhaps the hardest part of the job. On the opposite page we have produced a chart which will help. The best teacher is experience. When on camp note how much food your Patrol eats - how many litres of milk, how many sliced pans etc. Your parents will be able to help, they buy food and cook meals for your family every day and know a lot about how much their family will eat at each meal.

Write up a shopping list

When the quantities have been worked out it will be relatively easy to round them off into pack sizes and weights. Write up the shopping list, visit your local supermarket and check the prices. This exercise will give you a total cost. Divide it by the number taking part and you have the cost per person. Collect the money and buy your food.

Quantities

How much food do I need per person per meal?

Fruit (apple , orange, banana etc) 1 each
Eggs (boiled 1 each, scrambled and omelettes 2 each)
Pancakes 4 per person
Bread (approx. 24 slices in a sliced pan.) 3
- 5 slices per person
Toast 3 slices per person
Cheese - 30-50 grams per person

Drinks

Water - 1lt. a day
(milk, soup, juice) up to 300ml
Tea - tea bag per 2 cups of tea
Squash type drink up to 600ml per meal

Bean , peas, spaghetti tinned, a regular sized tin will serve 2.5 people
Potatoes - 2 - 3 medium sized potatoes.
Tomatoes - 1 big or 2 medium sized tomatoes per person
Onions - one small onion.
Vegetables - 120 - 130 grams per person (small cup)
Rice - 45 - 60 grams per person (1/2 cup uncooked)

Yogurts - 1 per person
Weetabix - 2 per person
Cereal - (corn flakes, rice crispies etc. 100 grams per person

Pasta - small cup/handful per person
Spaghetti - use measure gauge

Fish fingers 3 per person
Gammon 1 per person
Hamburger 1 per person
Sausages 2 per person for breakfast or lunch meal 3 - 4 for dinner meal
Chicken fillet - 1 per person
Rashers - 2 per person
Hot dog sausages - 2 per person
Mince - 100 grams per person
Chops - one per person
Steak - 175 - 220grams per person
Cold meat - 50 grams (often better to count slices)

Biscuits - 4 - 6 per person
Crisps - 1 packet each
Buns - 1 each
Cake - 1 slice each

Margarine/ butter 30 - 50grams per person
Sugar - 30- 40grams per person
Jam - 30 - 50 grams per person
Sauce - 30 grams per person



Preparing food

Fresh veggies and fruits should always be rinsed well under cold running water and then patted dry with paper towels before using. Some veggies, such as potatoes, need to be scrubbed well with a vegetable brush. Meat, poultry, and seafood should be washed before cooking. Simply rinse under cold water and then pat dry with paper towels before continuing. A separate chopping board should be used for preparing meat and vegetables and you should wash your hands between preparing each food type to prevent food poisoning.

Peeling

Some fruits and veggies peel easily with a vegetable peeler. Place the food (such as a carrot, cucumber, potato, apple, or pear) on a cutting board and hold firmly with one hand. Using the other hand, scrape the peeler down the length of the food. Keep turning as you go, so that you remove all of the peel.

Other foods, such as onions and garlic, are peeled differently. Use a sharp knife to cut a little off of both ends. Then use your fingers to peel away the dry, tough outer layers. For garlic, press down on it with the palm of your hand to loosen the skin. It will then peel off very easily.

Chopping

When chopping round foods like potatoes or carrots, the first thing you should do is cut off a small piece from one side so that it doesn't roll away while you're cutting it. Place this flat part down on the cutting board. Then, hold one side of the food firmly with one hand and cut the

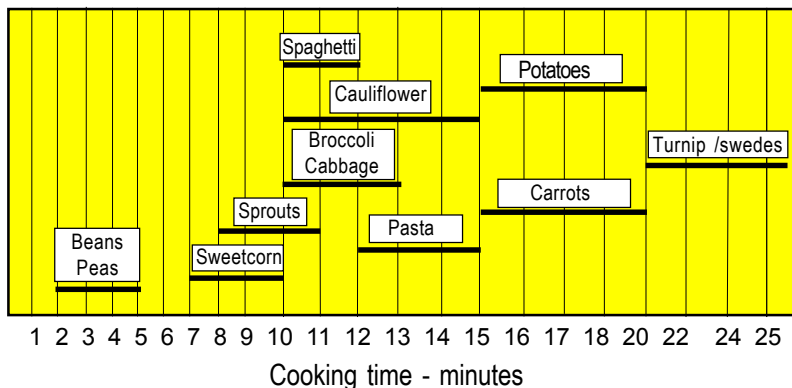
food to the shape or size desired. The more you chop, the smaller the pieces will get. When it comes to chopping, onions they are in a league all of their own! Once they're peeled, cut them in half lengthwise and place them flat side down on the cutting board.



Then, while holding the root end with your fingers, make lengthwise cuts all the way down to the cutting board. Then turn your knife and cut across the lengthwise cuts. Pieces of onion will fall away on the cutting board. The closer your cuts are to one another, the smaller the pieces of onion will be!

Mincing garlic is easy! Separate the head of garlic into cloves. Peel as described on above, then use your knife to cut the cloves lengthwise and then crosswise into small pieces. (Another way to do this is with a garlic press, which is really easy and safe - and fun! Just put the garlic into the press, and press real hard. Little pieces of garlic - just the right size - will come out of the holes!)

Cooking vegetables



Grating

When grating hard foods, like carrots or potatoes, hold the grater with one hand and the piece of food firmly in the other. Rub the end of the veggie downward over the holes, back and forth over a large mixing bowl or piece of waxed paper, and the grated pieces will fall through the holes. Be very careful not to grate your fingers — that hurts! Soft foods, such as cheese, are really easy to grate!

Sometimes a recipe will call for just egg yolks or egg whites. To separate eggs and use either the yolk or white only, crack the egg lightly and pull the halves apart, carefully letting the white drip into a cup. Keep the yolk in the eggshell. Gently move the yolk from one eggshell half to the other, letting the white drip into the cup until only the yolk is left in the shell. Be careful not to break the yolk so that it bleeds into the egg white.

Trimming meat

It's a good idea to turn the excess fat off of meat before cooking. Simply use a very sharp knife and follow the line between the meat and the fat. If a little fat is left, that's okay.

Testing the heat of a pan

You can test the heat of a pan by dropping a teaspoon of water in it. The pan is hot enough to cook in when the water "dances" into drops across the bottom.

Cracking and separating eggs

To crack an egg, hold it firmly in one hand while you hit the middle part (not too hard!) against the rim of a bowl. Then taking both hands grasp the cracked edges and pull them apart. It's always a good idea to crack an egg into a separate bowl before adding it to a recipe so that you can see if any bits of shell fell into the egg. (If so, remove them before adding the egg to the recipe!)

Testing with toothpicks

This is an easy trick! Insert a toothpick into the center of a cake — if it comes out clean when you pull it out, the cake is done. If you can see gooey stuff or bits of crumbs sticking to it, then it needs a bit more cooking time.

'Fork-tender'

When you insert a fork into something and it goes in easily, then it is said to be 'fork-tender'.

Meat doneness

Because some meat may contain germs that can make you sick, it's a good idea to cook your meat until its no longer pink inside. This is called being "cooked through."

Dried vs. fresh herbs

Most of the recipes in this book call for dried herbs, since this is what most people have at home. It's really easy to kick them up a notch by rubbing them between your fingers before adding them to the recipe. They will release more flavour. Feel free to use fresh herbs in your recipes. Just take the leaves off of the stems and chop them into small pieces with a knife. Remember, though, that to get the same amount of flavor from fresh herbs, you'll have to use about three times the amount of dried herbs called for in the recipe.

Pepper

When a recipe calls for ground black pepper, the kind you buy in spice jars or tins is just fine.

Keep it tidy

Keep your kitchen tidy. Clean up as you go along. Keep knives and other equipment in there place so that they are easy to find. Use plastic boxes and bowls with covers to place prepared food until ready to cook.

Always have hot water available to clean up utensils, work surfaces and containers as you go along. Plates can be heated by putting them over a billy of hot water a few minutes before they are needed.

When you take the top off a billy leave it top side down. Serving spoon and ladles should be put on a tray or plate, and not on the ground

Most meat dishes can be improved with gravy, and you can make it very easily by following the instruction on a packet of Bisto.

Put a match stick or small twig in your billy when boiling water for tea. It will prevent it from having a smokey taste.

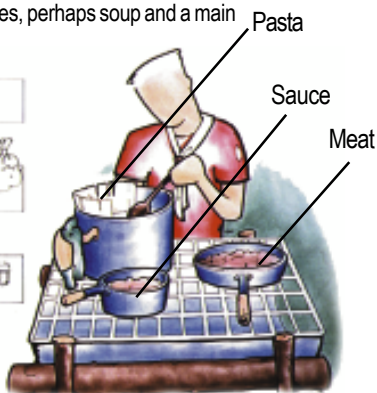
Rota

Name	Cooking				Assisting				Fire				Clean up			
	B	L	D	S	B	L	D	S	B	L	D	S	B	L	D	S
John		●										●	●			●
Paul	●								●					●	●	
Mary						●										●
Ann			●						●				●			
Brendan					●											
Mark							●							●		
Claire			●								●				●	
Philip							●			●						

Patrol Rota for a typical day with 4 meals. Every member has a job to do and all jobs are shared around the Patrol.

Cooking Plan

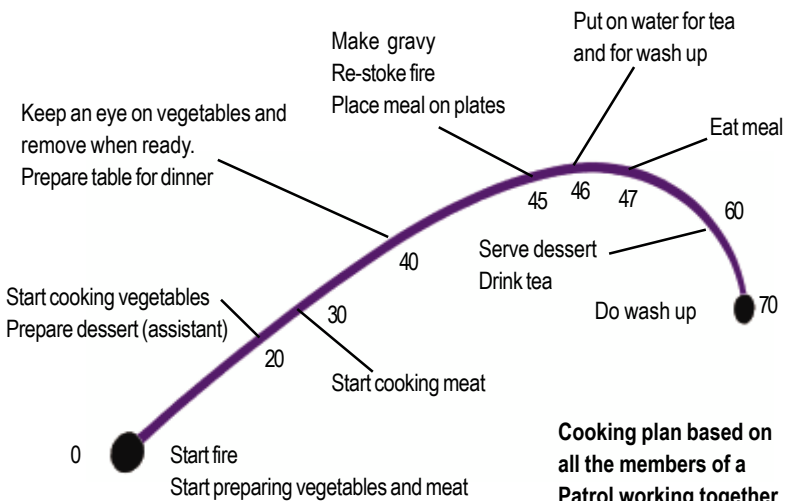
Cooking a meal is about preparation and planning. The object is to cook and serve everything on time. Each meal will have different courses, perhaps soup and a main



Cooking and presentation

The importance of cooking has been stressed, but presentation is equally important. Food should be served in the right order, on warm plates, with an organised routine. Scouts should learn that food should be placed carefully and not heaped onto plates. If the diners can eat at table attractively laid out, this is better. Never underestimate the value of presentation in helping to make the meals an important part of camp life, where high standards of presentation should be encouraged.

course followed by dessert. The cook's job is to get all the elements to work together so that the Patrol can have a satisfying meal together in comfort.



Cooking on fires

Cooking on a fire is different to cooking on a cooker at home. A fire has a variety of locations, each with its own temperature range. There is the instant flame heat, the long term heat from embers and the slow heat to the side. In order to cook successfully, you need to be aware of and be able to create these areas, in your fire. This is a skill learnt over a number of camping trips. In general light your fire well before it is required for cooking. This will produce a layer of embers in your fire with little smoke. Most meals take about 30 minutes to cook and a good bed of embers will maintain its heat for a long period of time.

Make a fire according to your needs. You don't need to light a fire fit to roast an ox so that you can boil a kettle of water! Likewise you will not simmer your stew contentedly for the morning with a few small twigs.

Have everything you'll need ready at hand before you start. That includes timber for the fire, fresh water for cooking and all the cooking utensils and ingredients you'll need.

Always have a billy full of water on the boil - you can probably do most of your washing up as you go along.

One of the discomforts of cooking on open fires can be smoke getting in your eyes, usually at the most crucial part of the meal. Why not have a pair of cheap swimming goggles to combat this occurrence.



Lift pots and billys from the fire with care. Use oven gloves or a towel to prevent burns and scalds



The secret to successful camp cooking is the control of your cooking fire.



Set up your stove in a sheltered location away from direct wind and tentage. The Trangia stove has its own built-in windbreaker and works well in windy conditions.

Cooking on the trail

Cooking on the trail requires slightly different skills than cooking on a fire. The main consideration is the fact that you'll only have one heat source. Meals need to be planned. Normally your menu will be centered around a meal that can be cooked in one pot or pan.



You'll need to have all the ingredients to hand before you start and you'll need to cook the meal in the right order.

An example might be a pasta meal with a meat sauce. The first food to be cooked is the pasta. When cooked it is left in the pot without draining it. You can then start to cook the onions and mushrooms in the pot or pan and add the meat. When it is cooked add the sauce (from a jar) to the meat and simmer. When ready, drain the pasta, and place it on a plate. Add meat sauce directly onto pasta.



As you eat the meal, place your kettle on the stove and boil water for tea, and later for washing.

In general try one pot or pan recipes that are quick to cook and avoid frying which creates grease and is hard to clean.

Get to know your stove and learn how to control the heat when cooking. Also be aware of how long a fill of fuel will last, you don't want to run out half way through your meal preparation.



Wash up

Cleaning billys can be made easier if they are filled with water above the food line and left to soak on or near the fire. The food particles remaining never get a chance to harden and the billy will become easy to clean.

Soap rubbed on the outside of billys and allowed to dry to form a protective film on the outside of them will make them easier to clean.

If a billy gets burnt inside, fill it with water and a little salt, let it stand for some hours and then boil it for a few minutes, after which it can be easily cleaned.



You can use soft sand to clean the inside of pots if you have no pot scrub.

All waste water should be poured through a waste water filter to remove grease and food debris before the disposal of the waste water.

Boil water in dirty pots and pans to remove heavy dirt.



Use a pot scrub to clean off all remains of food.



Plates and cutlery should be cleaned in hot water with washing up liquid. They should then be rinsed in cold water with a few drops of Milton type bleach to kill bacteria



Lastly, the plates and cutlery are dipped in clear, hot water and dried.

Water

Unless you are camping in a location that has a mains water supply, you will not be able to drink the water directly. Check with the camp warden when you arrive.

If you are travelling light across open countryside, it is best to treat all water with suspicion. You never know where the water has been. Dead animals could be lying in the stream just around the corner. There is also the possibility of contamination from chemicals and fertilisers from farm land.

Water can be treated by bringing it to a rolling boil for a minute as this will kill most organisms.

You can also use water purification tablets. Follow instructions on the bottle. You may need to add one or two drops of lemon or orange to the water for flavour as it may have an iodine taste.

Another possibility is to use a water filter which is available for hiking and camping. These operate by pumping water through a carbon filter unit.

Get into the habit of purifying water at night time ready for use the next day.



Equipment

Tools for preparation

- Two chopping boards
- A selection of wooden spoons
- Whisk
- Ladle
- Large lifting spoon
- Large perforated lifting spoon
- Knives – chopping and cutting
- Egg lifter
- Tin Opener
- Potato peeler
- Potato masher
- Sieve
- Colander
- Cooling rack - metal
- Two plastic mixing bowls
- Measuring cup and spoons
- Plastic containers - various sizes
- Selection of herbs and spices
- Salt and pepper shaker
- Cling film



Cooking the food

- Two sets of billies
- A large pan
- A small pan
- Oven gloves
- Two baking tins
- Baking trays – camp oven
- Roll of aluminium foil



Serving it up

- Plastic table cloth
- Two large serving plates
- Tea tray

Hygiene

- 2 basins for washing and preparation
- Water container
- 'Cooks' soap
- 'Cooks' towel
- Tea towels
- Cleaning cloths
- Paper towels



Haybox cooking

Haybox cooking is an ideal way of cooking on camp, particularly if you are cooking stews and casseroles. The haybox is an insulated container that holds the heat and allows your food to simmer slowly.



Line a suitable box with layers of newspaper



Place your normal cooking pot in the box and pack tightly with hay



Prepare your meal and bring the contents to the boil. Boil for a few minutes, then place pot in the haybox.

Remove the pot and your cooker is ready!



Cover the pot with hay and layers of newspaper. Seal the box with a lid and place weight on top. Your meal will be ready in 4 - 5 hours.



Menu builders

Eggs

Fry them

Break into cup first, then pour into a hot pan, turn over gently so as to prevent breaking the yolk.

One - Eyed Egyptians

Put a hole in a piece of bread and place in the pan. Break an egg into the hole. Fry on each side. Sandwich the fried bread between two other slices of bread.

Boil them

Boil water in a pot and gently lower eggs into the water. There should be enough water to cover the eggs.

3 - 4 minutes for soft boiled

7-10 for hard boiled

4 - 7 for in between

Scramble them

Two eggs per person, served on toast. Put a knob of butter in your pot and let it melt. Break the eggs into a bowl and add a tablespoon of milk or water for every two eggs, add salt and pepper. Whisk up ingredients. Pour into pot and stir with a wooden spoon. Use a low heat and be careful not to overcook.

Poach them

Bring water to the boil in a pot. Add a pinch of salt and a teaspoonful of vinegar. Break your egg into the boiling water. When the white is set, take out carefully and serve on toast

Omelettes

Beat up two eggs with a tablespoonful or two of water, salt and pepper. Heat up your pan and add a knob of butter. Pour the mixture into the pan and as the egg begins to set, pull it towards you with a fork so that more of the liquid is allowed to touch the pan. Continue until this mixture is fluffy and begins to set. At this stage you can add other ingredients as you wish, cheese, tomatoes etc. Turn omelette over in half and serve

Pancakes

First make the pancake batter - to make a mixture for about 8 pancakes you'll need

1cup of flour

2 eggs

1cup full not light milk

knob of butter or dessert spoonful of vegetable oil.

Salt

Place the flour in bowl and make a well in the centre. Add eggs, some milk, butter or oil and mix into a batter. Make sure there are no lumps. Add in the rest of the milk to thin the batter. The batter needs to be thickish and not too thin. It is best to leave batter to stand for a period of time before use.

Cook the pancakes on a hot pan. Pour the batter into pan and allow it to move over the pan in a thin layer. Flip over when brown on the underside. Serve with butter, sugar and lemon juice.

French toast

Beat one egg lightly and add about a half cup of milk. Dip - do not soak - slices of bread in the mixture and fry in a hot pan.

Chicken

Chicken can be cooked in a number of ways. A whole chicken can be cooked in a camp oven, but generally it is best to use chicken pieces, either legs or breasts as they are easier to cook.

Quite a lot of ready made sauces are available which will save time and provide variety in your meals. Chicken can be served with many different options such as rice, potatoes, pitta bread, fajatas.

In all cases you should first cook your chicken by frying or boiling before 'cooking sauces' are added as this will ensure that meat is cooked through.

Some options are

Chicken stir fry

Sweet and sour chicken

Chicken Curry

Chicken Tikka

Chicken Fajatas with salsa sauce

Chicken in a red wine sauce

Chicken with taggagon and tomato

Chicken Kiev - garlic dish

Chicken in cream and mushroom sauce

Fried chicken

Chicken meat is very tender and if you are not careful when frying, you can dry it out very quickly. If you are just frying chicken breasts for a meal it is a good idea to coat them in a batter mix of flour and egg.

Beat an egg and add salt and pepper. Dip the chicken in the egg mix, and then in dried breadcrumbs or flour, and place in a pan with a generous layer of oil. Turn chicken pieces until brown all over.



Meat

Meat can be cooked in a number of ways and the most common is frying, roasting or bar - b - que. Roasting is possible in a camp oven, but generally it is best to fry or cook meat in stews and casserole dishes.

Like chicken there are a large amount of ready made sauces available to make your meat menus more exciting. There are also many other foods it can be served with, potatoes, rice, pasta, vegetables etc.

No matter what the recipe, it is best to cook meat by frying before sauces are added to the dish. Even in the case of a stew or casserole the meat should be sealed by browning in a pan before placing in the cooking pot or dish.

Minced meat is very flexible to use. You should choose good round steak mince rather than the cheaper mince which contains more fat. All mince should be eaten freshly cooked on day of purchase.

Don't forget other meats besides beef - pork, ham, lamb (mutton), gammon, sausages, cold meats. In the case of pork, always make sure that it is well cooked.



Possibilities

Spaghetti Bolognese
Burgers
Chilli with tortilla or fajatas
Beef casserole in red wine sauce
Meat loaf
Savoury mince
Steak and onions
Pork steak and pepper sauce
Pork chops
Tin foil dinners
Hot dogs
Bangers and mash smothered in gravy
Gammon with pineapple
Chinese beef stir fry
Pitta bread stuffed with stir fry meat, onions and peppers.

Pasta

Pasta comes in all shapes and sizes from the simple spaghetti to pasta stuffed with meat such as ravioli. Pasta can be bought dried or fresh in supermarkets, the choice is yours. All pasta is boiled so it is simple to cook. Read the instructions on the pack, boil up your pot of water and cook for the required time.

The pasta can be served with other foods such as a chicken or meat dish or just by itself with a traditional pasta sauce. There are many different sauces to choose from generally the sauces are heated up in a separate pot and poured onto the pasta before serving. Pasta is best accompanied with a salad and crusty



bread. You can also sprinkle your pasta with parmesan cheese.



Breads

On camp it is easy to make simple breads and scones. You will need a camp stove or a reflector oven (see Room Outside section).

The simplest bread is the twist. This is made from a mix of 4 parts self raising flour to one part water and a pinch of salt. The ingredients are mixed to form a dough. The dough is then rolled into thin strips like a snake. This is then twisted onto a 'green' stick, which has been peeled of its bark, and gently cooked over the embers of a fire.

Traditional brown bread can be made simply by buying a brown bread mix and adding water according to instructions. The mix can be placed in a baking tin to produce a loaf or made into small balls to create rolls and scones. Rolls and scones are usually a better bet in a camp oven as they require less time and heat to cook.

Scones

Scones are made from the following:-

- 2 cups of self-raising flour,
- 3 tbsp butter,
- 1/2 cup milk,
- pinch of salt.

Sieve the flour into a bowl and rub in the butter quickly and lightly with your fingertips. Add the salt and then, using a round-bladed knife, mix in the milk a little at a time. With floured hands knead lightly to a soft dough, adding a little more milk if necessary. Roll out evenly but lightly about one finger thick on a floured board. Cut out with a pastry cutter. Cook on a greased baking sheet. Brown scones are made in exactly the same way, substituting wholemeal flour for half the white flour.

Potato cakes

225 grams cooked potato.
Salt.
25 grams butter (melted).
50 grams plain flour.
Makes 8

Mash the potatoes well. Add salt and butter, then work in enough flour to make a pliable dough. Divide the dough in two and roll out on a floured surface to form two circles 20cm in diameter and 1/2cm in thickness. Cut each circle into quarters and bake on a hot griddle or pan for about 5 minutes or until browned on both sides.

Soda bread

Soda bread is made from the following:-
4 cups plain flour,
1 tsp salt,
1 tsp baking soda,
1 tsp sugar (optional),
2 cups of buttermilk or sour milk.

Flour, baking soda salt and sugar (optional) are placed in a bowl and mixed together. Milk is mixed in slowly to create a dough.

Wheaten bread or brown soda bread is made in exactly the same way as scones but with



wholemeal flour replacing all or some of the white flour. This mixture will probably require less buttermilk.

Stewed apples and custard

Peel 4 large cooking apples and cut into slices. Place them in a pot and add enough water to cover them. Bring them to the boil and cook gently until soft. Add sugar to taste. For custard, heat milk until it is about to boil. Mix the custard powder and a little milk in a cup. Take the milk off the heat and stir in custard mixture, stirring continuously. Bring back to the heat and add sugar to taste.

Banana split

A nice idea for a campfire. Take a banana and split it length - wise. Place pieces of chocolate or a flake in the banana split. Wrap in tinfoil and place on the embers of your fire. Remove and eat from tin foil or place in bowl and serve with ice cream or whipped cream.

Sample long weekend menu

Friday

Arrive in the evening on site.

Supper

Soup or tea, bread and jam or biscuits.

Saturday

Breakfast

Orange juice.

Cereal, milk.

Tea. Toast.

Lunch

Hot dogs— if staying on site

Fruit

Tea or soup

Yoghurt

Packed lunch – if off site

Sandwiches.

Drink.

Packet of crisps.

Snack bar.

Yoghurt.

Dinner

Spaghetti Bolognese.

Garlic bread.

Orange drink.

Dessert - Banana splits with custard.

Tea, biscuits.

Supper

Soup. Tea. Bread and jam or biscuits.

Sunday

Breakfast

Scrambled eggs on toast, beans, bacon and grated cheese.

Alternative - French fried bread, bacon and cheese.

Tea, toast.

Lunch

Packed lunch if on site.

Hot dogs if off site yesterday.

Sandwiches.

Drink.

Packet of crisps, Snack bar, Yoghurt.

Dinner

Potatoes, Vegetables and Chicken breasts pan fried with mushroom sauce or sauce of Patrol choice.

Dessert

Apple tart or Swiss Roll and Cream.

Tea and biscuits.

Supper

Soup. Tea bread and Jam.

Monday

Breakfast

Cereal, Milk, Tea and toast.

Lunch

One eyed Egyptians or hamburgers.

Soup.

Packet of crisps.

Yoghurt.

Backwoods Living



Shelter

For a real backwoods adventure and experience you need to be able to build, and live in, a shelter created of natural materials. Plastic sheeting and bivvy tarps are the easy way out, but the true backwoods adventurers can build their own shelters.

The design of your shelter is determined by the size of the group, the natural materials available and the landscape



that you find yourself in. It is generally best to place your shelter in a wooded area, so that you are protected from the elements and to avail of suitable trees that can make shelter building easier.

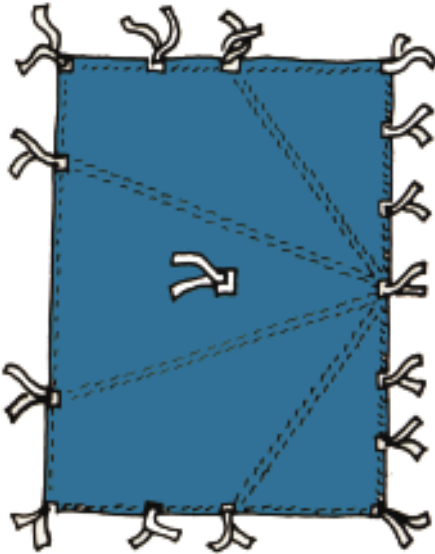
Lean to shelters are the easiest to build. The shelter is placed so that the prevailing wind is to the back of it. A reflector fire, placed to the front will reflect heat and warm up your living space - only build a fire in permitted areas.

A simple two person shelter can be built as shown.

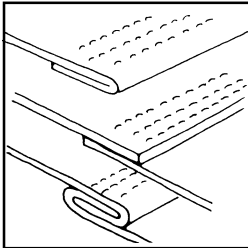
Select a suitable spot and build a framework - a strong ridge and an opening. Build up a framework of smaller timbers on which you can place your roofing material. The roof framework needs to be quite close, otherwise your roofing material will fall through the frame. Use small twigs and branches to intertwine the basic roof framework to avoid big holes.

Roof your shelter, starting at the bottom and working up to the top ridge. Moss, grass, and ferns make suitable roofing material. You could also use sods of grass or large pieces of bark. Don't forget to make a soft bedding of ferns or grass on the floor area. Finally, lie in your shelter and look up to find holes that need to be covered.

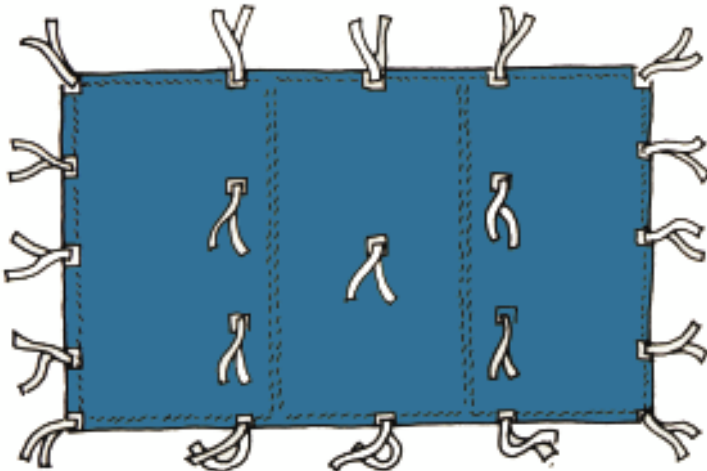
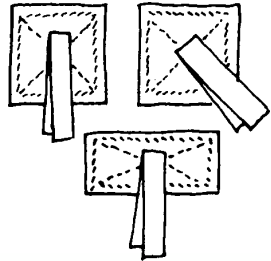
Tarp sheet



A tarpaulin sheet is a useful item of equipment for making shelters. This ready made sheet can be brought in hardware stores which is made of plastic and has a series of eyelets around its edges. The tarp sheet illustrated is made of light canvas or nylon tent material. It will be more durable and lighter than the plastic version. The tarp sheet design can vary depending on its use - small personal tarp sheet for the creation of a one or two person shelter or a larger version designed to sleep a Patrol.



Join lengths of material together using the folded seam method. Use some seam sealer to waterproof the joint. When attaching tapes and tie ropes use extra material and stitching to strenghten the area because it will be under tension.



Bivvy Shelters

Bivvy shelters are a lightweight and handy way to travel and live in a backwoods environment. You need to have a bivvy sheet. This can be a piece of plastic sheeting or you can buy a plastic



tarpauline sheet from a local hardware shop. The tarpauline sheet is made of stronger plastic and has eyelets around its edge so it is a better choice than the basic plastic sheet.

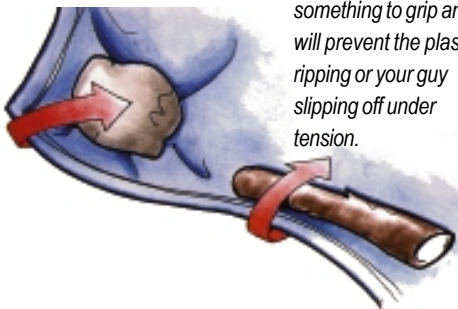
To make a basic lean-to shelter it is necessary to construct a simple framework on which the bivvy sheet is stretched to form a shelter. Many designs are possible; see opposite. A number of tent pegs can be used to peg the sheet to the ground. You could also tie off the sheet to a log or large stone.

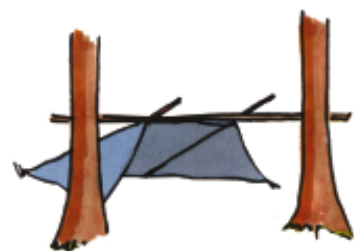
When constructing the framework- keep it simple - choose forked sticks to cut down on lashings. A simple arrangement of the guys will keep the frame straight. The design shown will keep you dry, and at the same time give you that 'back to nature feel' which you want to experience when living backwoods style.



If you are using plastic sheeting, wrap a small rock or piece of wood at the guy point and tie your cord around it.

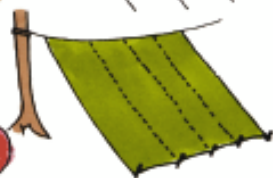
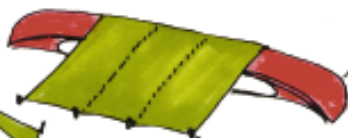
This will give you something to grip and will prevent the plastic ripping or your guy slipping off under tension.





Shelter Designs

Shelter design options using tarp and bivy sheet - branches and tree locations will often dictate the design used.



Firelighting

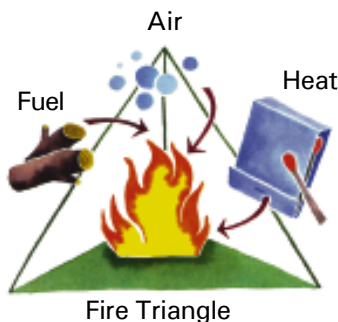
The art of firelighting is a real scouting skill, to be mastered by all. Scouts should be able to light a fire using only natural materials and one match. No fire lighters allowed. Every Scout worth his or her salt should be able to do it and it is a skill that should be learned from the beginning of their time in Scouting.

There are three parts to the triangle of fire; fuel, heat and air. In order to light, a fire must have all three elements. It needs fuel to survive, like we need food. It builds up heat gradually, from your match, to tinder, twigs and bigger fuel. Finally, like us, fire needs to breathe!

When you want to extinguish the fire, simply remove one or more of the parts of the triangle; keep unburnt fuel out of the fire, cool the fire down with water or snow, or smother it with water or clay.

The stones and logs surrounding your fire need to be spaced to allow air to be drawn into the fire base

Start building your fire by first placing your tinder on the ground in a light pile. Light your match and let your flame catch hold on the matchstick. Then place it carefully under the tinder and hold it there until the

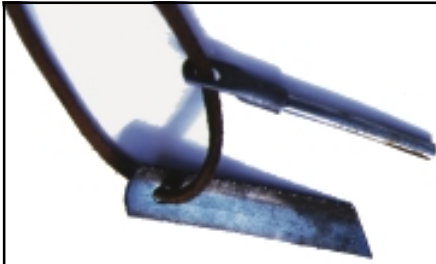


tinder lights. As the fire burns place light tinder and twigs on top of the flame, taking care not to kill the flame as you do so. As fire flares up create a pyramid of timber over the fire.

Once this timber has taken hold introduce heavier logs onto your fire.

A fuzz stick is an excellent way to create dry tinder. You need a sharp knife and a dry - dead wood - stick. Carve the stick into a fuzz as shown. Create long curly shavings if you wish, and collect these to add to your tinder pile. A number of fuzz sticks will be required to light your fire.





Flint and steel

You will need a flint and steel kit as shown, which can be bought in camping shops, and some dry frizzed sisal, or best of all, plumbers hemp or charred cloth as tinder.

Draw the steel blade along the flint stick to create sparks. Watch where the sparks are falling and correct the stroke so that they fall into the same area of the tinder.



When enough sparks are created and hitting the centre wad of the tinder it will suddenly flash into a flame. Now, move quickly to the tinder bundle and create your fire.

Tinder

Tinder is light dry materials that ignites quickly. They are essential to lighting a fire quickly and successfully, using only one match and no paper or firelighters. The simplest of tinder is fluff from pullovers and fleeces. You can also use frizzed up sisal or dry moss. Another good tinder is paper thin

bark strips. By far the best natural tinder is dry curly timber shavings created by carving a dry stick. These shavings must be from a dry deadwood stick rather than a green sapling. If you cannot find a dry stick carve off the wet bark; usually the timber is dry underneath.



Fire by friction

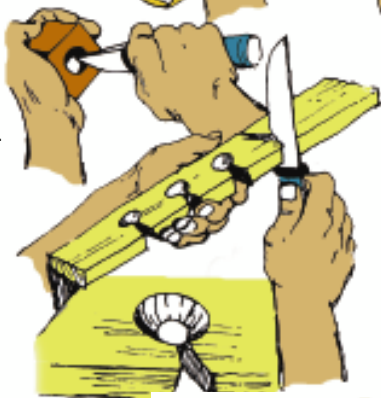
To create fire by friction - a real scouting skill - you first need to make the elements - a bow, a spindle, a 'thunderbird' and a base board. The timber used needs to be dry deadwood - hazel, ash, lime and elm are good woods to use for this purpose. The spindle is a piece of wood that is pointed at one end and rounded at the other. To get a good grip on the bow string it is best to flatten out the sides of the stick so it has a hexagonal shape. The bow is a bow shaped stick with a loose cord attached as shown.



Create a baseboard using a flat piece of wood not more than 10 - 15 mm thick. A number of burn holes are created using the spindle then a slot is cut so as to create a channel into which you place your tinder.

You will also need a 'thunderbird' or spindle holder. This is a simple block of wood with a groove cut into it so that pressure can be applied to the spindle as it turns. Soap or spittle will act as a lubricant. Set up your apparatus as shown, with one turn of the bow around the spindle.

It is best to kneel down, placing your foot on the baseboard. Apply pressure to the spindle and push the bow from side to side in a sawing action. This action will cause friction on the baseboard and smoke will rise into the air. The idea is to create enough hot timber ash that will fall on the tinder in the slot and allow it to smoulder. Continue with the sawing action until the smoke thickens and you think it is about

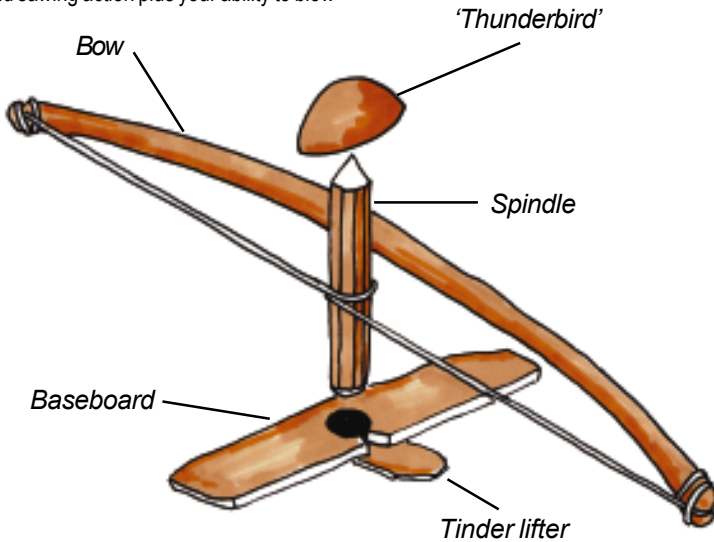


to take flame. Then stop quickly and blow very lightly onto the tinder. If you are lucky it will catch flame.

Some practice will be required to master this technique - which is based on the pressure and sawing action plus your ability to blow

gently and create a flame. It is also very important that the timber used is dry.

A small thin stick placed under the tinder slot makes it easier to lift the smouldering tinder from the baseboard and carry it to the fire.



Key hole fire

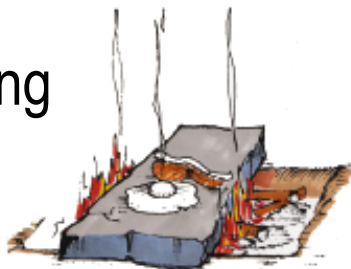
A key hole fire is another way to cook your food backwoods style. Backwoods cooking is done using hot embers rather than flame heat. Embers are raked from the main fire to a side area for ease of cooking. Clear a suitable area by lifting sods or building on gravel or on bare earth. Create a keyhole fireplace as shown.



Backwoods cooking

The secret to successful backwoods cooking is to build a good fire that will provide hot embers, for it is on embers that we cook - not flames. One of the problems with embers is that they tend to become cool after a short while. The keyhole fire solves this problem. A 50mm bed of ashes is required for successful backwoods cooking. Use beech or oak logs, as these will give longer lasting embers. Charcoal can also be used and it will retain the heat longer than wood embers.

Aluminium foil can be used if you want to take the easy way out. With it, it is possible to construct pots and pans for cooking food or you can place your food in an aluminum foil envelope.



Frying

You will need some form of pan or grill base, usually a flat stone which is placed in the fire to heat it up. The stone is then cleaned off so food can be fried on it. It may be necessary to place small pieces of twig around such things as eggs to stop them rolling off the stone.

The pioneers and backwoodsmen of the past used only those materials that could be found locally, for creating cooking utensils.

They often used leaves and clay as well as ingenious cooking spits and holders made from green twigs and branches (green twigs and branches are less likely to go on fire and are pliable, so they can be worked).

Hygiene

Although backwoods cooking is considered to be primitive in approach, your food hygiene methods should not be. Wash all food before use and keep covered until you intend to use it. Take care not to burn food and avoid cooking the food quickly in a flame. Quick cooking will cause the food to cook on

the outside and be raw inside. Make sure all the food is properly cooked, thus the need for slow cooking over embers. Clean up the area used when you are finished and dispose of all food scraps carefully. Don't forget to clean your hands also when you have finished cooking. It is traditional to eat using your hands to hold the food.

Container cooking

It is possible to use food as cooking containers, such as, orange skins in which eggs can be cooked. Onion 'shell', created by cutting an onion in half, scooping out the core and leaving three or four shins in place to form a container. You can also use potatoes or pineapples in the same manner.

Orange eggs

Cut an orange in half and eat the contents without breaking the skin. Break an egg into the orange shell and place on embers and allow to cook. When done, eat from the container.

Onion eggs

Cut the onion in half. Remove internal contents except for the remaining three outer layers. Break egg into the onion shell and place on embers. When cooked, eat the onion container as well as its contents, after you have removed the outer scorched layer.

Spud egg

Halve a large potato. Hollow one half. Break an egg into the hollow. Pin two halves of potato together with small sticks and roast in hot embers.

Baked potato

This is perhaps the easiest to cook backwoods style. Take a potato and place it in the embers of the fire. When it is cooked, after about 25 - 30 mins slice open the skin and place a piece of cheese or butter on top.

Instant hot dogs

Lay sliced onion on a cabbage leaf, add a sausage or two and place more onions on top. Wrap up the cabbage leaf tightly and



secure it with a number of small green sticks. Place in embers for about 7 - 10 mins, turning occasionally .

Meat and burgers

Meat and burgers can be cooked by a number of methods, such as the kebab method, or the wrap method whereby the meat is wrapped in cabbage leaves. Meat may also be cooked using a broiler or by frying on a hot stone.






Fish



Fish is an excellent backwoods food. It needs some preparation if caught in the wild and is easy to cook. You can buy some fish in your local supermarket and bring it with you, but it is so much better to catch your own.


Planked method - Pin the fish, flesh side forward, on a plank or piece of flat board and cook by reflected heat. Place a knob of butter on the fish when it is cooking and later a splash of lemon - delicious!

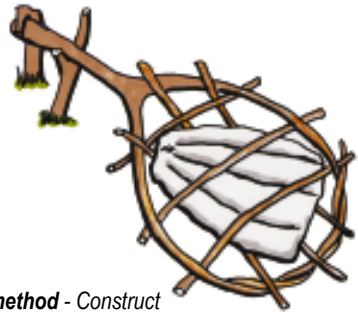


It will be necessary to clean and gut any fish before you cook it. The fish should be cleaned as follows:-

- Wash the fish thoroughly in clean water.
- Remove the scales by scraping with the back of a knife(that is, not the sharp edge), working from the tail towards the head.
- Cut the spine at a point just behind the gills and tear the head off with a steady, slow, forward motion. If you are careful, the fish innards will come out with it. (Dispose of carefully)
- Slice the belly open from tail to gills and thoroughly wash the inside.
- Finally, cut off the fins and tail and cook as desired.





Broiling method - Construct a broiler as shown and place your fish in it. Cook over hot embers turning regularly.



Wrap method - wrap fish in grass and cover in mud and place on the fire, or wrap fish in cabbage leaf and pin together with small twigs and place on the fire.



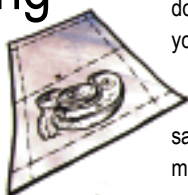
Fish cook very quickly so be careful you do not burn them.

Burgers in leaves

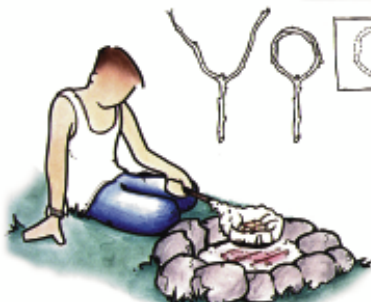
Place three layers of cabbage leaves directly onto the hot embers and put the burgers or mince patties on top of them. After approx. 10 minutes, turn the meat over, putting it onto three new cabbage leaves. Repeat this process until the meat is cooked.

Note: Cabbage leaves can replace foil in most instances when using backwoods cooking recipes. It is important that at no time should rhubarb leaves be used, as they contain a highly toxic substance.

Foil Cooking



at the



Getting ready

Choose heavy duty foil rather than the domestic version as it can be a bit light or you could use two layers of light foil.

Food is a matter of choice. This could include - burgers, sausages, corn on the cobs, onions, mushrooms, tomatoes, potatoes, oranges, eggs etc. It is best to bring foodstuffs that cook quickly. Chunks of meat should be avoided as it is hard to get all the items cooked at the same time.

Burger in armour

Wash, peel and cut, a medium potato and a large carrot, into 4mm slices. Double the foil into a 450mm square and spread the vegetables on one quarter of it, leaving a 50mm margin around them. Put a handmade burger of minced meat or a thawed out frozen burger beside the vegetables. Salt the vegetables, but not the meat; pepper, if you like. Add slices of onion and a dab of butter. Wrap in foil and leave room for expansion. Set on 'not too hot' coals and cover with more coals. Cook for 15 to 20 minutes. Eat from foil.

Roasting

For roasting you will require a good bed of embers. For large animals and birds you will need a spit construction over the fire. For smaller animals and fish, the best way, is to peg them out on a board or a flat piece of wood and stand this next to the fire to form a kind of reflector.

Grilling

You will need a grill. This can be made from green sticks, and held over a hot bed of embers. The disadvantage of grilling food is that it tends to dry out.



Foil cooking times

Cooking time will depend on such factors as the size of the package and the heat of the coals. If necessary, peep into the package to see if it is done, but be sure to seal it up airtight again before replacing it in the coals.

When cooking several things together, you must, of course, allow enough time for the slowest one to cook.

Some suggested foods and approximate times -

Food Time (minutes)

Mince beef 8 - 12

Sausages 5 - 10

Lamb chops 20 - 30

Fish (whole) 15 - 20

Fish (fillets) 10 - 15

Carrots (sliced) 15 - 20

Potatoes (whole) 45 - 60

Potatoes (sliced) 10 - 15

Apples (whole) 20 - 30

Corn Ears 6 - 10

Onion (sliced) 10 - 15



Camp Bread

Twists

Mix flour, water, and a pinch of salt together to form a thick dough, adding raisins and sultanas if you like. Make a snake like roll of the dough and twist this, snake like fashion onto a thick green stick (with bark removed). Support it over glowing embers turning occasionally until the outside turns golden brown.

Kebabs

Simple Kebab

Remove the bark from a green stick and onto it spear slices of bacon, mushroom, sausage, carrot, tomato, peppers, pieces of pork. Support the skewer over glowing embers, turning occasionally. Eat when the meat is crisp and golden brown.

Fiji oven



This method is useful if you want a meal to cook while you are away - a bit like a hay box oven. Dig a pit around 60cm deep and 60cm across. Light a fire in the bottom of the pit. Place a thin layer of soil on top of the embers and then place a number of leaves (cabbage leaves are best) on top of the soil. Then place your food on top of the leaves covering it with more leaves. Cover this with more soil and then light a fire on top of it. It could take a hour or

more to cook depending on how big in size it is and the amount of food you are cooking. Another way of baking food is to wrap it in leaves or grass and then in mud. Then bury it in , or surround it with, a fire, and leave it for an hour or more. When you break open the cast of clay, you will find that the grass has kept the food moist.

Containers and utensils



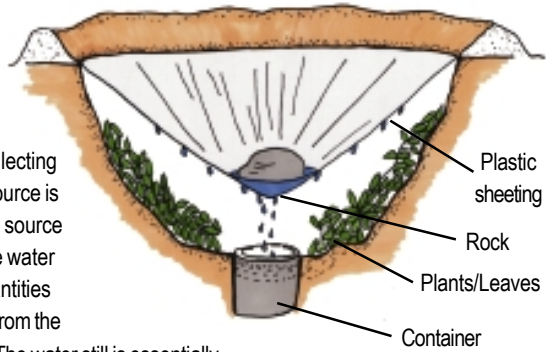
If you are boiling your food then you will need some form of container. It is possible to use a paper bag to boil up water - the trick is to ensure that the heat only touches that part of the bag that has liquid behind it to absorb the heat. In stone age times a water hole was created. Into this hole were placed hot stones heated on a fire nearby, resulting in heating and boiling the water.

You can also make containers out of foil or foodstuffs such as oranges and potatoes. Stone age people used the materials they

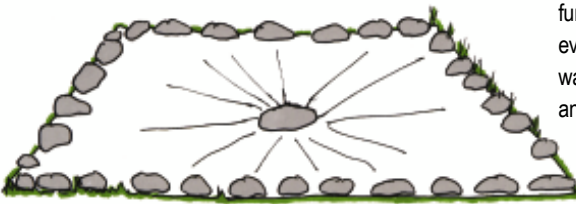
found around them in order to survive. Simple containers were made from the bark and leaves of trees. These were sown together using sinew or roots and sealed using pine pitch or sap. Clay was moulded and fired to create pots and cups. Apart from the cooking methods shown earlier, using sticks etc., you could also carve your own utensils, such as spoons and ladles or perhaps a cup and a plate from a sawn log.

Water still

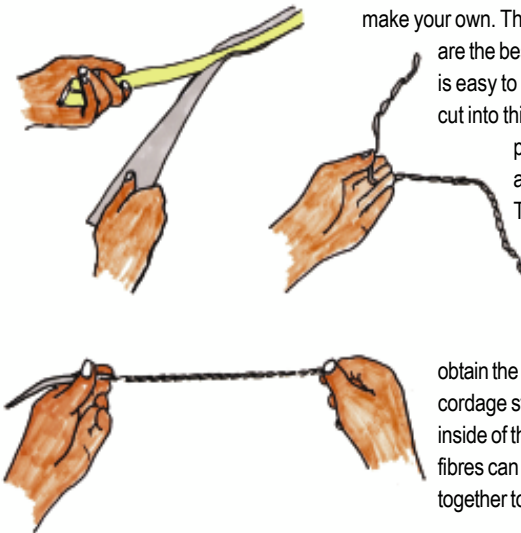
A water still is a method of collecting water when no other water source is readily available, or when the source of water is suspect. Using the water still, you can collect small quantities of water through evaporation from the ground and from vegetation. The water still is essentially a survival tool rather than a water collecting method. In normal backwoods conditions, a stream is more likely to be the source of water or bring a supply of water with you.



The water still has two functions, to collect water by evaporation and to collect water by precipitation - rain and dew.



Cordage



Rope and twine is made by using natural materials such as barks and plants. It is easy to make your own. The lime tree and the birch tree are the best for bark material. The bark is easy to strip off a branch and when cut into thin strips it is very strong and pliable, making it excellent as a tying material.

The common nettle is the best plant. The plant stem needs to be beaten on a rock to break down and

obtain the cordage fibres. The thin cordage strips can be drawn from the inside of the plant stem. A number of fibres can be rubbed, twisted or plaited together to make a strong string.

Finding your way

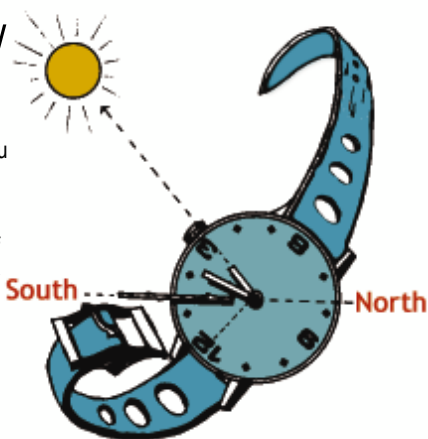
Finding your way using map and compass can be exciting, but what if you had no map or compass and found yourself stranded in open countryside? Nature navigation relies on your skills of observation, through it you can find your way to safety.

Nature provides us with a variety of ways of discovering direction, the sun, the stars, the trees and the wind. The simplest and most obvious way to find North is by the sun. At dawn it rises in the East, at mid day it is due South and in the evening it sets in the West.

Finding your way at night

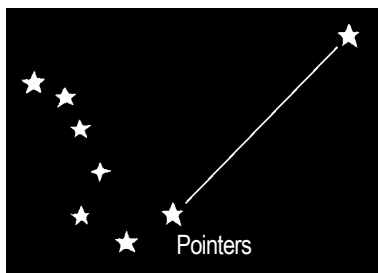
Except for a few nights every month the moon, like the sun, can help give you direction. Because the moon reflects the sun's light, the moon always points towards the sun, and even at night indicates the direction of the sun. Whether the moon is waxing or waning. If the moon rises before the sun has set the illumination side will be on the west. If the moon rises after midnight the illumination side will be on the east.

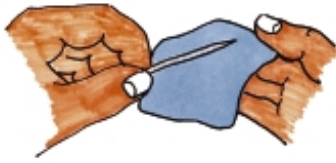
The location of North can also be determined from the stars using the Pole Star. The 'Plough' Constellation is visible all year round as it moves around the Pole Star. On a clear night the Pole Star can be found by plotting a line through the 'pointers' As with the sun and the moon, the stars also appear from the East and sink in the West. So, if you face a rising star you are facing East, if you face a descending star you are facing West.



Using your watch as a compass

You can use your watch to tell the direction. This is done by using the hour hand and the 12 o'clock mark on your watch. To discover where South is, point the hour hand towards the sun. Then divide the angle between the hour hand and the 12 o'clock mark on your watch. This will give you the North - South line, the direction towards the sun is South. Once you know where one of the directional points lies it is easy to discover the others.





Needle Compass

It is a good idea to have a magnetised needle in your personal survival kit. If not, you can magnetise a needle by rubbing it in the same direction towards the point of the needle using a piece of silk or nylon based cloth. In order to find direction, the needle needs to be suspended so that it moves freely. This can be done in two ways, either by suspending it from a thread as shown or by floating it in a pool of water on a piece of grass or a small leaf. The pointed part of the needle points north.

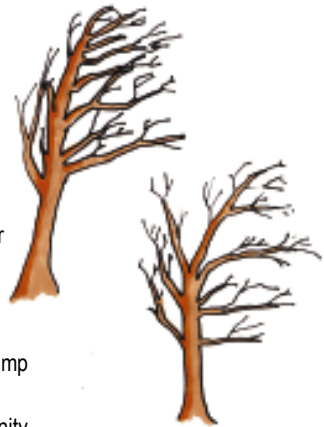
The wind

Almost every area has what is called a prevailing wind - that is a wind that blows longest and strongest from a particular direction. (in Ireland it blows from the South west). Prevailing winds have their impact on trees. You can very often observe how trees in a given area have been influenced by a prevailing wind to lean in a particular direction. There are but a few exceptions to this general rule - such as with the trees on some of our coastlines which always lean away from the sea.

Trees are affected by many factors, and you should not jump to conclusions after studying a single tree, but confirm your findings by observing several trees in the same vicinity.

Most trees tend to develop more foliage on the sunny side.

Mosses and lichens will tend to grow more on the North side of a tree trunk, rather than on the Southern sun facing side.



Shadow method

Place a stick in an upright position in level ground (90 degrees to the ground) and mark the tip of the shadow cast. Wait at least 15 minutes and again mark the tip of the shadow. A line can be drawn between the two tips, is the East - West line. If you scribe a line at right angles to this line you have North and South

Fishing

In order to catch a fish, you must first understand how a fish looks for food and when it chooses to eat. Fish in rivers generally feed on insects whereas at sea they feed on sea creatures.

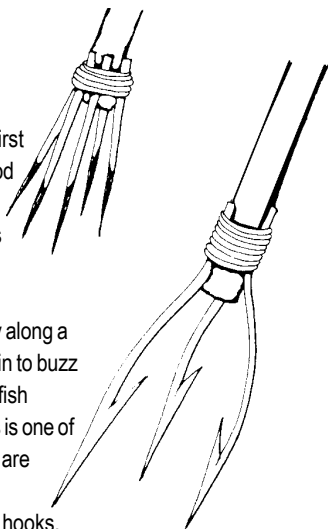
When the heat of the sun is at play along a river or lake bank, the insects begin to buzz around and then you will observe fish coming to the surface to feed. This is one of the best times to catch a fish. Fish are on a constant quest for food and this urge will drive them onto your hooks.

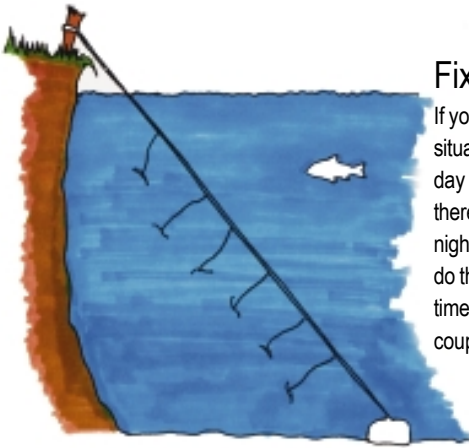
On the seashore the best time to fish is when the tide is coming in.

If the water is clear and there are many shallow pools then you might consider using the fishing spear. This is a skillful way to catch fish but requires practice.

Hooks can be made from a wide variety of materials, from the simple safety pin to chicken bones. Useful hooks can also be made from thorns. In all cases the object is to create a hook that will hold the bait and catch a fish. By their nature they will be small and require some time to make.

You will also need some form of weight to bring the hook to the depth required, and of course a fishing line.

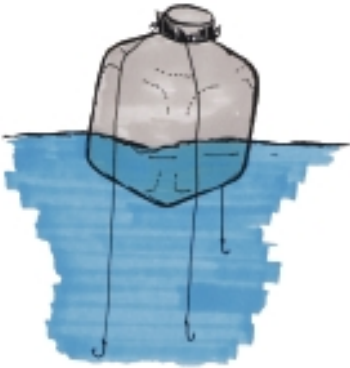




Fixed and night lines

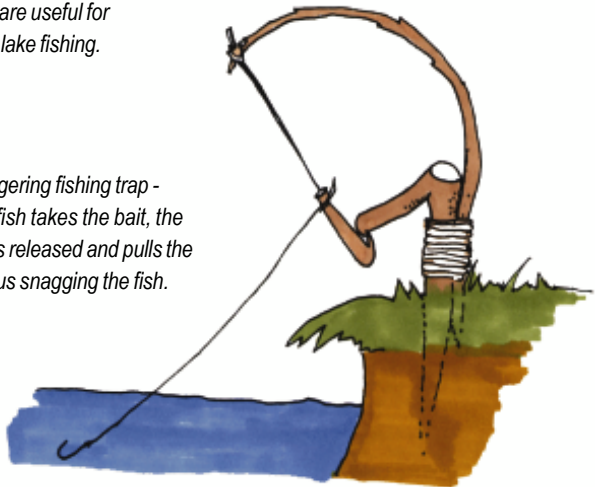
If you were to find yourself in a true survival situation, you could not afford to spend all day sitting by the river fishing. You would therefore consider the use of fixed lines and night lines. These lines are fixed and left to do their work. The fish come in their own time and get caught. Lines are checked a couple of times a day.

The location of fixed lines is important and observation of the waterway is the key. By observation you will be able to see where fish are likely to be. Note where the shadows fall from trees, the deep and shallow areas, where the fish are jumping etc., other indicators are birds, in particular, birds that live on fish. Birds with pointed beaks are usually flesh eating birds and feed on fish and animal life that live near the water. Discovering the best locations to place your lines will increase the possibilities of catching a fish.



Floating fixed lines are useful for seashore fishing or lake fishing.

Self triggering fishing trap - once a fish takes the bait, the trigger is released and pulls the hook thus snagging the fish.





Baden Powell, the founder of Scouting was very keen on backwoods living. This painting by Baden Powell shows a backwoods shelter he constructed on a trip to a Canadian wilderness area in 1911.

Ropework



Ropework



Stopper Knots

Stopper knots are used as a temporary method of stopping a rope from fraying or as a method of locking other knots which may be prone to loosening.

These knots are:

The Overhand Knot

The Figure of Eight Knot

2.



1.

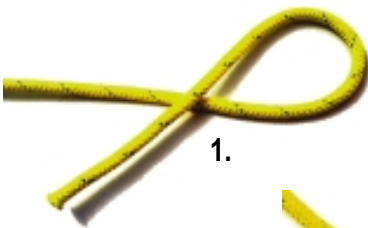


Overhand Knot



The Overhand Knot can be used to create a loop by doubling the rope and then tying the knot.

1.



2.



Figure of Eight

3.



4.



ROPEWORK



Reef Knot



Joining Knot

Joining knots are used for joining ropes together. The Reef Knot and the Fisherman's Knot are used when joining ropes of the same thickness together, whereas the Sheet Bend is better suited to ropes of different thicknesses.

The Joining Knots are

The Reef Knot

The Sheet Bend

The Fisherman's Knot



The Reef Knot is used for tying bandages, because when tied it lies flat.

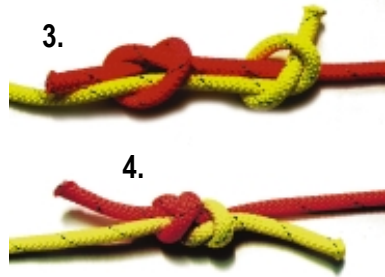
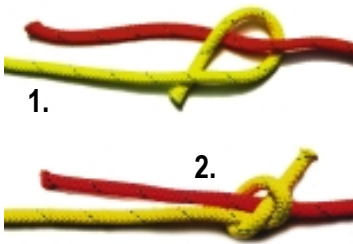


Sheet bend



When tying with light and heavy lines and braided rope it will be necessary to secure with a stopper knot or complete a number of turns as it Stage 4

Fisherman's Knot



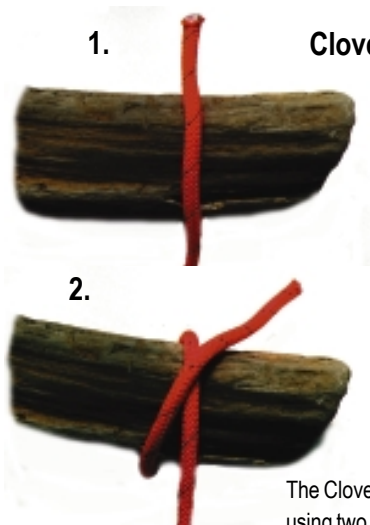
This knot is particularly useful for tying fishing lines together.

Fixing Knots

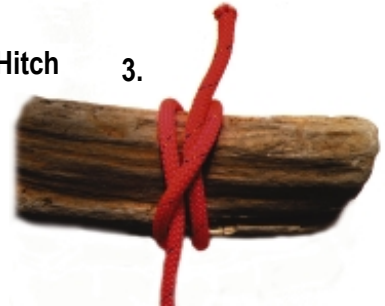
Fixing knots are those knots which are best suited to fixing a rope to a pole or object. The Clove Hitch and the Round Turn and two half hitches are the main knots used for fixing. The Marlinespike Hitch is used for attaching the rungs to a rope ladder. When you need to drag a log or start a diagonal lashing you use the Timber Hitch. The Highwayman's Hitch is a fun knot which can be used to fix a rope to a branch so as to climb up or

down a tree. The beauty of this knot is that it can be removed, from the ground, by pulling on the slip loop. The fixing knots are:-

- The Clove Hitch**
- The Round Turn and two half hitches**
- The Highwayman's Hitch**
- The Marlinespike Hitch**
- The Timber Hitch**

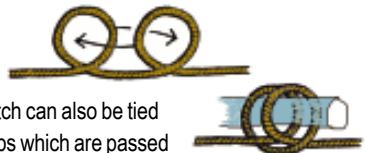


Clove Hitch



The Clove Hitch is always used for fixing to a pole when starting a lashing

The Clove Hitch can also be tied using two loops which are passed over the top of a pole.

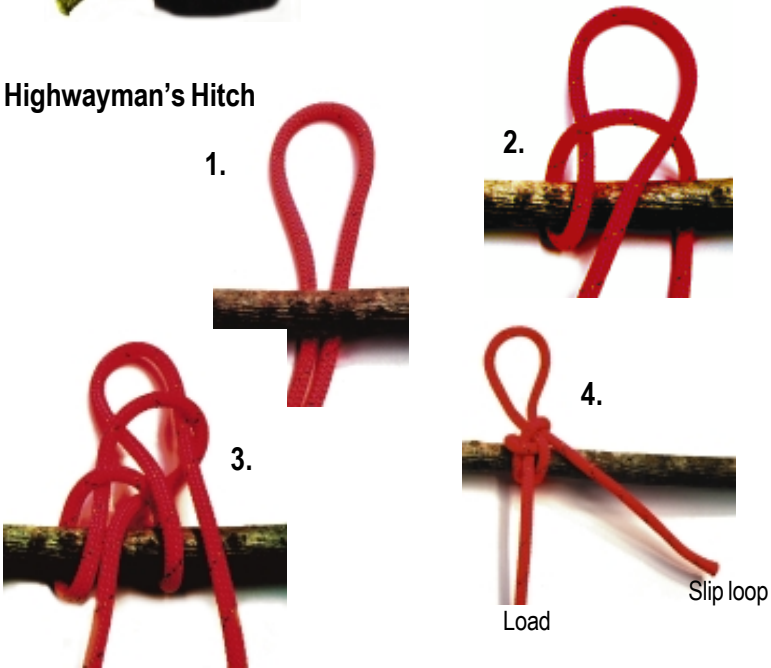


Round Turn and two half hitches



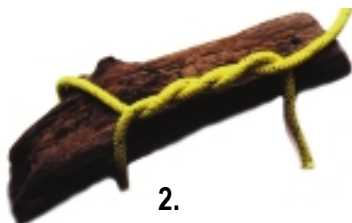
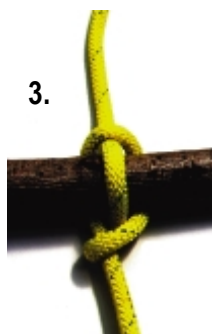
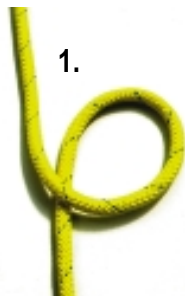
This knot is normally used to secure a rope to a tree or pole as it will not slip under strain. It is normally used in boating for tying up a boat to the pier.

Highwayman's Hitch





Marline spike Hitch



Timber Hitch



Strain on rope keeps knot in place.

Loop Knots

The Bowline, Figure of Eight loop and Manharness Knot are essentially climbing knots. Each knot creates a loop that will not slip under strain. The Bowline is normally used to tie yourself onto the end of a rope. The Figure of Eight loop is used to attach a rope to a karabiner, however it can also be used to tie yourself on to the end or middle of a rope. The Manharness Knot can do the same job, but is normally used to tie on the middle of a rope.

Bowline

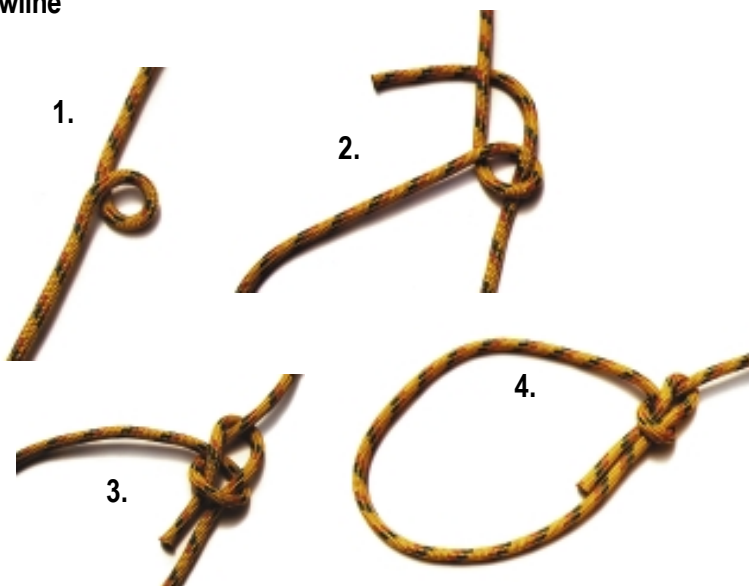
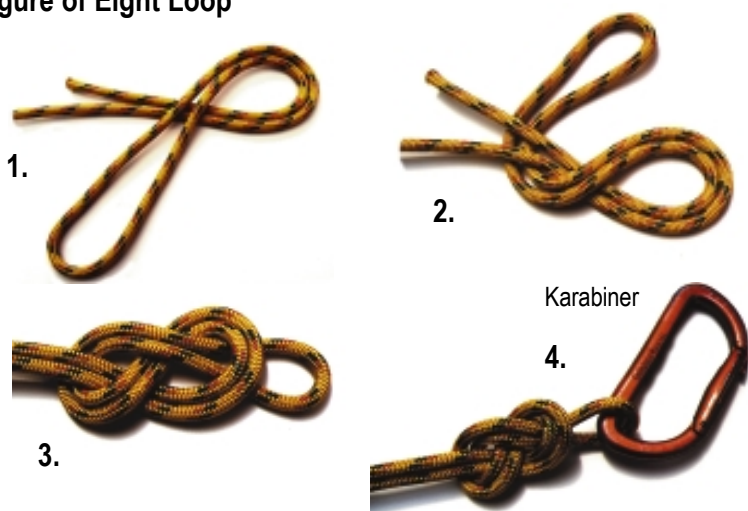


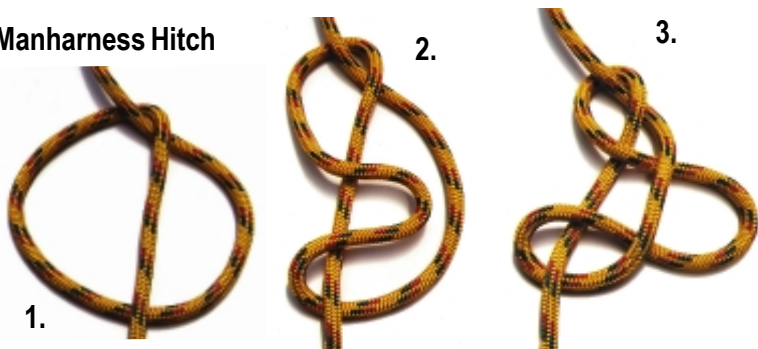
Figure of Eight Loop



Basic Figure of Eight Stopper knot

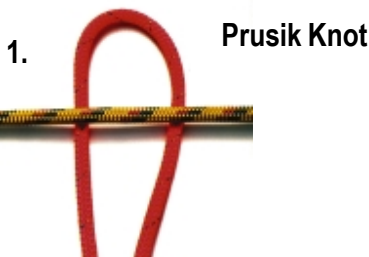


Manharness Hitch



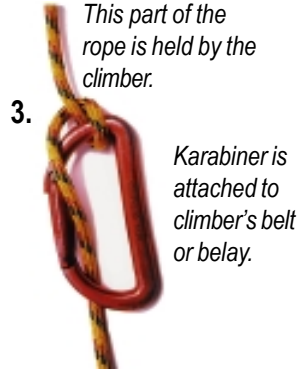
Friction Knots

Two friction knots are illustrated here. They are the Prusik Knot and the Italian Hitch. Both knots are normally used in climbing and caving. The Prusik Knot has an unusually feature; it is non-slip when under pressure and can be slid along a rope when pressure is remove. It is a useful knot for climbing up a rope. The Italian Hitch is used with a karabiner and allows a person to be lowered down a rope, under control, due to the friction created between the karabiner and the rope.



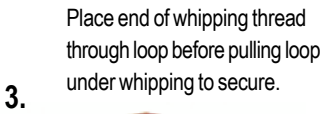
Prusik Knot

Italian Hitch



Whipping

In order to prevent a rope from fraying a whipping is applied to the end of it. Nylon and plastic ropes can be prevented from fraying, by sealing their ends. This is done by melting the fibres, using a candle or soldering iron.



Splicing Ropes

Crown Knot

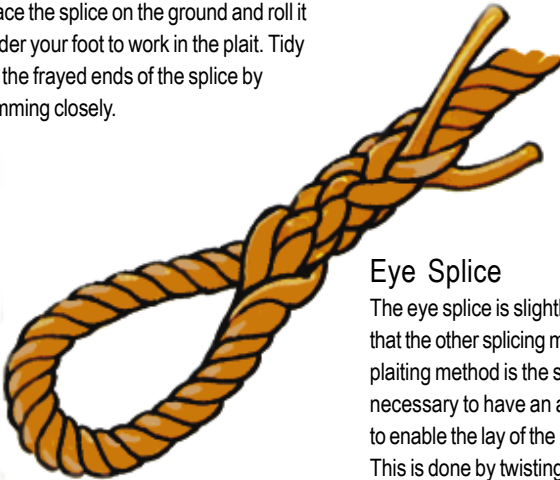


Back splice

A back splice is used to prevent a rope from fraying. It is created by unravelling about 120 mm of the rope end. The first step is to make a Crown Knot. Then taking each strand in turn plait it back into the rope. This is done by skipping one lay of the rope and passing the strand under the next. Move to the next strand and repeat this process until all the strands are plaited back into the rope. Place the splice on the ground and roll it under your foot to work in the plait. Tidy up the frayed ends of the splice by trimming closely.

Long splice

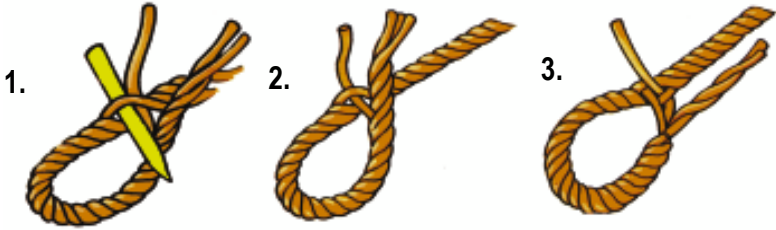
A long splice is used to join two ends of a rope. The first step is to unravel about 120mm of the end of each rope. The strands are spread apart and placed together equally as shown. The rope is then plaited as with the back splice - skip one lay and under the next. Tidy up ends when finished.



Eye Splice

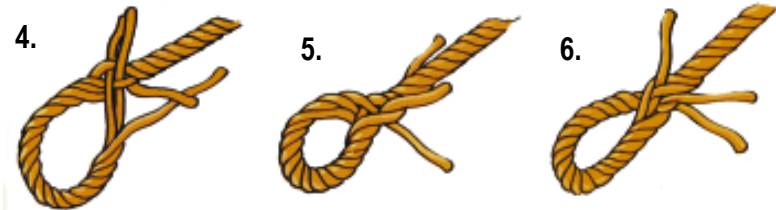
The eye splice is slightly more complicated than the other splicing methods, however the plaiting method is the same. Normally it is necessary to have an awl or pointed dowel to enable the lay of the rope to be opened. This is done by twisting the rope and pushing the dowel between the lay to create a hole so that the plaiting strand can be passed through the lay of the rope.

Eye Splice



Unravel the end of the rope by about 120mm. Turn the rope to create the loop. Observe the lay of the rope. It will have 3 strands and it is necessary to place a strand under each lay of the rope. Be careful not to get your strands crossed - under the same

lay - otherwise the splice will not plait correctly. When the strands have been placed equally under the 'lays' - plait the rope as in the back splice - skip one lay and under the next. Tidy up the ends when finished



Commando rope

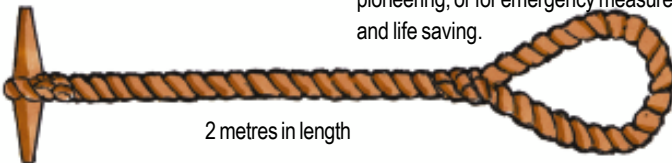
The toggle rope came into prominence during the second world war, especially with commandos, who often, in the course of their duties had to scale walls, climb cliffs, cross deep rivers. Most of the tasks required large quantities of bulky rope to be carried. Rather than burden a few men

with such an awkward load, each soldier was given a piece of rope about 2 metres in length, and 20mm - 25mm in diameter, with an eye splice on one end and a toggle on the other, secured by means of another eye splice. The open eye splice was large enough to allow the toggle to fit through with no danger of the toggle slipping.

This is a versatile piece of equipment that every Scout should have. It has many and varied uses on hikes, in pioneering, or for emergency measures and life saving.



100mm



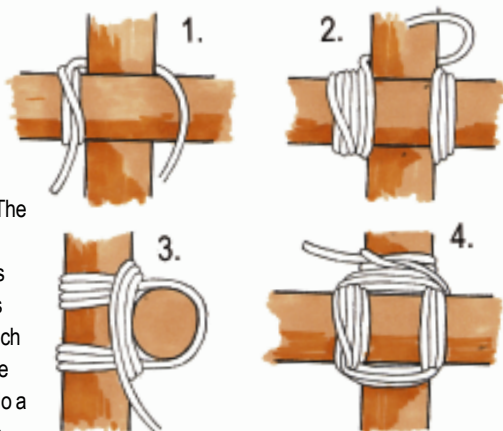
Lashings

Lashings are knots which use a combination of knots and wrappings to create a binding which holds poles together securely.

Traditional square lashing

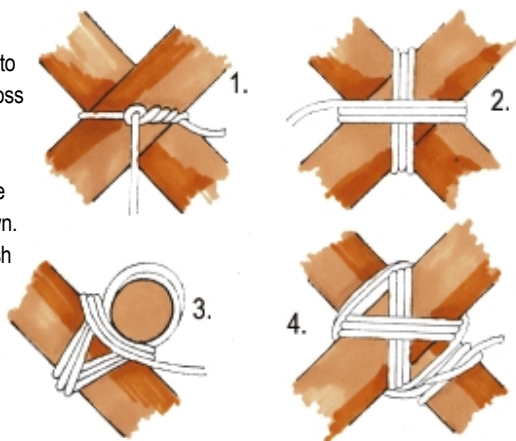
This lashing is used for joining poles that cross at right angles. The lashing is started using a Clove Hitch. The free end of the rope is then passed around the poles as shown and pulled tightly after each turn. When five or six turns have been made, twist the rope and do a number of frappings between the two poles. The frappings pull the wrappings together and tighten the lashing. Finish with a Clove Hitch on the opposite pole.

Traditional Square Lashing



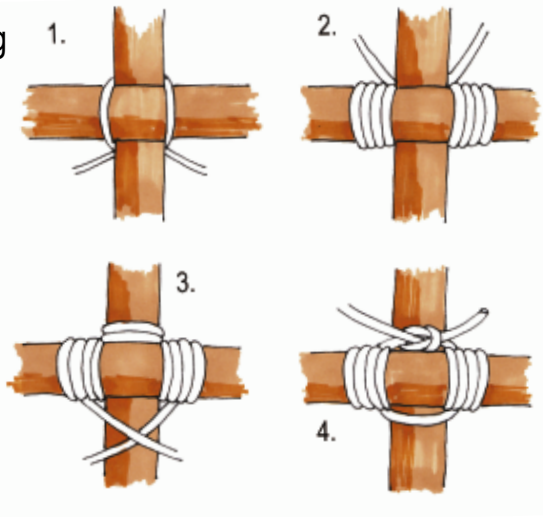
Diagonal Lashing

The diagonal lashing is used to lash together poles which cross each other at an angle. This lashing is started by using a timber hitch. Once secure the wrapping is created as shown. Then do the frapping and finish with a Clove Hitch

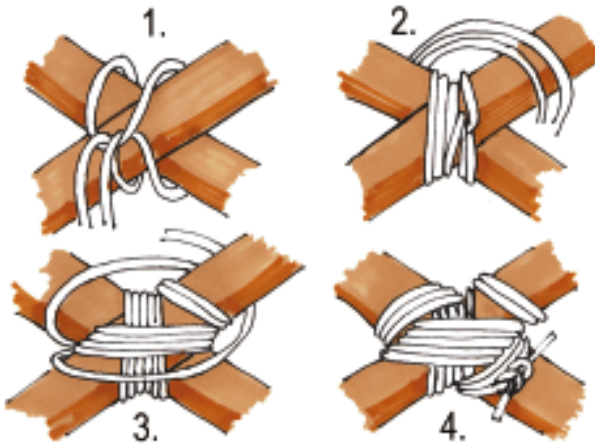


Norwegian Lashing

The Norwegian Lashing is easier to lash and results in a tighter lashing due to the fact that you are tightening the rope against itself. The lashing is created by halving the lashing rope and starting at the middle, around the upright pole. Make four wrappings by pulling and changing over the lashing ropes. Then create a number of frappings in a similar fashion. Finish the lashing with a Reef Knot



Japanese Lashing



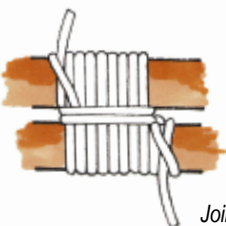
The Japanese Lashing is similar in technique to the Norwegian lashing. Start by halving the lashing rope and creating a secure loop around the poles. Use the two strands to make the wrappings as shown. Switch the

direction of the wrappings so as to have two single strands working in opposite directions, best done around a pole and frap the lashing. Finish with a Reef Knot

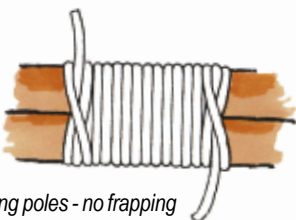


Sheer Lashing

Sheer legs lashing with frapping



Joining poles - no frapping



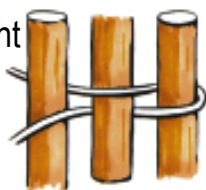
The sheer lashing is used to join two poles together to create sheer legs when the butt of the poles are spread apart and to create a long pole and keep them parallel. In the case of joining poles two

lashings are required, one at each end of the overlapping poles. Start with and finish with a Clove Hitch. Wrap and frap as shown. In the case of sheer legs one lashing is required.

Tripod or Figure of Eight Lashing



Traditional Tripod lashing

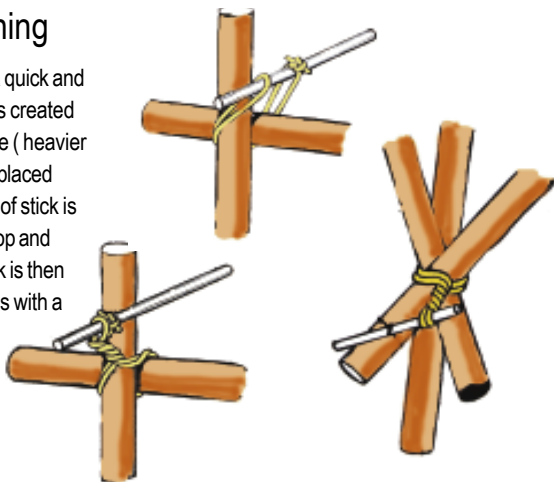


Danish Tripod lashing

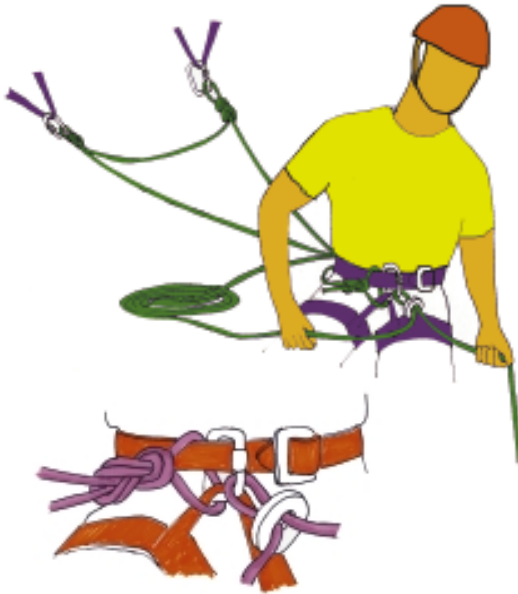


Tourniquet Lashing

The tourniquet lashing is a quick and easy lashing to create. It is created using a closed loop of rope (heavier than normal lashing rope) placed around the poles. A piece of stick is then placed through the loop and twisted until tight. The stick is then secured to one of the poles with a piece of string



Rope management on rock



Belay

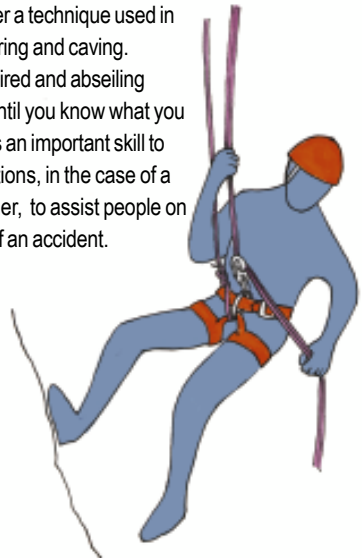
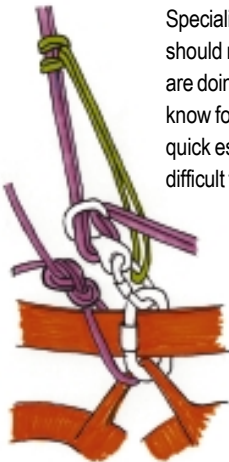
Whenever you work with ropes at a height it is necessary to belay yourself to a fixed object (rockface, wall) to prevent a fall. A belay is the method that is used to tie yourself to this object. This is done using certified equipment such as tapes, climbing ropes, chocks and metal pegs. A belay should be fixed to at least two points in case one point fails.

Setting up a belay correctly requires training and should not be attempted unless you know what you are doing. Your life may depend on it.

Abseiling

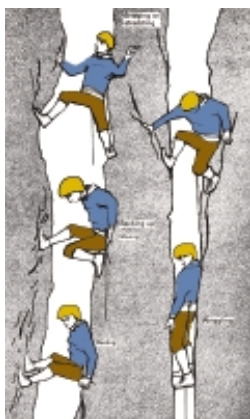
Abseiling is a means of lowering yourself from a height, using a rope in a controlled manner. It is not a sport in itself but rather a technique used in rock climbing, mountaineering and caving.

Specialised training is required and abseiling should not be attempted until you know what you are doing. The technique is an important skill to know for emergency situations, in the case of a quick escape in bad weather, to assist people on difficult terrain, or in case of an accident.

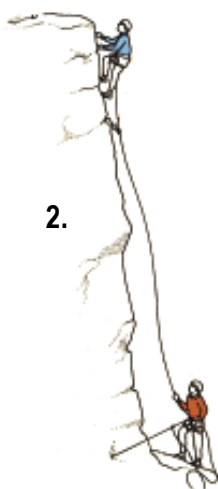


Climbing technique

The lead climber climbs first and as he/she climbs they place 'protection devices' in small cracks and slots within the rock face. If they fall, the 'protection device' will stop or slow down their fall. The second climber protects the lead climber - loosening and tightening the rope as required. When the lead climber has completed the climb, or a section of the climb, known as a pitch, he/she then belays himself/herself and brings up the second. The second removes the 'protection devices' as they climb.



1.

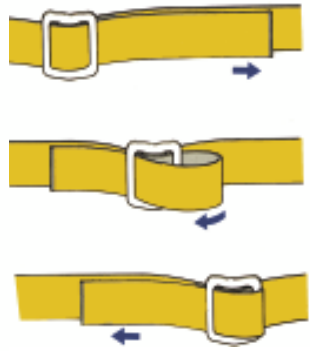


2.



3.

How to climb up a 'chimney'.



Rock climbers use specialist climbing belts which are designed to prevent injury in the event of a fall. The belts also have anchor points and loops to connect ropes and equipment to the them.



Safety helmets

Safety helmets are a must for all rock climbing activities.

Helmets are made to standard sizes and all have adjustable strapping. When you place the helmet on your head adjust it to suit, and tighten strap under the chin.

Karabiners

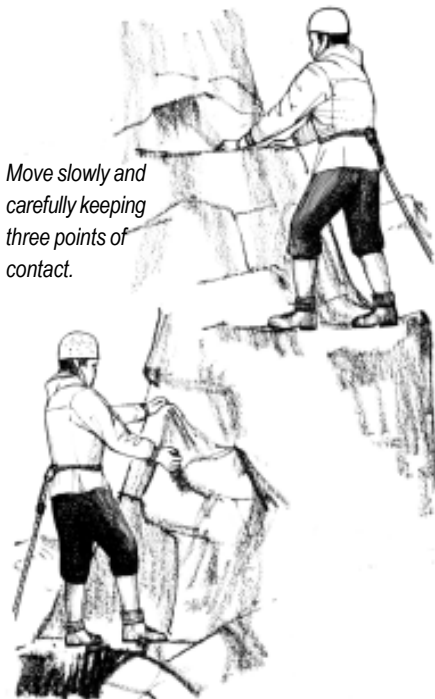
Karabiners are standard climbing equipment. They are strong metal links which are used to connect equipment and ropes to the rock and the climber. 'Screw gate' karabiners are preferred for safety reasons.





While walking and climbing mountains you will often find that you have to scramble over small outcrops of rock and steep ground. This is, technically, not rock climbing and often you may not need a rope. However it is advisable to carry and use one for safety. The climbing of a rock or outcrop is done by technique rather than brute force. Your legs provide the lift and your hands grip and balance - just like climbing a ladder. You do not pull yourself up by your hands. When climbing, you move one limb at a time, three points of contact should be maintained at all times. Move slowly and carefully and never jump for a hold.

ROPEWORK

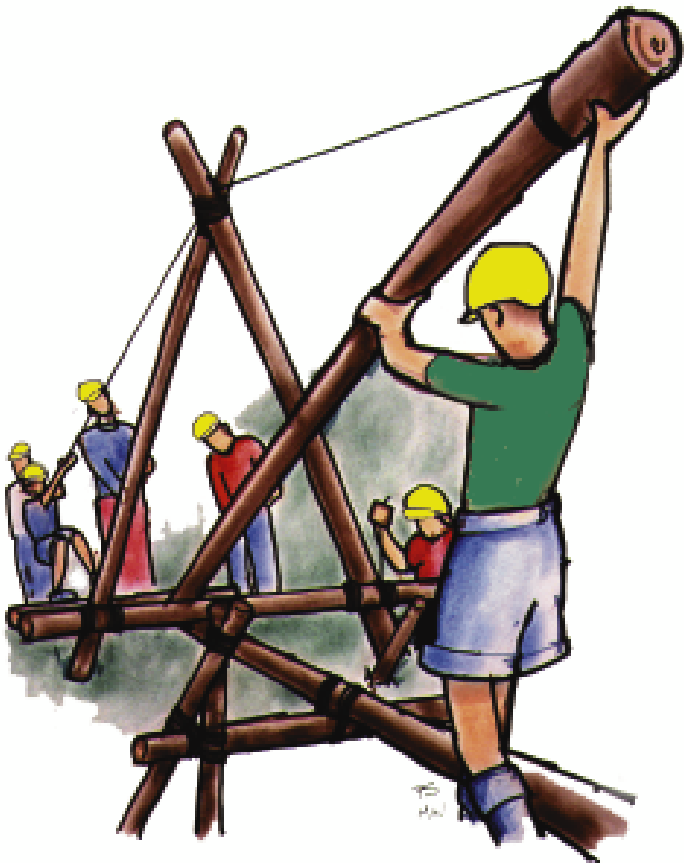


Move slowly and carefully keeping three points of contact.



Handholds come in all sorts of shapes and sizes and often you will have to move and manipulate your fingers to get a good solid grip.

Scout Engineering



Getting started

Pioneering or Scout engineering refers to the work of military engineers who went ahead of the army on foot, to build bridges, roads and to generally prepare the way.

They got there first, often in the wilderness, and had to make do with what they could find, or carry. With axes and ropes they worked wonders and created many functional structures.

Scout Engineering provides Patrols with a challenge and an opportunity to develop as a team and achieve something worthwhile.

Before building, it is necessary to have an understanding of the skills involved, as well as enthusiasm. Firstly, you must know how to tie the required knots and lashings, secondly, you must have spars or poles with which to build your

project. The next consideration is ropes and pulleys to bridge and secure your project, and, lastly, loads of common sense.

Each project should be approached in a logical way:-

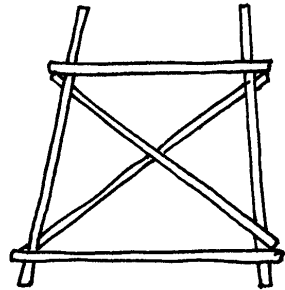
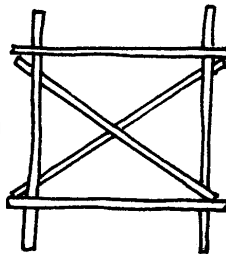
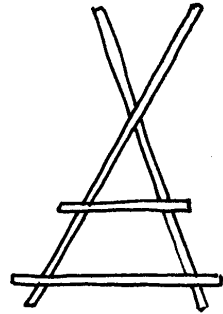
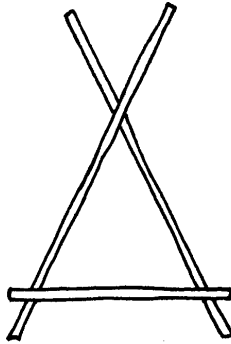
- What are we trying to do?
- What equipment do we have?
- What is the best way to use this equipment?
- Designing the project
- Planning the steps to complete the project
- Testing and safety
- Dismantling the project

Every project should be approached in this way. The designs suggested have been tried and tested. However you will rarely find a level river bed or trees in the right places for rope bridges etc., so each of the basic designs suggested may have to be modified to suit the conditions you encounter.



Lashings

Experience would suggest that the best lashing to use in the construction of the projects is not the traditional square lashing but rather the Norwegian lashing. This is easier and quicker to tie than the traditional lashing. With the Norwegian lashing the sisal or lashing rope is halved, and you are constantly pulling the strain against yourself. This makes it easier to tighten and manage the construction of the lashing plus you finish it off with a reef knot or granny knot. Once you master the technique it can be adapted to the other lashings - Tripod, Diagonal, Sheer.

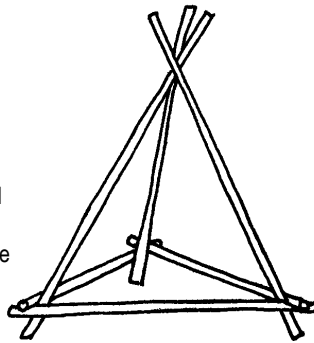


Basic Structures

All pioneering structures are created using a number of basic forms - the A frame, the A frame with double bar, the sheer legs, the square trestle and the rectangular trestle.

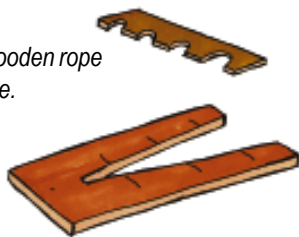
All of these basic structures are stable, if constructed correctly, and will not move out of shape.

Once the basic shapes are constructed on the ground they are combined perhaps with a number of linking spars to provide a tower, bridge or similar structure. As a general rule it is better to build a big structure from a number of smaller and reasonably light frames than trying to lift heavy frames or poles.



Ropes

Simple wooden rope size gauge.



Ropes come in many types and sizes and to simplify matters you should use the following as a guide.

75mm rope (25 mm diameter) or larger, certainly no smaller than 75mm, should be used whenever it is intended to hold weight such as in the case of a monkey bridge, foot and hand rails, aerial runways, and commando rope bridges.

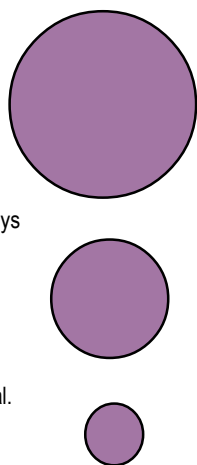
Quick reference - the diameter of a broom handle is approx. 25 mm.

50 mm rope (16 mm diameter) should be used for 'reeving' up pulleys and anchors and for rope ladders.

Quick reference - the diameter of a man's thumb is approx. 16mm-18mm

25mm rope (8mm diameter) should be used for guy ropes in general. On large structures this size would need to be increased.

Quick reference - the diameter of the small finger is about the size of what is known as sash cord or heavy clothes line.



Ropes below this size should be used for lashings only.

Rope lengths will vary according to how they are purchased. 25 metre lengths will normally cover most projects as the distance between sheer legs or rope bridges should not exceed 15 metres, to avoid 'flipover'. Flipover occurs when too much slack in the rope causes it to act like a skipping rope. When pressure is applied to the middle of the rope it becomes unstable, and sways, resulting in the 'rope crosser' being thrown off or becoming entangled in the ropes, which is extremely dangerous.

As most of the ropes used in pioneering structures require an element of friction to provide maximum efficiency, laid ropes of natural fibre, such as sisal or hemp are

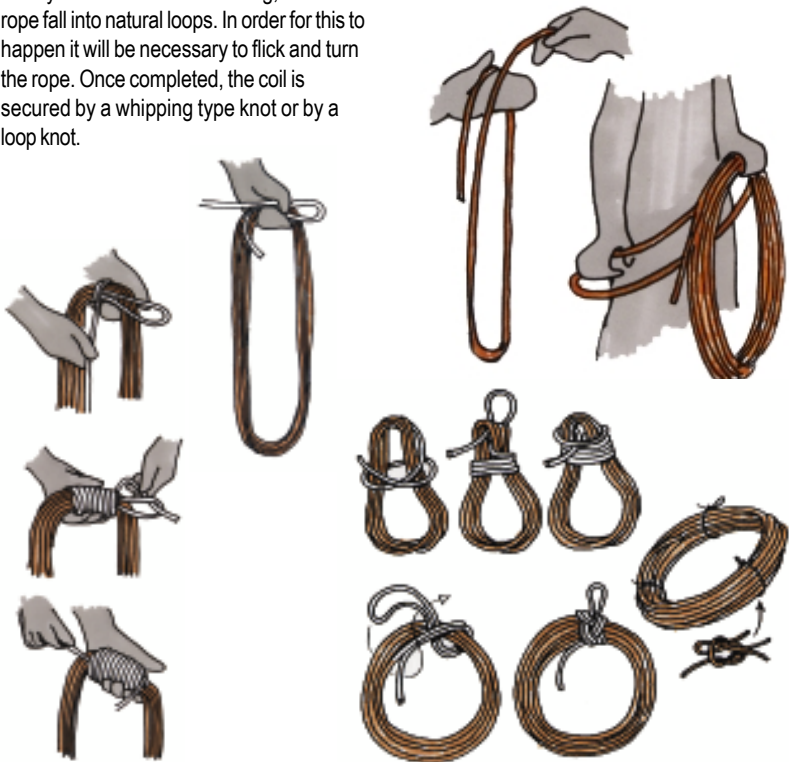
preferred. They are more expensive and need care and attention as the fibres can deteriorate and rot if not dried carefully. Synthetic ropes are less expensive but require extra care particularly when fixing them to trees and poles. These ropes are generally smoother than hemp or sisal ropes, but the knots have a tendency to slip under pressure. To ensure safety and prevent slippage you should secure all knots with extra hitches.

Coiling a Rope



In order to protect a rope from damage and to aid in transporting it, you should be able to coil it properly. This can be done in a number of ways as shown. When coiling, let the rope fall into natural loops. In order for this to happen it will be necessary to flick and turn the rope. Once completed, the coil is secured by a whipping type knot or by a loop knot.

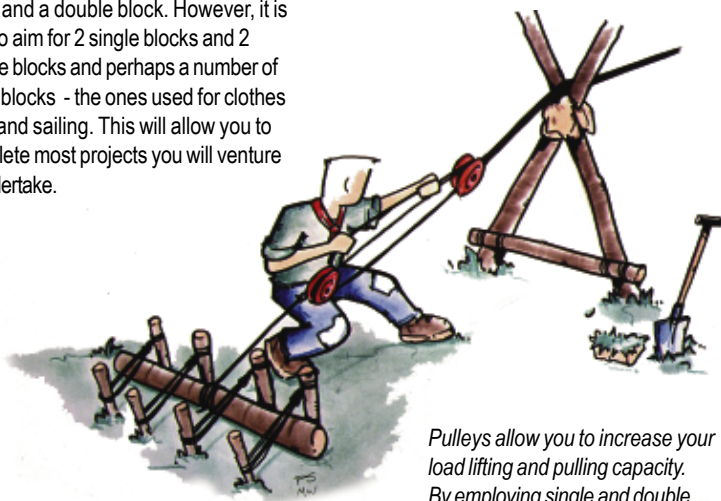
When coiling a heavy hawser it is best to coil it in large loops on the ground. Passing the hawser through your legs will aid this process and prevent tangling. The coil is secured using short sisal ties.



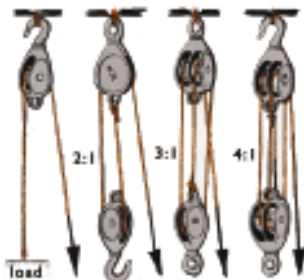
Pulleys

Most pioneering projects can be completed using 2 pulleys - a single block and a double block. However, it is best to aim for 2 single blocks and 2 double blocks and perhaps a number of small blocks - the ones used for clothes lines and sailing. This will allow you to complete most projects you will venture to undertake.

The size of your blocks will need to be:-
 150mm for 50mm rope
 230mm for 75mm rope



Pulleys allow you to increase your load lifting and pulling capacity. By employing single and double pulleys, different pull ratios can be achieved

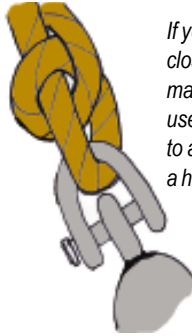


Mousing

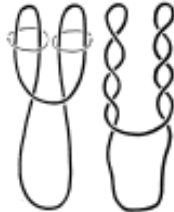
All hooked blocks need to be 'moused'. This is done using sisal which is bound around the 'bill' and back of the hook as shown.

Mousing is not 100% effective so it should be checked at regular intervals.



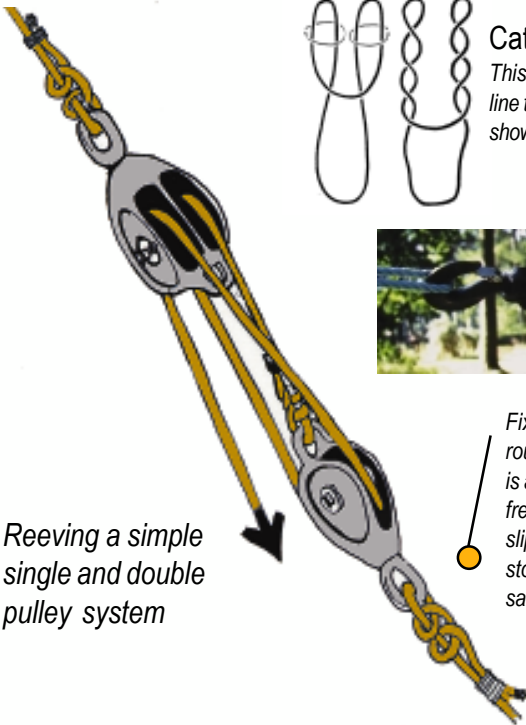


If you are using a closed eye pulley it may be necessary to use a D ring shackle to allow you to attach a heavy line.



Catspaw knot

This knot is used to connect a line to a hooked pulley as shown.



Reeving a simple single and double pulley system



Fix the line to the pulley using a round turn and two half hitches. It is also a good idea to whip the free end of the line to prevent slippage. You can also use a stopper knot if you wish to do the same job.

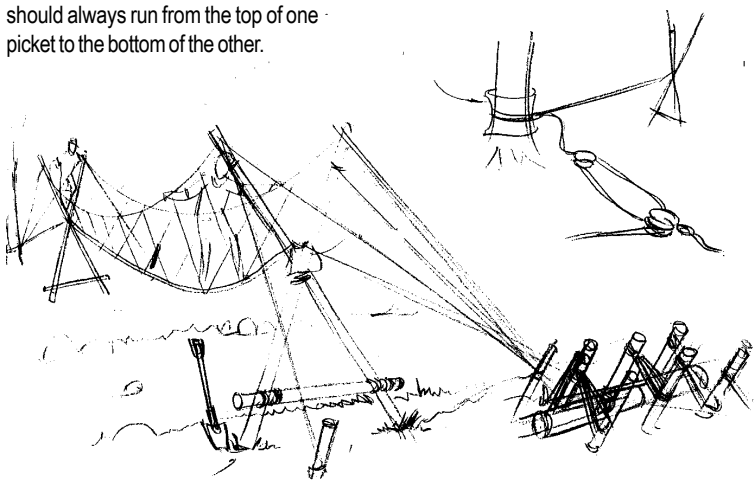
Anchorage

If at all possible you should anchor your ropes to a fixed object such as a 'big' tree or rock. However, they will rarely be available in the right places so we will have to create our own anchors and pickets. There are two possibilities: the 3-2-1 picket and the picket and log anchor. Both are illustrated below. In each case the pickets should be at least 160cms long and put in position with a sledge hammer or large mallet. If the ground is soft they may need to be longer. The pickets should be set in the ground at 60 degrees and the bindings between pickets should always run from the top of one picket to the bottom of the other.

As a rule of thumb

Pickets should be positioned in the ground approx., 3 times the height from which the main rope leaves the structure. i.e. if the main rope passes over the sheer legs at 3 metres above the ground then the pickets should be set in the ground 9 metres from the base of the sheer legs.

It is normal practice to fix the rope to a log and picket anchor and fix the pulley assembly to a 3-2-1 picket anchor.





3-2-1 picket



Deadman's Anchor

Log and picket anchor



Fixed anchors

With fixed anchors, such as trees, you need to create a loop of rope on which to fix pulleys. This is done by wrapping a rope around a tree a number of times as shown. The collective strength of the loops of rope must exceed the strength of the rope being strained, otherwise the loops are the weakest part of the structure. It is therefore suggested that 25mm rope is used for this job and is wound around the tree at least 4 times.



Protection of trees

If you are fixing a rope or spar to a tree you should be careful not to damage the bark. This can be done by using some sacking or old canvas to protect the bark from friction. It may also be necessary to use sacking or padding on a structure if the rope will be subject to excessive friction, for example in the case of a monkey bridge. This is particularly important when using synthetic ropes as they are prone to melt if in a friction situation or if two ropes are rubbing off each other.

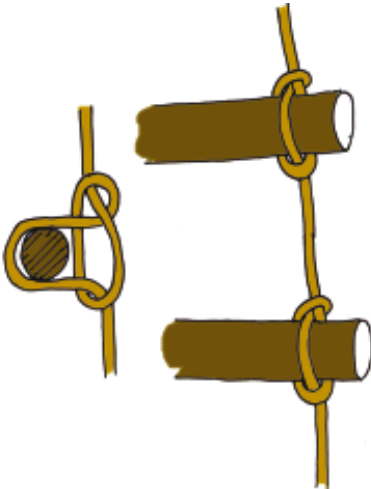
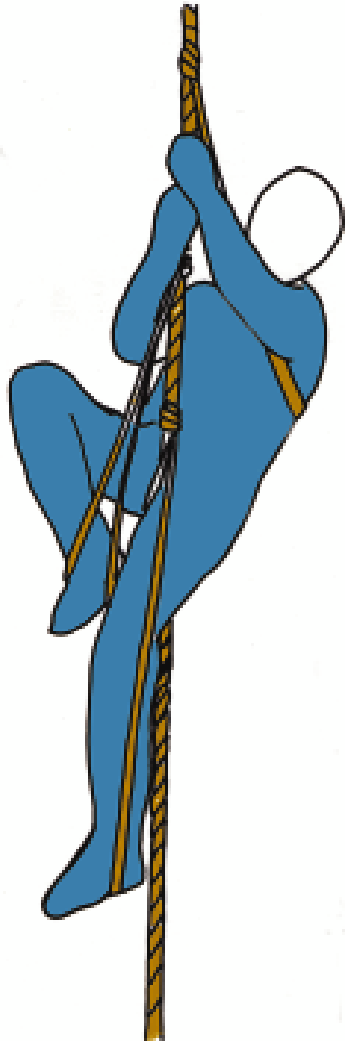


Getting up

A problem that can be encountered when pioneering, is getting up a tree to secure ropes and pulleys to branches.

Prusik Knot

The prusik knot is a friction knot, which allows it to slide on a rope when free of a load, but will grip the rope when under strain. To climb a rope you will need three prusik loops fixed onto the main rope - 2 for the feet and 1 as an underarm loop. The rope is climbed by sliding the knots, one at a time, so that it is possible to 'step up' the rope using the foot loops. With practice, a rhythm can be developed which will allow you to climb the rope with ease.



Rope ladders

Rope ladders are constructed using the Marlin Spike Hitch or Clove Hitch.

How much equipment do you need?

In order to undertake all of the projects shown in this chapter you need to have the following minimum quantities of equipment in your store. The quantity listed is to complete one project at a time.

Most Units have a stock of spars and pulleys, so it is only necessary to borrow them from the Unit quartermaster. Apart from the large spars you will also need a number of small poles for platforms, and rungs for ladders and handrails.

Rope ladder

It is better to have a permanent rope ladder made, using fixed stopper knots and in your store, rather than making one each time it is required.

Ropes

You will need a main hawser, 75mm rope, for footrails and for use whenever a rope is expected to hold weight. These ropes are sold in set lengths and you should not cut them.

50mm ropes and smaller will probably be provided in various lengths by the quartermaster and you should not cut them. Lashing ropes will also be required. Your quartermaster will probably supply these already cut into working lengths.

A rule of thumb for lashing ropes

1 metre of lashing rope should be used for every 25mm of thickness of the spars to be secured together,
i.e. two 75mm spars require 6 metres of lashing rope.

Pulleys

You will need a minimum of 1 double block, either 150mm or 230mm, depending on the size of the rope to be used (normally 150mm). Depending on the design and location of your project you may require two of each to cover all situations.

These large blocks can be supplemented with a number of smaller pulleys which are useful for hauling and small lifting devices.

Equipment list

4	No.	5 metre spars
6	No.	4 metre spars
10	No.	3 metre spars
10	No.	2.5 metre spars
8	No.	2 metre spars
8	No.	1.5 metre spars

Selection of poles for pickets and small spars for platforms, rungs for ladders and handrails

1	No.	Rope ladder
1	No.	75mm rope - main hawser
2	No.	50mm rope - long lengths for handrails

50mm reeving rope for pulleys
25mm rope for guy lines (15 metre lengths)

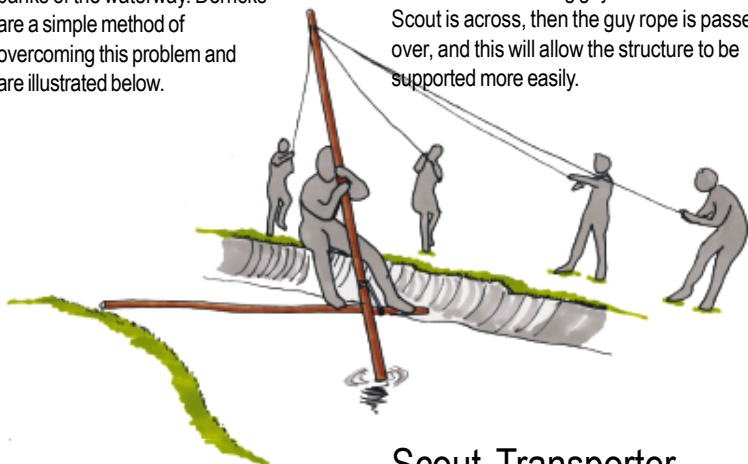
Lashing rope and sisal of various lengths

Pulleys

2 single (150mm or 230mm)
2 double (150mm or 230mm)
5 small pulleys (clothes lines or sailing type)

Getting over

One of the problems encountered when constructing a bridge is how to get members of a Patrol or construction crew to the other side of the river or stream so that the bridge can be completed on both banks of the waterway. Derricks are a simple method of overcoming this problem and are illustrated below.

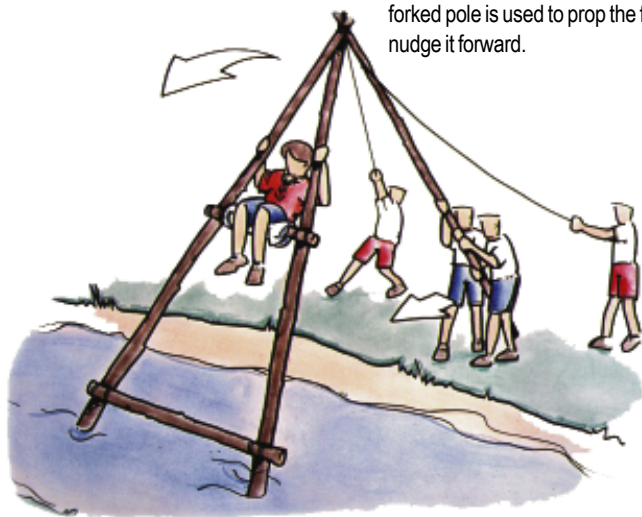


Simple Derrick

The simple derrick is constructed using two spars loosely tied together. a loop of rope is attached to both spars so that it is possible for the 'traveller' to balance and manoeuvre the spar over the waterway. The rope should be attached on each pole using a round turn and two half hitches. Guys are fixed to the top of the derrick. The derrick is balanced by Patrol members using guys until the first Scout is across, then the guy rope is passed over, and this will allow the structure to be supported more easily.

Scout Transporter

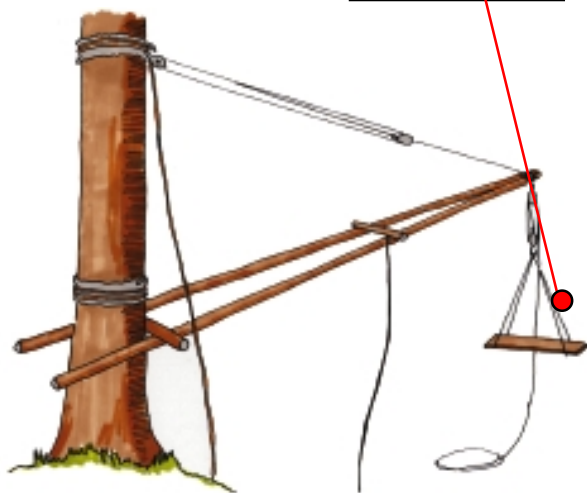
A double bar A frame is constructed and a member of the Patrol sits on the frame. A forked pole is used to prop the frame and nudge it forward.



A double bar A frame is constructed. The first Scout to cross stands on the frame and a forked pole is used to push it over. The rest of the Patrol, manning the guy ropes, control the balance and descent of the frame. The Scout on board jumps to the bank.

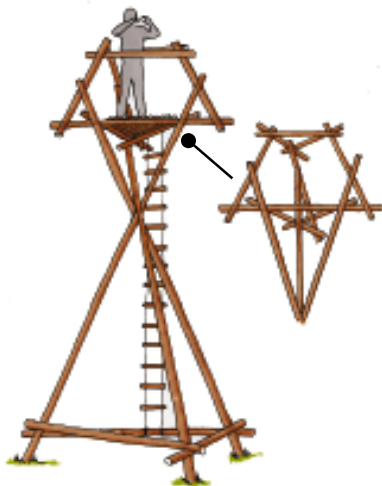


This swinging derrick is slightly more complicated to construct. A 'slim' double A-Frame is constructed and pulleys rigged as shown. The 'traveller' pulls on the pulley rope to raise themselves up. Some of the Patrol haul the A-frame into position and the other members swing the frame over the void.



Wooden seat is attached to ropes using a clove hitch

Towers



Tripod Tower

This tower is reasonably easy to construct. All the lashings are square except the tripod lashing on the main spars.

Equipment required

- 3 No. 5 metre spars
- 3 No. 3 metre spars
- 3 No. 2 metre spars
- 3 No. 1.5 metre spars
- 3 No. 1 metre spars
- Small poles or planks for platform
- Lashing ropes
- Guys
- Rope ladder
- Spade to dig butt holes for tower

How to build

- Place a tripod lashing three - quarters up the 5 metre spars.
- Lift the spars straight up and create tripod shape.
- Fix 3 metre braces to the bottom of the tripod using square lashings.
- Drop the tripod to the ground and place top braces on it allowing them to jut out of each side.
- Build the rest of the platform structure. You can also build the top structure as one piece and place on top of the tripod.
- Fix the guy ropes and the rope ladder and raise into position.
- You should dig a number of small holes for the butts of the spars to fit into.
- Secure the guys and test the rope ladder and platform before use.

Hour Glass Tower

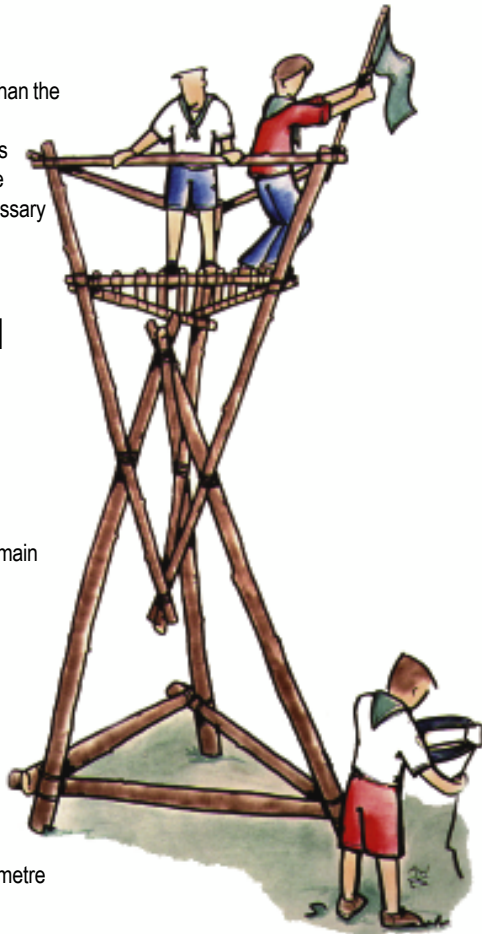
This tower is slightly more complex than the tripod tower, however the principle of construction is the same. The tower is constructed by using two tripods, one inverted on top of the other. It is necessary to brace the two tripods to prevent the top tripod swaying.

Equipment required

- 3 No. 4 metre spars
- 6 No. 2.5 metre spars
- 3 No. 1.5 metre spars
- Small poles or planks for platform
- Lashing ropes
- Guy ropes
- Small spade for digging holes to butt main spars.

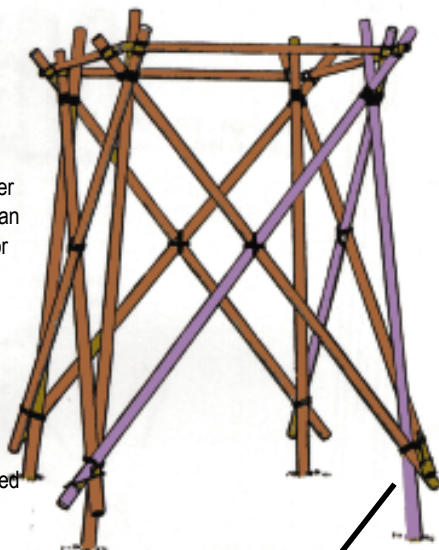
How to build

- Create a tripod with the 3 No. 4 metre spars.
- Raise the tripod and fix braces (2.5 metres).
- Drop tripod to ground.
- Make a second tripod using 2.5 metre spars.
- The legs of this tripod should be 'threaded' through the base tripod.
- The spars are then lashed in place using square lashings.
- The top braces- (2 metre spars) are fixed onto the top tripod and platform base is created (1.5 metre spars). Fix small poles or planks to form platform.
- A loose binding is fixed at the top of the lower tripod and the base of the top tripod to prevent swaying. This will need to be tightened when tower is raised in order to straighten it.
- Rope ladder and guys should be fixed to the platform before raising the tower.
- Place butts of tower in small holes dug at base.
- Fix all guys. Test structure before general use.



Ten Minute Tower

With practice, and the use of tourniquet lashings, it is possible to erect this tower in ten minutes. This structure provides an ideal challenge for a Patrol at a Troop or Patrol meeting. However, the tower tends to be used to create more complex bridges, using a number of towers to bridge a wide river or lake. Tripod, diagonal, square and tourniquet lashings are required to hold the structure together. The structure is free standing and can be lifted or carried into position.



Equipment required

- 8 No. 3 metre spars
- 8 No. 2.5 metre spars
- Planks for platform base
- Lashing ropes
- Small poles for tourniquet lashings



How to build

- Place a tripod lashing on 4 sets of spars as shown in diagram, the centre pole being 2.5 metres in length, the two outside spars being 3 metres in length.
- Stand up tripod 'sets' and spread out legs so that the 3 metre spars act as braces and the centre spar acts as the corner support of the tower.
- Move the sets together using tourniquet lashings at the bottom and diagonal lashings where the braces cross.
- Place 2.5 metre spars on top to brace top sections together.
- Place planks on top to provide platforms if it is to be used as a single tower.

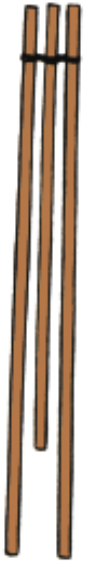
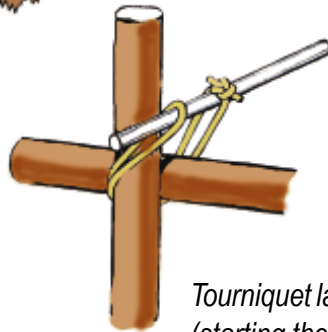


Figure of Eight lashing



*Tourniquet lashing
(starting the lashing)*

*Tourniquet lashing
(tightening the lashing)*

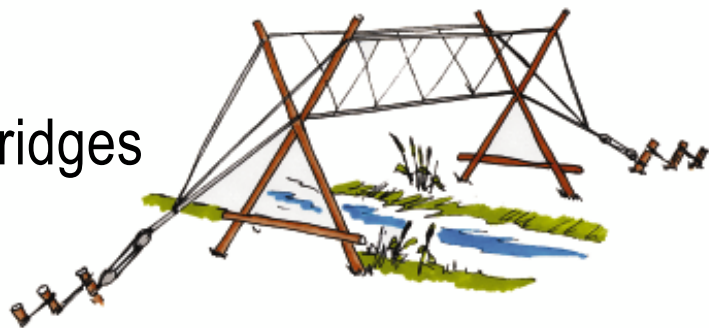


Tourniquet lashing

The tourniquet lashing is made using a loop of rope and a small pole. A small pole is inserted in a loop that is passed around the spars. This is twisted until the binding is tight. The small pole is then secured to the nearest spar, with sisal, to prevent it unraveling.



Bridges



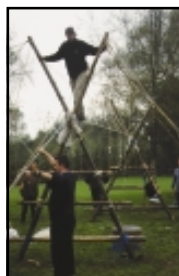
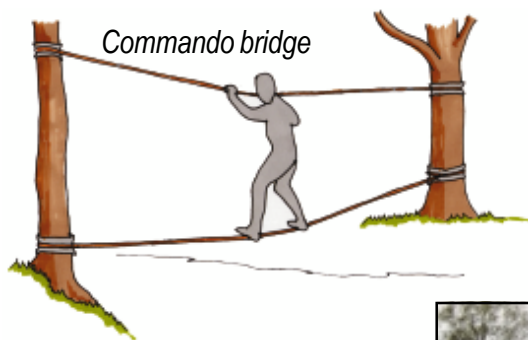
Monkey Bridge

The monkey bridge is constructed using two sets of sheer legs and bridged with a hawser, with handrails secured using pickets. This is an easy structure to build as most of the bridge is constructed using rope.

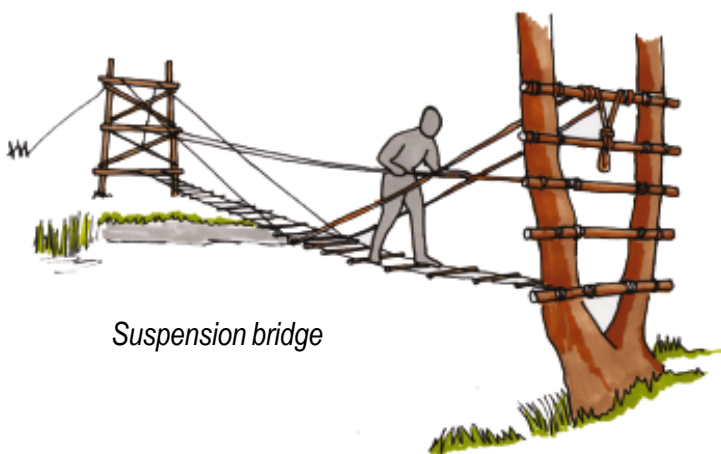
How to build

- Assuming you have access to both banks, construct two sheer legs with the crossing of the spars being a little above half way. The top portion of the spar should allow you to position the handrails at about shoulder height. The distance between the tips of the spars should be 1 metre.
- The sheer legs are then raised into position and the bases of the spars butted into the ground and guyed into position.
- Old canvas or sacking should be placed in the diagonal to reduce friction and wear on main footrope.
- The main rope (75mm) is passed over the sheer legs and the rope is aligned and hand strained, so that the position of anchors can be determined.
- A 3-2-1 picket anchor is placed in a straight line to the 'foot rope' on each side of the river bank. If only one set of pulleys is available then a log and picket anchor is placed on one bank and a 3-2-1 picket anchor on the other, to which your pulleys are attached.
- Hand rails are attached using clove hitches and are carried down to the ground like guys.
- Securing ropes are tied between the handrails and footrope, using clove hitches.
- Test structure before using.
- Pulleys will need to be checked at regular intervals as ropes slacken with use.





Single log bridges



Trestle Bridge

The trestle can be used as a basic building block for a whole range of bridges. The bridge illustrated is the locking trestle bridge which can either have a see-saw bridging platform or a fixed ramp on each side.



Equipment required

2 No. 6 metre spars

8 No. 4 metre spars

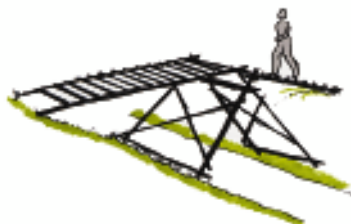
2 No. 3 metre spars

3 No. 2.5 metre spars

Spars for handrail supports and rungs for bridge

Lashing ropes

Handrail ropes



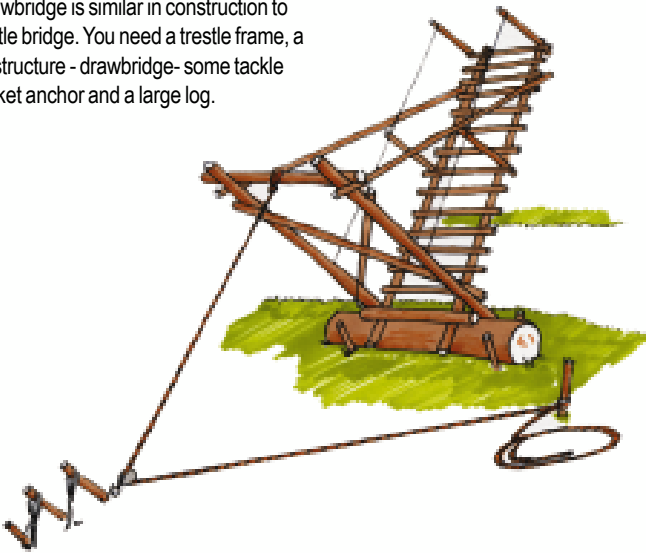
How to build

- Construct two trestles. It will be necessary to construct these according to the depth of the river and river bank.
- These trestles are placed opposite each other on the banks of the river and lowered into each other.
- A ladder type construction is created using the 6 metre spars and small poles and handrail supports.
- A 2.5 metre spar is placed between the diagonal created by the joined trestles.
- This is not fixed as it is a rolling pivot for the ladder structure.
- The ladder is fixed to this rolling spar.
- A large log placed on each bank will protect the bank from damage caused by the see-saw action of the bridge.



Drawbridge

The drawbridge is similar in construction to the trestle bridge. You need a trestle frame, a ladder structure - drawbridge- some tackle and picket anchor and a large log.



Equipment required

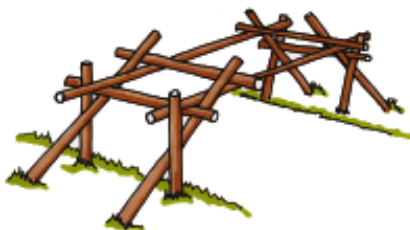
- 2 No. 6 metre spars
- 6 No. 4 metre spars
- 1 No. 3 metre spar
- 1 No. 2.5 metre spar
- Small poles for ladder
- A large log
- Pickets
- Pulley and 50mm rope
- Lashing ropes

How to build

- Construct the trestle frame, the bottom brace position will be determined by the height of the log.
- Make a ladder structure using 2 No. 6 metre spars with small poles as rungs.
- Fix 4 metre braces from trestle frame to ladder and fix handrails. The handrails can be of rope, or spars if you prefer.
- Place 3-2-1 picket anchor in the ground and rig up a pulley to it.

Other challenges

Outback Bridge



Friction bridge

No lashings are used in its construction. You rely, rather, on the friction and tension of each log in the bridge, to hold the structure together.



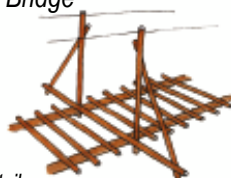
Square tower



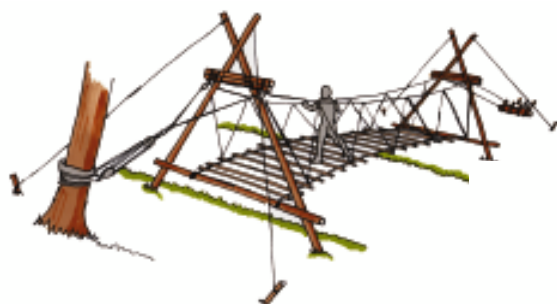
Stilt Tower



See-saw Bridge



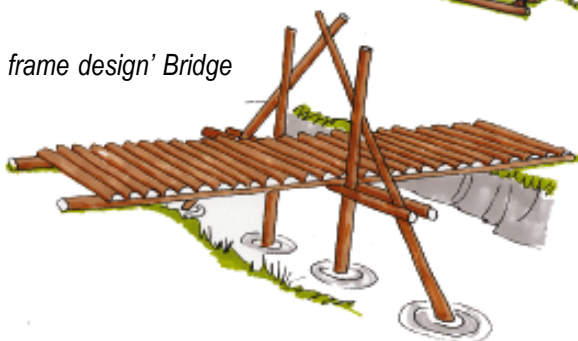
Handrail detail



Abington Spring Bridge



Simple 'A frame design' Bridge



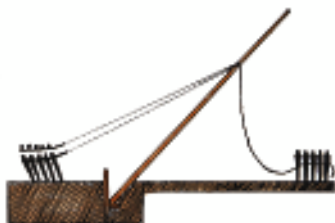
Levering and lifting



Did you ever wonder how ancient peoples such as the Egyptians and the Druids managed to move large stones to form the pyramids or Newgrange - they used levers. This tried and proven

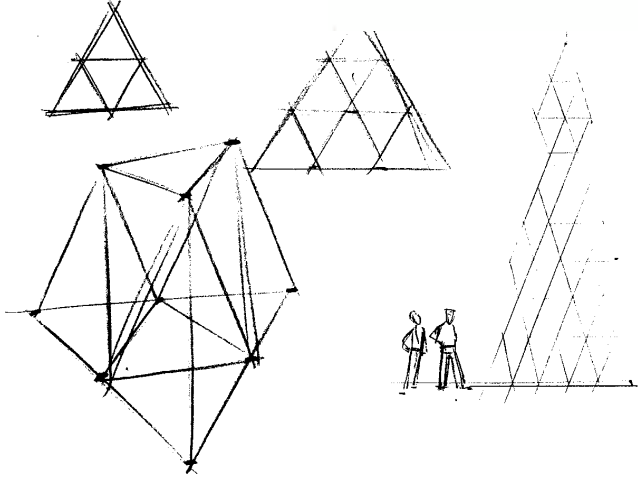
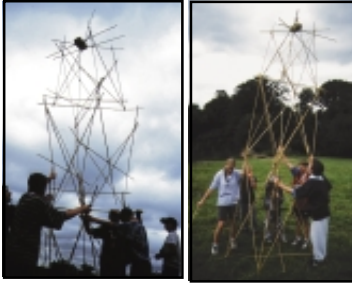
method of shifting heavy loads should be used by your Patrol, to conserve energy and prevent injury.

When levers are being used for moving logs, or prising out boulders, care must be taken that the lever is strong enough to withstand the strain that is being placed on it. If you are using a lever to lift an object, lift it only a small distance at a time and place a roller or solid block under the object as you lift it. This will enable you to reposition the lever after each lift. Work as a team to complete these types of tasks, as accidents can happen, if lifting is not undertaken with care.



Lift large poles using a team of people and use guy ropes to control the lift. It may be necessary to construct an A frame to aid lifting.

Bamboo and elastic bands



Simple and elaborate structures can be built using bamboo canes and elastic bands. The secret is to construct small pyramid shapes which are strong and stable. These pyramids are then locked together to make more complex structures. It is important however that you maintain the pyramid shape in your design as it adds stability to the final project. It may be necessary to peg down the structure to the ground, in case of windy conditions.



Rope weave

There are few pioneering projects which can be described as 'aesthetically beautiful'. Rope weave decoration has no structural value but the finished product is eye-catching, graceful, and looks far more complicated than it really is.



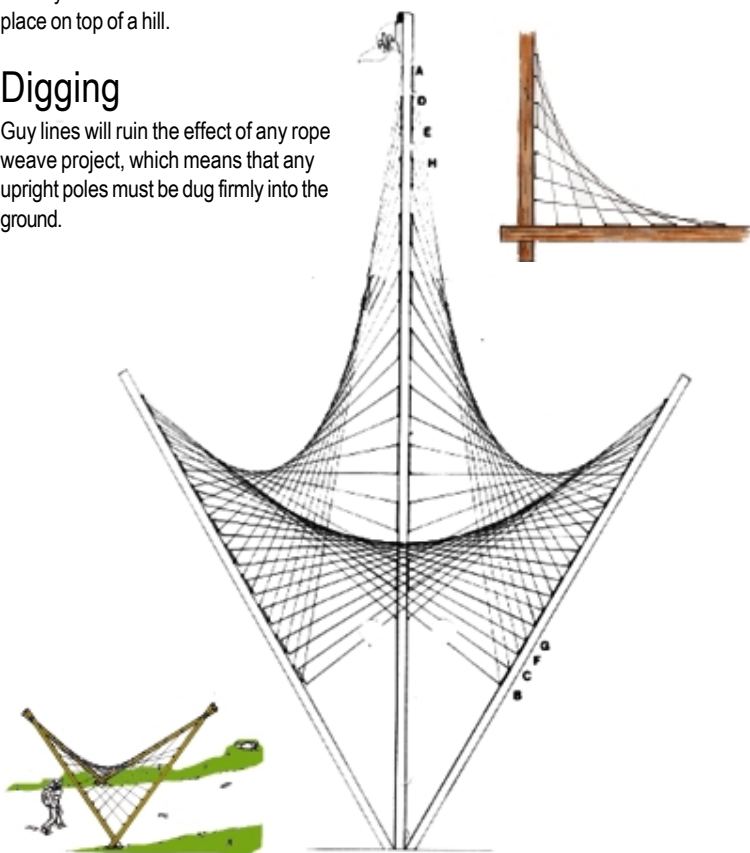
Siting

The transparent nature of the rope weave means that it will blend in with any countryside and would not look out of place on top of a hill.



Digging

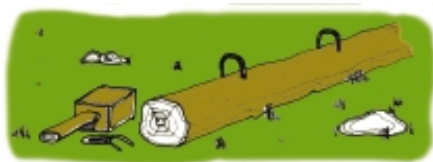
Guy lines will ruin the effect of any rope weave project, which means that any upright poles must be dug firmly into the ground.





Staples

You will need strong wire staples to complete the rope weave. There should be the same number of staples on each spar. The distance between the staples is normally 100mm - 150mm, however, it is possible to vary the distance on both spars to create new effects - so experiment!



Stringing up

The poles should be loosely strung up on the ground, using a continuous length of string or coloured bailing twine, which can be tightened once the poles are firmly in place.



Erection

Erecting the structure is best done using sheer legs and temporary guys until the spars are firmly in the ground.

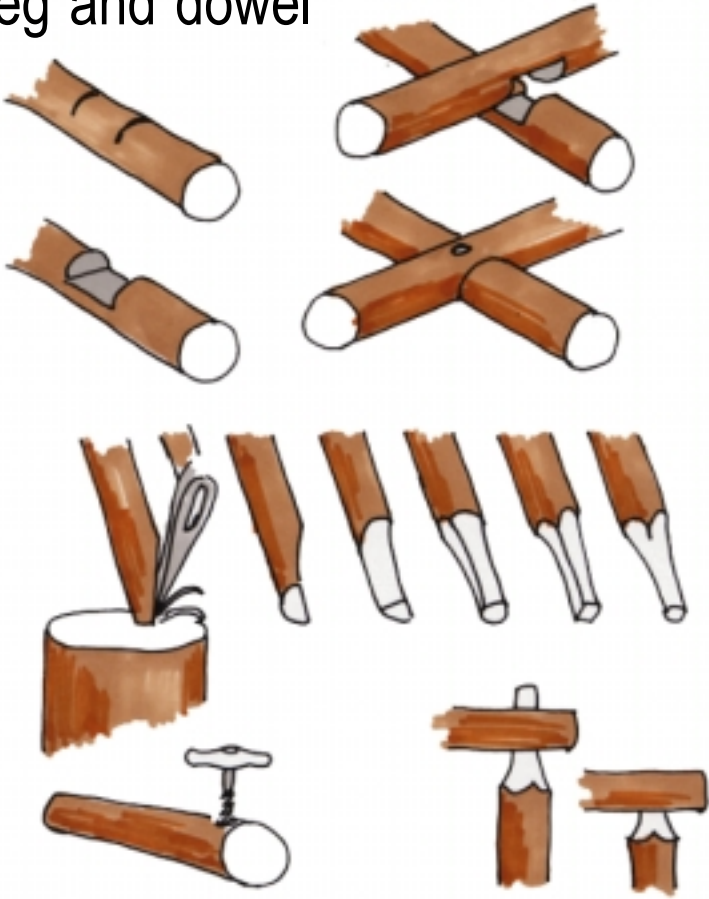


Tightening

Tightening will probably need to be done several times, depending on the weather. A 'saggy' weave does not look good.



Peg and dowel



Peg and dowel is a traditional technique used by craftsmen in the creation of rustic and traditional furniture and fencing. The technique involves the paring of poles and stakes and the drilling of holes, to accept the pared poles. A 'scotch eyed auger' is used for drilling. This needs to be about 30mm in diameter.

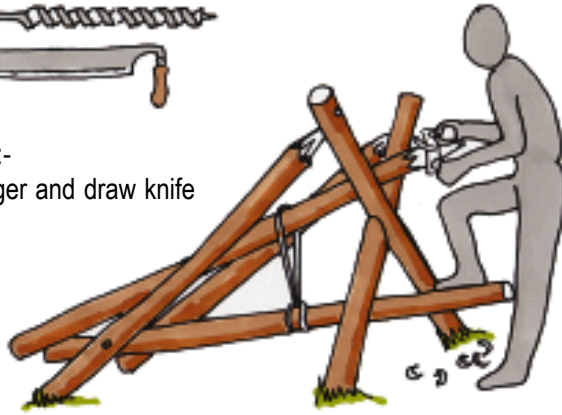
Many designs are possible and any item of furniture normally made on camp can be created using the peg and dowel method.

Of course you could also use a hammer and a few nails but where is the skill in that ?

Peg and dowel is a secure method of making camp structures which will last the rigours of camp. You may want to consider making a set of rustic furniture for your den to give it that Scouty feel. It is also possible to make larger projects such as camp gates and simple bridges.



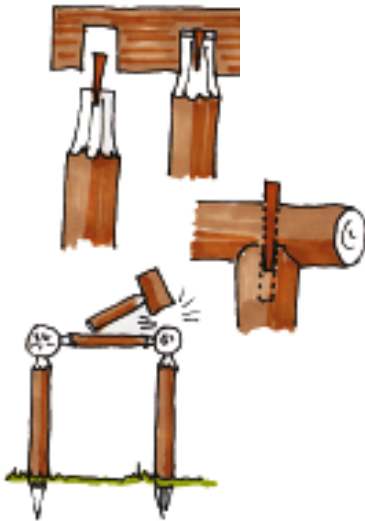
Tools required:-
Scotch eye auger and draw knife



The 'horse' allows the paring of stakes to be done with safety, and ease. Pressure is applied to the foot pole which in turn applies tension to the rope tie and secures the working stake to the horse.



Any camp furniture that is created using lashings can also be made using the peg and dowel technique.



Joints are secured using a 'hidden wedge'- a hole is bored to accept the pared point. A small wedge is placed in the peg and as the joint is knocked together the wedge seals the joint. A dowel can also be used, which is driven down through the stakes as shown.

Fun projects

Tree houses and raised sleeping platforms



The first step in building a tree house or sleeping platform is to find a suitable tree or collection of trees. Look for a tree that has branches which are strong and suitably spread apart so that a platform can be constructed. Gather together all the equipment you will require - tools, timber, pallets or plywood sheeting, ropes and safety equipment.

The design of your tree house will be determined by the shape of the tree you select, so many designs are possible. Start off by making a simple sketch, taking into account the branches available, in particular the 'branch elbows', where the branch attaches itself to the main trunk.

Use pulleys and ropes to lift the logs up

to the platform area. This should be done carefully so as to avoid accidents. The base of the platform can be constructed using spars to get a rustic feel. You can also use a number of pallets or a sheet of shuttering plywood. Be prepared to cut any sheeting to shape.

Anyone working up the tree should be protected by means of a safety belt and fixed loops on to the main tree. You should also be wearing a helmet both up on the platform and on the ground. Be careful when using tools on the platform so that Scouts on the ground are not injured from items falling on their heads.

Once the platform is constructed you can then consider building the rest of the structure.

Bodgers Lathe

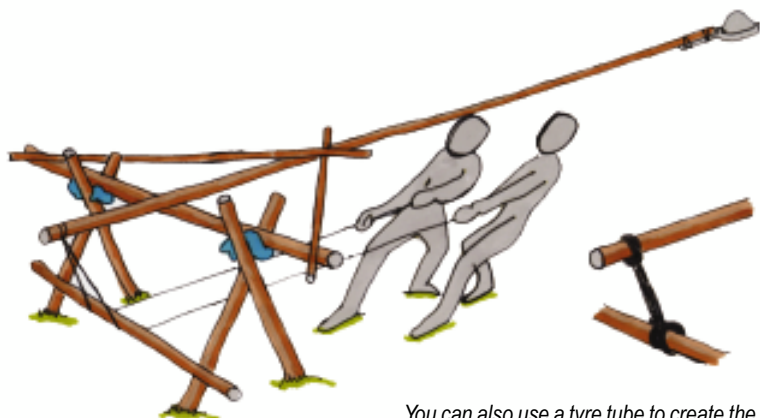


The Bodger lathe is a fun project to build. The lathe is created by first placing a large stake in the ground and attaching a springy sapling to it. This is the driving force behind the lathe. A string or light rope is attached to the top of the sapling and in turn is wound around the wood to be turned and on to a foot pedal device. The foot pedal can either be a piece of flat timber or a forked stick that is pivoted so it can move freely.

Two other stakes are required which should be bored on each side to accept the wood to be worked. The working piece should be able to move freely and spin backwards and forwards when the foot pedal is operated.

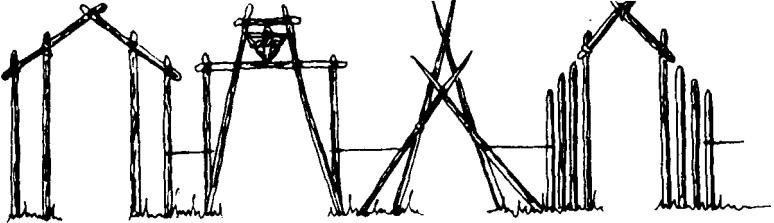
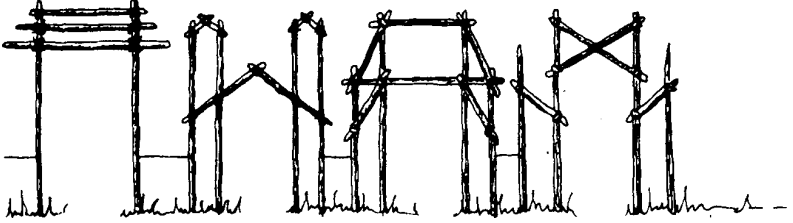
You will also require a set of sharp chisels to work on the spindle.

Camp ballista



You can also use a tyre tube to create the tension on the ballista.

Camp Gateways



SCOUTENGINEERING

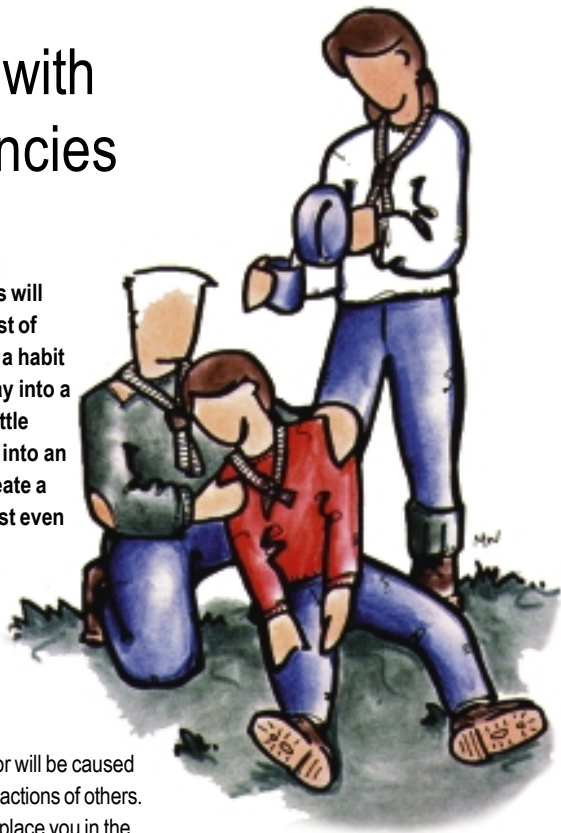


Emergencies



Dealing with Emergencies

Emergency situations will occur, despite the best of planning. Nature has a habit of turning a sunny day into a thunder storm with little notice, a well person into an ill person and can create a landscape that will test even the fittest of walkers.



Accidents will happen or will be caused by the less than careful actions of others. All these situations will place you in the position of the patient or the first aider. How we deal with such incidents can be the difference between life and death! It is the role of the first aider to do what is necessary to reduce the danger to the patient, to reassure the patient, to keep them warm and to get help. You should never attempt to do anything that you have not been trained to do. In a city or urban location help is usually easy to find, a phone call is all that is required to summon assistance. However risks are present in open countryside that can add extra complications to any incident. Immediate help is often some distance away and the elements of weather can add to the

severity of the situation. 'Be prepared' is the key phrase that needs to be remembered. Having the proper equipment will help you to reduce the risks. A bivvy sheet or survival bag for shelter, a first aid kit, warm clothing, water and food; each item in your rucksack will aid survival, therefore the importance of bringing such equipment with you on every trip, cannot be over emphasised.

Guidelines in emergency situations

- **Be calm and assess the situation**
This is important. You may be frightened and prone to panic, particularly if there is a lot of blood, or the patient is unconscious. Take charge of the situation quickly and don't stand there looking on, as a quick reaction is important.
- **Assess the situation carefully but quickly**
Ensure there is no further danger to the patient and to yourself. Stabilise any danger before approaching the patient or remove the patient to a safer location.
- **Treat life threatening conditions first**
Breathing, serious bleeding, unconsciousness. (ABC)
- **Send for help - ring 999 or 112**
- **Treat the less serious injuries next**
- **Reassure patient at all times and tell them what you are doing.**
- **Keep the patient warm and treat for shock**
Keep the patient warm. In outdoor situations it may be necessary to insulate the patient from the cold rising from the ground and a sleeping bag is a better option for warmth.





In the case of an accident in the open countryside

- Do any immediate first aid that is required and treat for shock.
- Keep the patient as comfortable as possible and ensure they are warm. If necessary erect a shelter to protect the patient from the elements.
- Assess the situation:-
 - If injuries are minor and the patient can walk then head for safety.
 - If the injuries are such that the patient can be carried to safety easily, then improvise a stretcher.
 - If the injuries are unknown or the patient is unconscious or you are unsure what to do then send for help and stay put.
- If you choose to stay then you must do the following:-
 - Erect a shelter.
 - Keep the patient and the rest of your party warm.
 - Send two experienced members of the group to seek help. The messengers should carry the following information concerning your situation to the emergency services:-
 - Exact location, giving a 6 figure grid reference and as much information as possible about the location of the patient.
 - Time of accident and any treatment given.
 - How many people are involved and/or injured.
 - Nature of injuries to patient.
- You should mark your position with survival bags, flags, or fires so that you can be found easily.

Being Prepared

These are the essential items that EVERYBODY should have in THEIR OWN RUCSACK on EVERY ADVENTURE into the wilds.

- ☺ A OS map of the area
- ☺ A compass
- ☺ A torch with spare batteries and bulb
- ☺ Extra food
- ☺ Extra clothing
- ☺ Raingear
- ☺ A penknife
- ☺ Matches in a waterproof container
- ☺ A candle or other firestarter
- ☺ A personal first aid kit
- ☺ A survival whistle
- ☺ A survival bag



The group should also have between them

- ☺ A walking rope
- ☺ A bivvy sheet
- ☺ A sleeping bag
- ☺ A mobile phone (optional, but extremely useful in emergencies)



Note:

If working as a Patrol, you may only require one map and compass. However it is good practice for every member of the Patrol to have their own compass and map. Every member of the Patrol should be aware of where they are at all times. What happens if the Patrol Leader is injured or knocked unconscious?



Signalling

You have an emergency and need help. You have a number of options. If you have a working mobile phone try to contact the emergency services and follow their instructions. If not, then you will have to seek assistance by sending people for help. In both cases the communication of your situation is most important. Rescue personnel will have to find you and will need some idea of what to expect by way of injuries. If the situation is serious then there may be a tendency to panic and rush for assistance. In such a situation, calmness and a clear head will be of greater help for you and your patient.

Before you contact the emergency services, work out exactly where you are and give a grid reference for your



position. If you are lost give the last known location and where you think you may be in relation to this position. Work out a description of the injuries of your patient and if possible write it down before you make a call or send for help.

Contact the emergency services and calmly give them whatever information they require. If you choose to send for help, write out this information so that it can be brought to the

rescue services.

Mark your location with survival bags or bright coloured clothing, and have whistles ready to signal your location. At night build a fire and have torches and whistles ready.

International Distress Signal

The International Distress Signal is six good long blasts on a whistle or six shouts or six flashes of a torch followed by a pause of 1 minute, then a repetition of the signal.

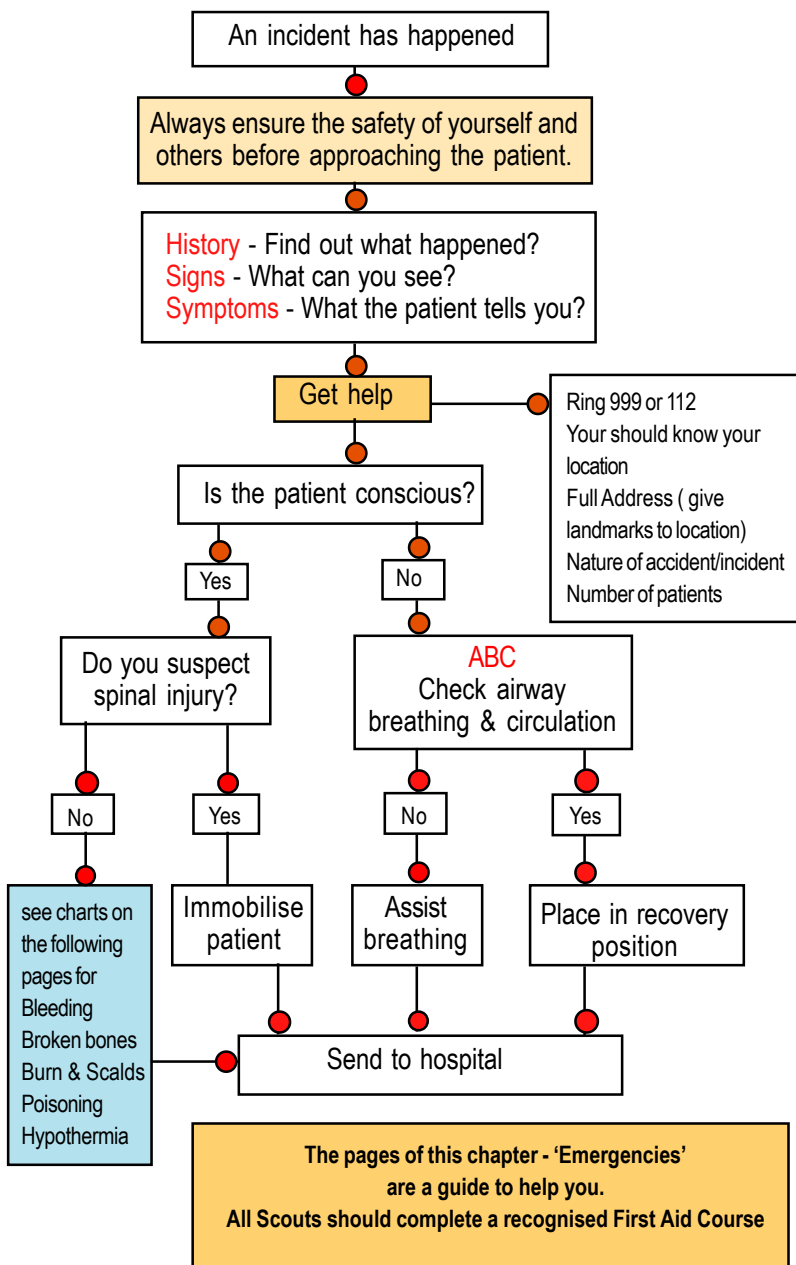
This signal should be used to alert rescuers to your location.

If the signal is heard you will hear an answering signal of three blasts followed by a pause of a minute and repeated until they find you.

Do not stop because you hear a reply, as rescuers may be using your blasts as a direction finder (especially in bad visibility).



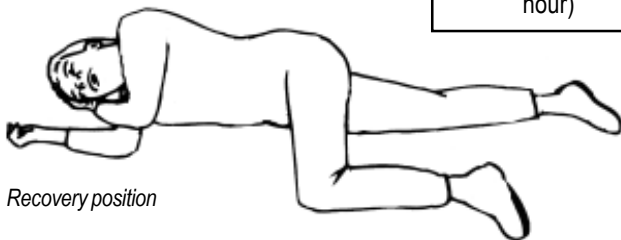
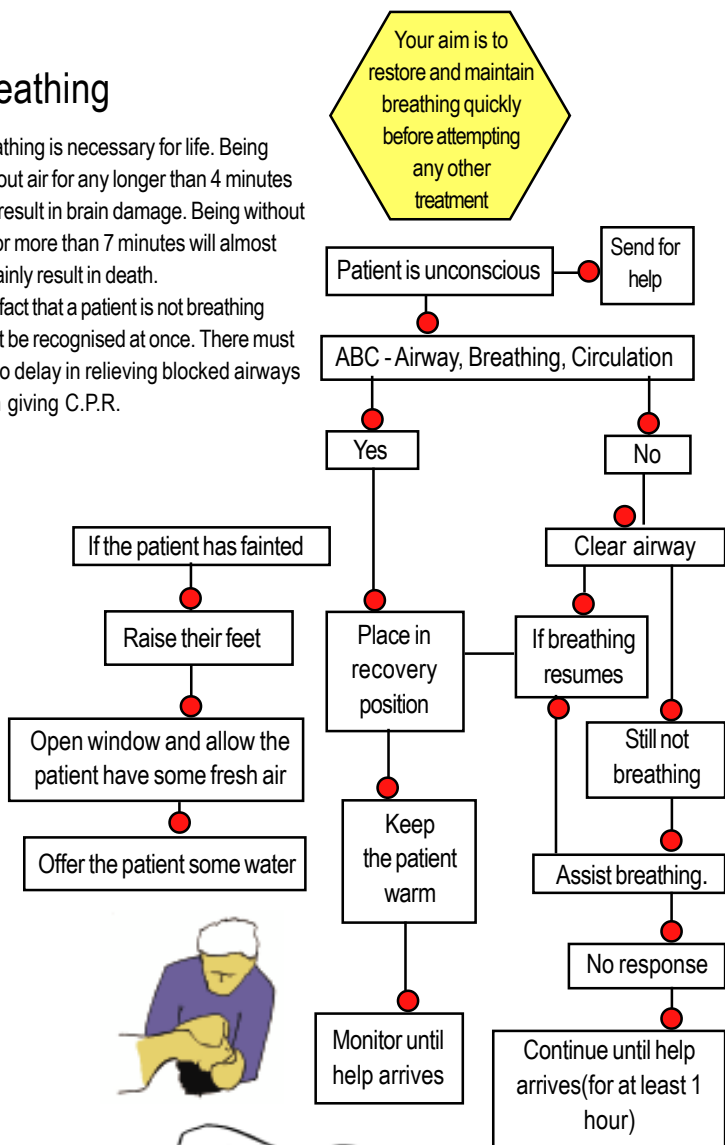
Procedure to be followed in the case of a first aid incident



Breathing

Breathing is necessary for life. Being without air for any longer than 4 minutes can result in brain damage. Being without air for more than 7 minutes will almost certainly result in death.

The fact that a patient is not breathing must be recognised at once. There must be no delay in relieving blocked airways or in giving C.P.R.



Recovery position

Assisted breathing

Look for movement of the chest and abdomen

Listen for the sound of air movement

Feel for air movement against the side of the cheek

If you see chest or abdomen movement without hearing any air movement the patient is trying to breathe but the airway is obstructed. Check mouth and airway and position the head and jaw to make sure airway is open.



If patient is not breathing give 4 quick breaths.

Pinch the patient's nose with your thumb and forefinger while maintaining the head tilt.

Take a deep breath, open your mouth wide and make a tight seal over the patient's mouth.



If at anytime you do not see the chest rise when you breathe in check for blockage of the airway.

Breathe into the patients mouth twice. As you breathe into the mouth, watch for the patients chest to rise. Be sure to look up and take a deep breath, to completely refill your lungs between breaths. Each breath should last at least one to two seconds, to allow adequate time for good chest expansion.

It is a good idea to learn CPR from a recognised First Aid Organisation.



Head injuries

If a patient has bumped his/her head or has been unconscious for any period of time check their eyes. Pupils of unequal size or pupils that respond unequally to light are an indicator of a major head injury. So get help immediately.



Shock

A person can suffer shock as a result of any type of accident and this can be extremely dangerous, if not treated. Patients will appear ashen or pale faced and may have a rapid heartbeat and feel faint and dizzy. Lay the patient down and raise the feet. Cover the patient with a blanket but do not overheat.

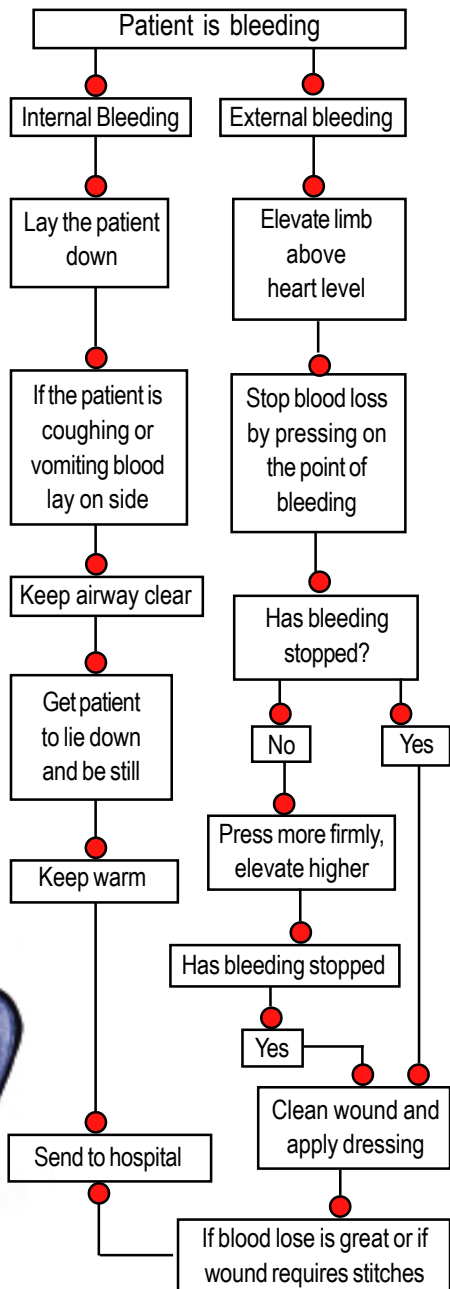


Lay patient down. Raise feet using pillows, rucksack. Keep patient warm, cover with blanket.

Patient should recover in a short period of time when the blood supply to the brain increases.

Bleeding

Your aim is to stop bleeding as quickly as possible. Apply a dressing and get help if blood loss is great.



Cuts and wounds

The first step is to stop the bleeding. This can be done by applying pressure to the wound. It is essential to have examination gloves in your kit for this purpose. Next, clean the

wound, working away from the cut. If it is a simple scratch or cut apply a band aid. If it is more severe, apply a compress bandage. If the cut is deep or a long gash seek medical advice, as stitches may be required.



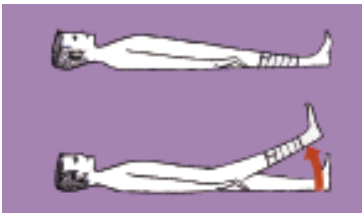
Self Help

If you injure yourself and there is no one about to help, would you be able to treat yourself? You should practice, using the tips shown in the illustration.

If the wound is bleeding and does not cease when pressure is applied, lift the affected area above your head. Lying on the ground with your feet above head level will help to prevent the onset of shock and dizziness.



Makeshift or emergency butterfly strips can be made from clear sticky tape. These are very good at closing large gash type wounds



Leg wounds

Bleeding from leg wounds can be severe, as blood vessels are very close to the surface, in particular on the shin. Lie the patient down and apply pressure to the wound with a sterile pad until bleeding stops. Apply a cover bandage. Heavy bleeding from the upper leg can be serious. Elevate the leg, apply a pad and call for help.

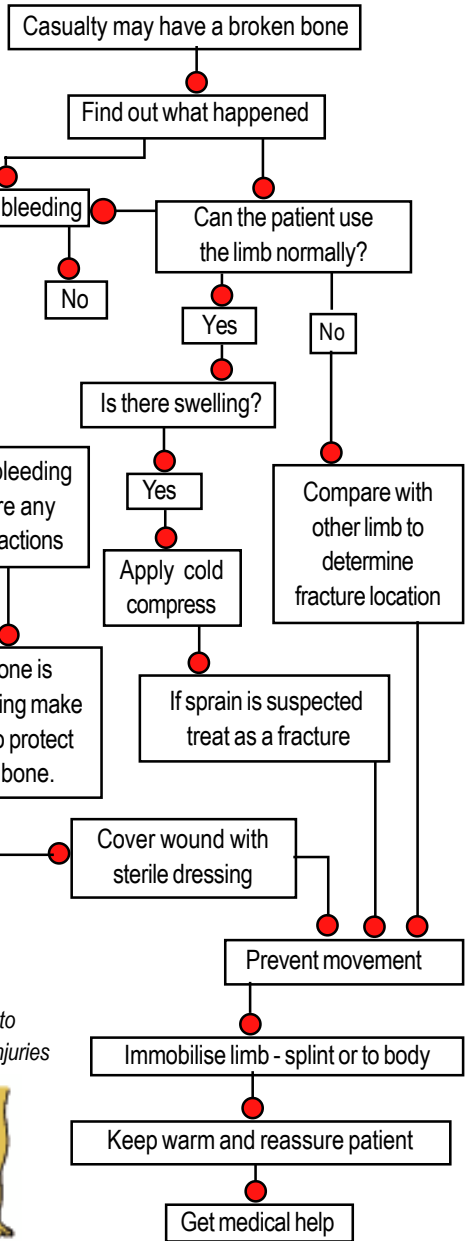
Broken bones

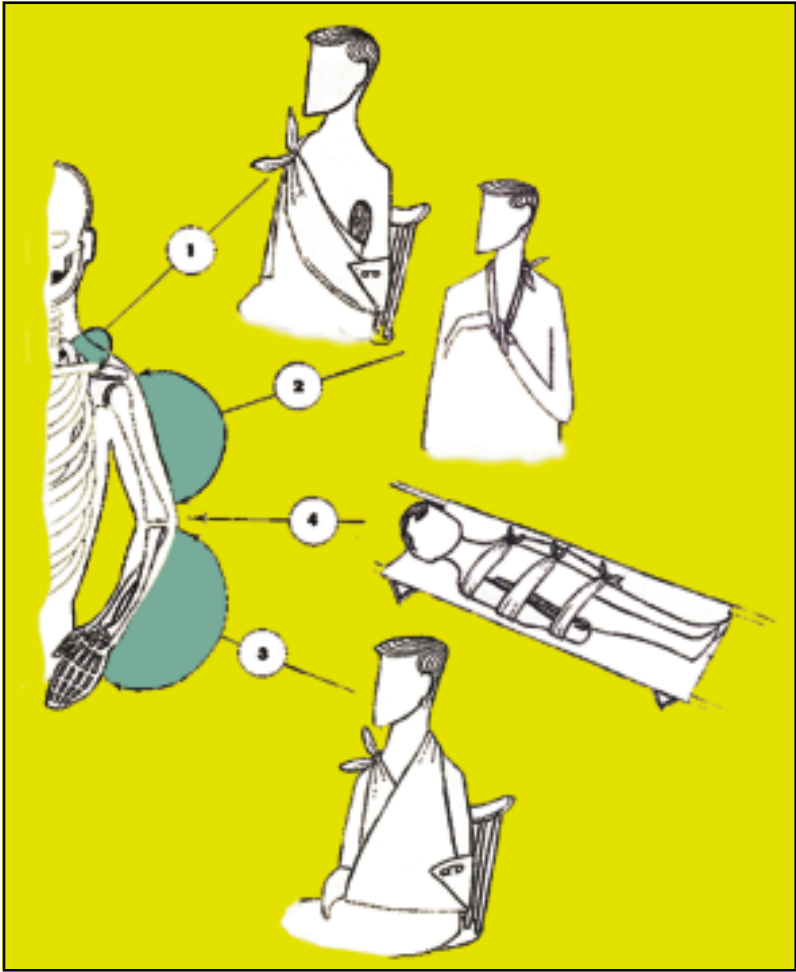
You aim is to stop bleeding, if any. Reduce swelling. Make the casualty comfortable and get medical help

EMERGENCIES



Compare the good with the injured to discover swelling or more serious injuries

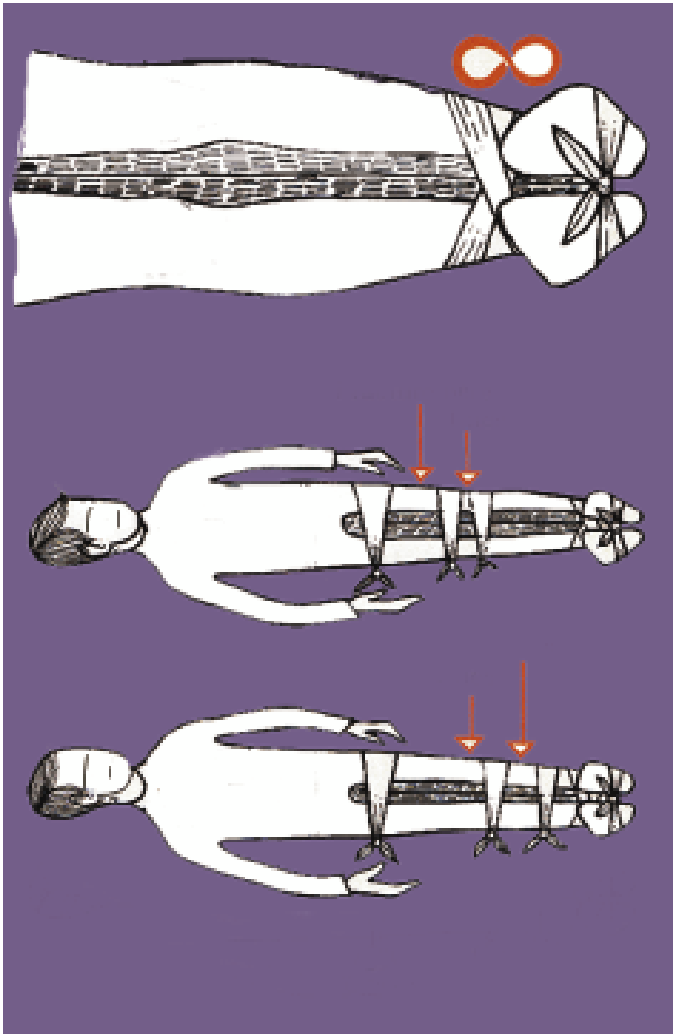




Fractures to the arm

If a person has fallen and complains of a pain in the arm and holds it tightly to the chest, it may be broken. The treatment of the fracture is determined by the position of the break. Great care needs to be taken with any fracture as the break may cause internal damage to blood vessels. This is particularly important with fractures in the elbow area. Any treatment given is only to aid the comfort of the patient, until transport to expert medical assistance is organised.

The triangular bandage is used as shown. Move slowly and let the patient move injured arm into the fracture sling. The injured person knows best where it hurts - be gentle!



Fractures to the legs

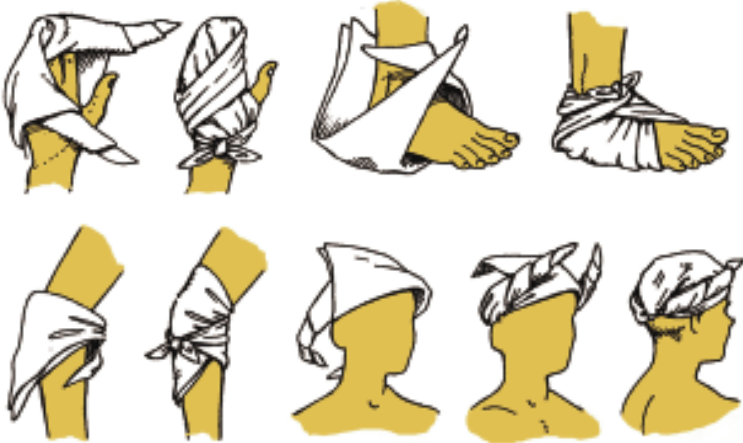
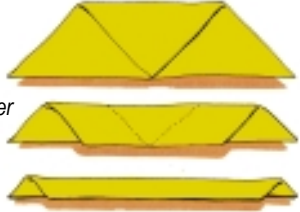
Fractures to the legs normally result from a fall or a bad twisting of the limb. The limb needs to be immobilised for comfort and to prevent further damage. This is best done by strapping it to the good leg. It is important to pad between the legs for comfort. In all cases secure the feet, using a bandage tied in a figure of eight. One bandage is used to secure the hips. Then depending on where the fracture is in relation to the knee, bandages are applied as shown. For added security you can apply a splint to prevent any movement of the limb. Be careful, gentle and aware that any sudden or unnecessary movement will cause pain and may cause further internal injuries to blood vessels and nerves.

The triangular bandage or a Scout neckerchief

The triangular bandage, or a scout neckerchief, is an extremely versatile bandage and can be used in many situations. It can also be folded down to form a bandage or rolled into a doughnut shape to protect exposed and tender wounds. In all cases finish off your bandage with a reef knot tied away from the affected area.



The triangular bandage can be folded down as shown to create a number of different sized bandages



Create a 'doughnut' bandage by rolling the bandage as shown.

This bandage is used to prevent further damage to a wound, especially if an object such as a piece of metal or glass is still stuck in the wound. One or two 'doughnuts' can be used to protect the object that is protruding from the wound, so a dressing can be applied.



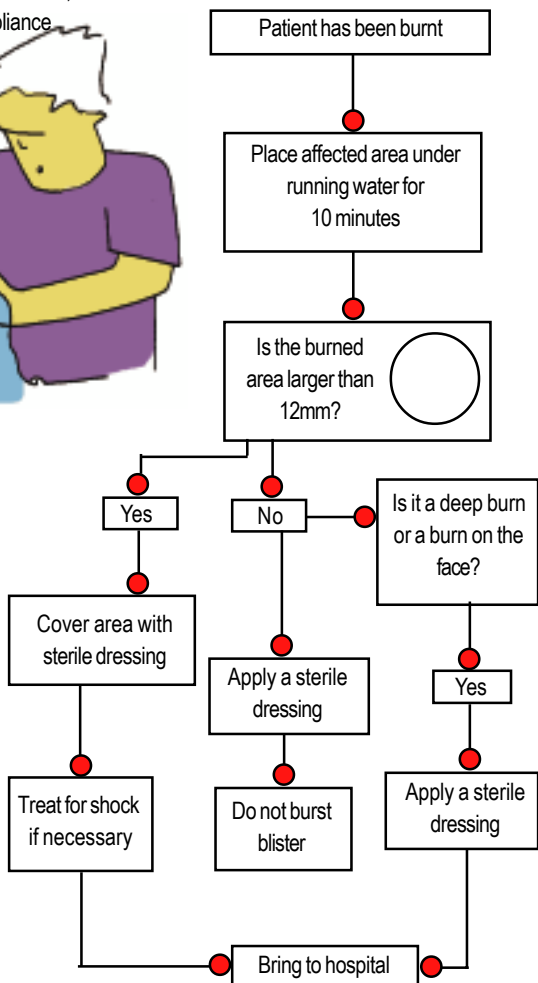
Burns and Scalds

Burns can be caused by hot objects, chemical substances and electrical contact. Burns caused by hot liquids are called scalds. Most burns and scalds result in an immediate reaction by the patient - dropping a match or hot pot etc. so before it is possible to treat the patient make the situation safe - put out fire, disconnect the electrical appliance or turn off the cooker.



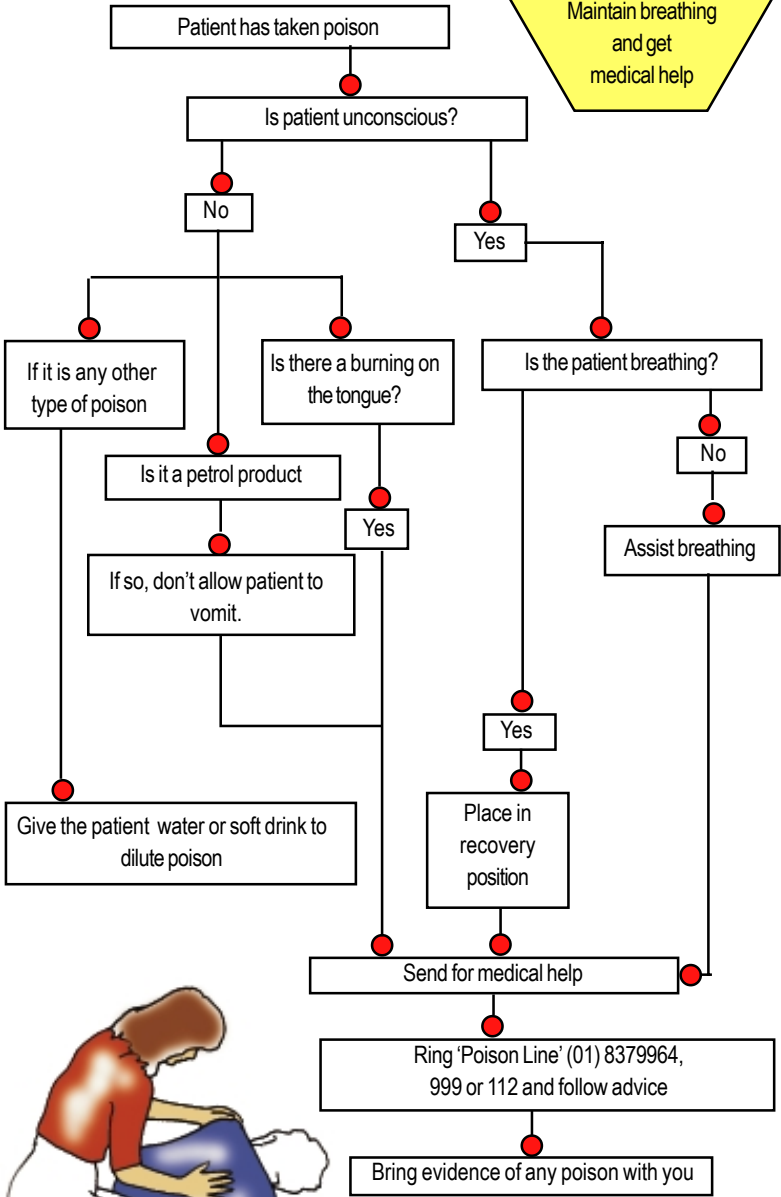
Cover burned area with a sterile dressing such as a clean pillow case. You can also cover the burn with clingfilm.

Your aim is to make the situation safe
Place the burned area under running water
Cover the burned area and get medical help.



Poisoning

Your aim is to find out what poison has been taken. Maintain breathing and get medical help



Hypothermia

Your aim is to shelter and restore the core body temperature (37 degrees) of the patient. Get medical advise if necessary.



Signs of onset of hypothermia

- Mood change
- Uncharacteristic actions
- Slurred speech
- Complaining of being cold
- Shivering
- Staggering and stumbling in a drunken manner

Is the patient shivering or showing early signs of hypothermia?

Sit the patient down in sheltered position and rewarm core body slowly

Evacuate when warm

Consult with doctor on return to safety

You think patient is suffering from hypothermia (exposure)

Is the patient unconscious?

No

Yes

Is the patient breathing?

Yes

No

Insulate from ground and heat loss

Assist breathing

If the patient responds

If no response

Start core body rewarming process

Get immediate help and evacuate to hospital

Common Ailments

Cuts and scratches

Minor cuts and scratches need to be treated immediately to prevent infection, particularly when camping. Always start by cleaning your own hands. Next, clean the skin around the wound thoroughly, then the wound itself, using a mild mix of antiseptic and water. Apply a dressing to the wound.



Nose bleeds

Pinch the nose just below the hard part and at the same time keep the head forward over a basin or bowl. This should be done for at least 10 minutes. Tell patient not to blow nose for the next few hours. If bleeding does not stop seek medical help.



Splinters

Remove splinters with a tweezers if possible. If the splinter is small it can be eased out using a sterilized pin (sterilise by burning pin until red hot or boiling it for 3 minutes). When removed, clean area with antiseptic fluid. If the splinter is deeply embedded in the skin, and impossible to remove, infection can set in, so seek medical advise.



Sunburn

Prevention is the best treatment. However if sunburn occurs:-
Rest the patient in the shade.
Give the patient cold fluids to drink.
In mild cases, calamine lotion may have a soothing effect.
If sunburn is severe, seek medical help.





Stings and bites

In the case of a sting, and it can be seen in the skin, then remove it with a tweezers.

Treat area with an antihistamine cream or with antiseptic.

If the sting is in the mouth, throat or ear, then seek medical help, as swelling in these parts may be dangerous. Insect bites should be treated by cleaning the area with antiseptic and applying an antihistamine cream to prevent itching.

Choking



Heimlich
Manoeuvre



A piece of food or some other substance can easily become stuck in the airway causing choking. Choking patients may have as little as 7 minutes from time of obstruction to death, so quick action is required to restore breathing.

Try to remove the obstruction by slapping the patient hard between the shoulder blades. If this is unsuccessful put your arms around the patient's waist and making a fist with one hand, place the thumb side halfway between

the navel and the rib cage. Hold your fist with the other hand and give 3-4 quick strong pulls - upwards towards you.

Use your hand to create the pressure; do not squeeze with your arms. If the patient collapses, continue procedure as shown.

If the patient vomits, clear their mouth to prevent further choking. Place in recovery position.

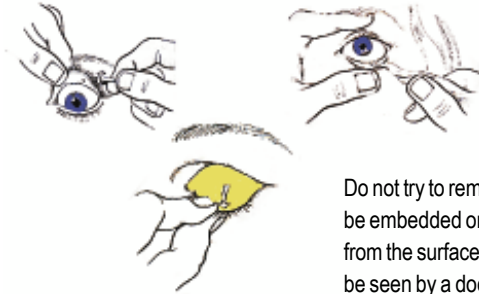


Something in eye

Warn the patient not to rub the eye.

While the patient looks up, gently draw the lower lid down and out. If particle is seen on lower lid it can be removed with a moistened cotton bud or the corner of a clean handkerchief.

If the particle is thought to be under the upper lid, then, while the patient looks down, grasp the upper lid and draw it down and out over the lower lid as this action may wipe away any foreign particle.



Wash eye with water when finished, or if the above methods are unsuccessful.

Do not try to remove any particle that appears to be embedded or cannot be wiped away easily from the surface of the eye. These cases must be seen by a doctor.

Footcare

Blisters are most likely to form on the feet and ankles if boots are too tight, new, stiff or ill - fitting in any way. At the first sign of discomfort, a dressing should be applied to the area to prevent a blister from forming.

If it is too late, the blister needs to be assessed. If you are on camp, it is best to cover the blister with a sterile dressing and wait for nature to do its job. However, if you are hiking across open countryside it may be better to burst the blister with a sterile needle (the movement of the foot will cause it to burst shortly anyway) and cover with a sterile dressing.

Blisters can be avoided by wearing two pairs of socks or by placing a



folded plastic bag between the boot and your sock. This transfers the possible friction to the plastic bag, rather than to your skin.

Personal Conditions

Asthma

Asthma is a difficulty in breathing which is caused by a spasm in the muscles that control the air tubes to the lungs. It can be caused by many factors, such as stress, physical exertion, dust and pollen.

People who suffer from asthma will have a difficulty in breathing out and will appear to be in distress and gasping for air.

Most people who suffer from asthma are aware of their condition and will often be able to control the asthma attack with inhalers and drugs.

If you are confronted with the condition do the following :-

Stop what you are doing.

Reassure the patient.

Make sure that the patient can find the inhaler or prescribed drugs to treat the condition.

Stay calm, confident and unexcited.

If the person suffering the attack, does not have an inhaler or drugs to control it, or, if after taking the drugs, there is no improvement in the condition in a short period of time, then seek immediate medical assistance.

Diabetes

Diabetes is a condition which affects the way in which the body converts glucose into energy. Natural insulin produced by our bodies normally does this job. However people who suffer from diabetes have to inject insulin into their bodies to do this.

People who suffer from diabetes know how to deal with their condition, and if treated correctly they can live normal lives. They may inject themselves with insulin perhaps twice a day - once in the morning and also in the evening. As well as taking insulin they must also control their diet. Therefore it is most important that meals and breaks during the day, are taken at set and regular times.

A common problem encountered is a 'hypo' or low blood count. The sugar levels run low and will result in the person becoming hungry, dizzy, and confused, or even going into an unconscious state. If the patient is awake give them something sweet - a piece of chocolate, a sweet or a drink of full sugar drinks such as 7 up or Coke. Within a minute or two the patient will come around. They should then be given a meal or snack to recover their sugar levels. If the patient does not recover get medical help immediately.

Do not attempt to give food or drink to a person who is unconscious.

Epilepsy

Epilepsy is a condition in which the sufferer can experience a seizure, brought on by increased activity in the brain, which results in an interference with messages in the brain.

People who suffer with epilepsy are normally aware of their condition and will control it by prescribed drugs which allow them to lead normal lives.

Problems can sometimes happen when the drug routine is not maintained. A seizure can happen at anytime, sometimes a patient may feel a seizure coming on, however there may not be any noticeable signs

If seizure occurs do the following:-

Stay calm.

Lay the patient down and prevent the patient from hurting themselves from falling

or rolling by holding the patient carefully. Loosen all tight clothing.

Make sure the patient can breathe.

Seizures normally don't last for very long. When the seizure has ceased, reassure the patient and give them something to drink.

The patient may be confused and will often have a need to sleep after a seizure. If in the open, erect a shelter or tent and let the patient sleep for a short while before making for safety.

The patient will often know how to deal with the situation. However, during the seizure your role is to ensure that the patient does not injure themselves and is reassured and comforted after the ordeal.



Other Disabilities

People can suffer from many different types of disabilities, but this should not stop their enjoyment of Scouting. People with such conditions will be aware of the treatment and care that they require, on a regular basis. If you know of such people in your Patrol talk to them about their condition and the special needs they may

have, so that you can help if required.

If you suffer from a disability yourself you should also make sure that the members of your Patrol, in particular your Patrol Leader and Scout Leader, are aware of your needs and treatment, so that they can assist you if required.

Lifting and Carrying

An injured person should only be moved if in immediate danger - from weather conditions or patient is in an unsafe place. If the person is conscious and only slightly injured then simple carrying methods can be used, such as the shoulder support or the piggy back. If the person has an injury, that prevents movement, or is unconscious then you will have to use the fireman's lift or seek help so that you can use stretchers.

Moving an injured person by any method will be a strain. Be careful when lifting the



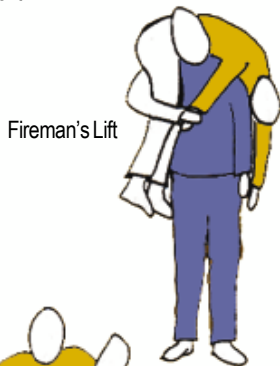
person or moving over rough ground, so that you do not injure yourself, or fall, perhaps causing further injury, pain and discomfort to the patient.



Shoulder Lift



Piggy back



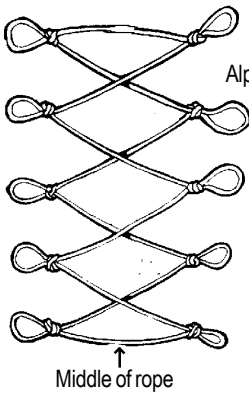
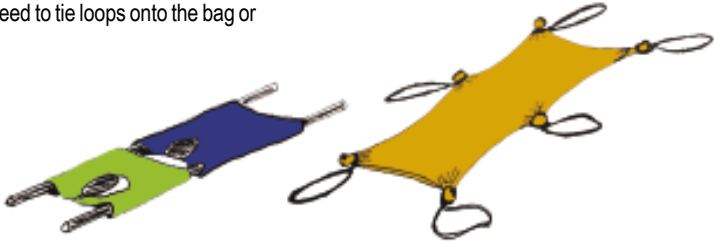
Fireman's Lift



Four Hand Lift

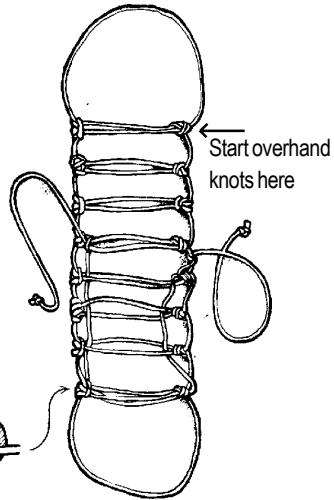
Stretchers can be made by turning clothing inside out and placing poles up the arms. Survival/bivvy bags make excellent stretchers. They can be difficult to carry so you will need to tie loops onto the bag or

support it underneath by rope loops or belts. Handles are secured to the bag using a stone wrapped in the plastic to prevent ripping and tearing.



Alpine Basket

Middle of rope

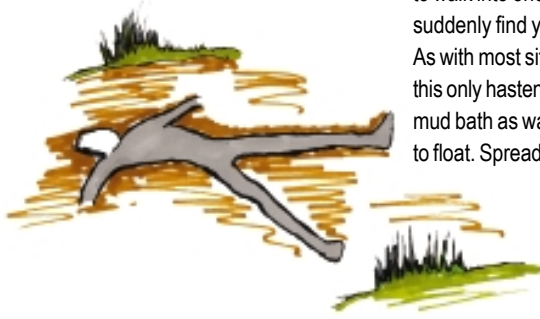


Pigott Stretcher

There are two kinds of emergency rope stretchers- the Alpine basket and the Pigott stretcher. Both stretchers require a climbing rope and a large number of people to carry them successfully. The preference would be towards the bivy bag stretcher.



Rescue Techniques



As you travel across wild countryside you may come across boggy ground. Whilst most of this ground can be crossed with ease, great care is needed. Sometimes what appears safe can in fact be bog holes, 'quick sand' and mire. If you are unfortunate enough to walk into one of these mires you will suddenly find yourself sinking very quickly. As with most situations, try not to panic as this only hastens the sinking. Think of this mud bath as water. Lie on your back and try to float. Spreading your weight in this way

will prevent you from sinking. Gradually, move your body towards more solid ground and pull yourself free.



Helping someone trapped in a bog or swamp

The technique used to rescue someone who is trapped in a bog, swamp or has fallen through ice is the same as for someone who has fallen into water. In the first instance the rescuer does not enter the bog, or danger area, to reach the person. Find something - such as a stave, stick, coat or rope, that can be thrown to the person and you can pull them free.

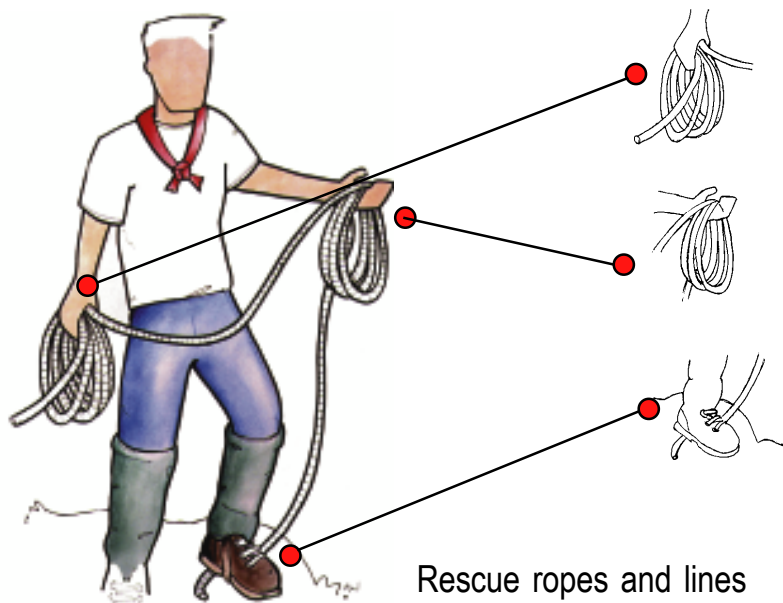
Reassure the person that you are making progress, and that it will help greatly "if we both stay calm".

If the trapped person is carrying a rucksack, or other equipment, this may be used as a floatation device to aid the rescue.

Branches, logs and indeed other rucksacks can also be used to act as platforms to reach those in difficulties.

Beware of the extra weight, pulling someone from a bog is a lot harder than pulling someone through water.

When the person has been brought to safety, remove wet clothes, replaced them with dry clothes and warm the patient. Make a fire if possible or provide a warm drink. The patient will be stunned by the experience and perhaps suffer from shock. Even in summer the mire and bog will be cold and will quickly cool the body so exposure can be a real threat. Find a safer route to your destination. A stave is a great tool for testing ground for stability before crossing.



Line throwing

Line throwing is not as straightforward as you might think! Practice, from time to time, to improve distances and accuracy of throw. Coil the rope carefully to prevent snagging when throwing. Don't forget to keep a foot on the end of the rope, better still secure the end of the rope before throwing.

Rescue ropes and lines

Whenever you travel in wild countryside, a safety rope or webbing line should be part of your equipment. It has many uses, and in rescue situations it can prove a valuable tool for reaching those in difficulties. It can also assist when crossing rivers and climbing over difficult terrain, as a support for a lean-to shelter or for the construction of a stretcher.

Rescue services

Many mountain and general rescue services exist around the country. These teams are comprised of volunteers who agree to help and assist other people who get into trouble on land or sea. These services should only be called out in a real emergency.

Rescue services are activated by calling the emergency services phone number - 999 and 112



Survival in Water



In most water emergencies it is more important that you stay afloat for a long period of time rather than swim to safety.

Drown proofing.
Raise your head and take a breath. Lower your face into the water and press down your arms in water. As you breathe out rise up and take another breath. This method conserves energy. Threading water keeps your head out of the water but uses more energy.



Items of clothing, such as rainjackets and trousers, can be turned into buoyancy aids.

If you are wearing a lifejacket use the Heat Escape Lessening Position (H.E.L.P.), shown above, to prevent heat loss and the onset of hypothermia. This position helps to keep the head, and core body area covered. Water is always cold and will quickly draw away the heat from your body. Don't flap about and use up valuable energy which is needed to provide heat to your body. If a number of people find themselves in the same unfortunate position, huddle together for security and warmth. Place the smallest member of group in the middle.



Always stay with the overturned craft; as it will provide buoyancy and is easier to spot than individuals in the water.

Fires

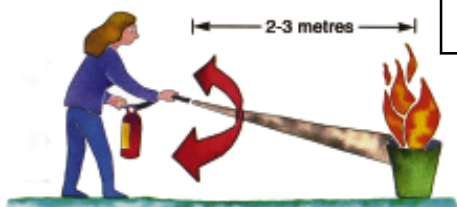
Fire is always dangerous. Without warning you can find yourself in a life threatening situation. Your clothes can catch fire, a chip pan can flare up, or a candle can fall on a carpet and set your home alight.

The golden rule, as in all emergencies is to keep calm, assess the situation quickly and get help. Under no circumstances try to be the hero. In a house fire, raise the alarm, get everyone out and stay out, until the fire brigade arrives. You should make an escape plan for your family home and the Scout Den.

Smoke



Smoke and toxic gases rather than flames are the real killers and they can quickly fill a room or house. If you are caught in such a situation then crawl on the floor to safety. The smoke and gases will rise to the ceiling first, before dropping towards the ground and this can provide a 'safety zone' and lifesaving opportunity for you to get out.



If your clothes catch fire or if a friend's clothes catch fire remember the catch phrase -

Stop, Drop and Roll.

Stop the victim moving as this will fan the flames, Drop to the ground and roll over and over until flames are out - treat burns.



If you have to escape from a building do so only when instructed by the fire brigade or if the situation is life threatening. If possible use blankets, ropes etc, to make a line. If you must drop from a height, do so carefully as shown and push yourself away from the building as you fall. Break your fall by bending your knees and rolling as you reach the ground.



If you have to use a fire extinguisher remember this little catch phrase PASS. Pull the pin. Aim low. Squeeze the handle and Sweep from side to side.

Survival

Despite the most careful planning an emergency can occur on any adventure into wild countryside. You may find it difficult to navigate through driving rain or dense fog, or someone may get injured. Your survival will depend on how well you are prepared, the equipment you have in your pack, and how you approach the problem.

If you get lost

- Stay together as a group
- Sit down and be calm
- Carefully work out your approx. position from the map
- If you are reasonably sure of your position, take a bearing and trust your compass
- If travelling in dense fog or darkness, use the group as markers on the compass bearing to ensure an accurate line of travel
- If you are caught in dense fog or darkness, and do not feel you have the confidence to travel to safety, then stay put for the night or until the fog lifts

If the situation is such that you decide to stay put, it is necessary to do a number of things to ensure your survival.

- Make sure every member of the group is safe
- Render first aid as required
- Find or erect a shelter
- Keep warm



- Alert rescuers
- Send for help

In such situations, the likelihood is that weather conditions will be severe. Every year people die, even with the right equipment, because they fail to realise the potentially lethal mix of COLD, WET and WIND. Shelter, warmth and dry clothing are therefore critical considerations.

Hypothermia (exposure) can quickly take hold in wet windy and cold conditions, so beware. The safety of the group is paramount, so decisions will have to be taken as a group, taking into account all those factors that make up your situation. If shelter, such as a rock outcrop, or forest, is nearby, then head for that location. If you have a tent you might consider setting up camp where you stand. However, weather conditions may make it unwise to erect a tent in an exposed position.

Survival bags can be used for quick shelter from the elements, however, for long term shelter the condensation generated within the bag can be worse than the rain falling on the outside.

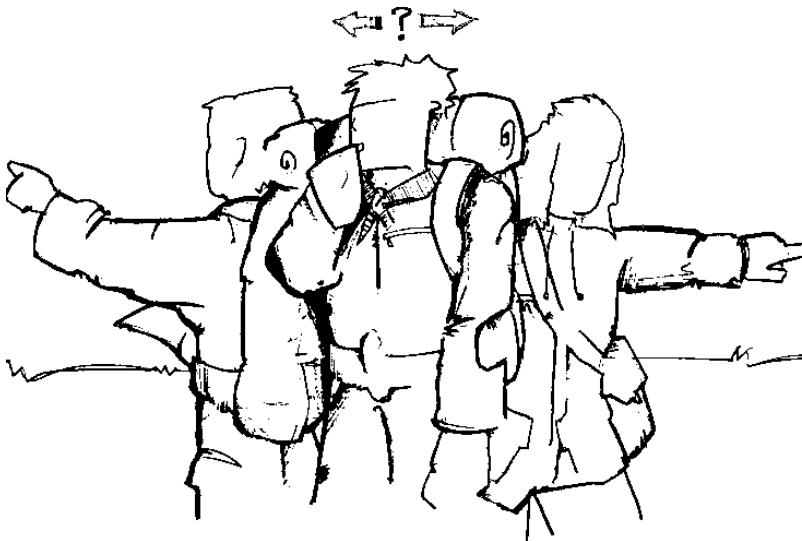
A bivvy type shelter built in a sheltered area such as a forest or rock outcrop is a better long term option. Carry a large sheet of plastic with the group gear.

If the situation permits, it is best to seek nearby natural cover to set up base, as camping in exposed locations in severe weather may add to your difficulties. This option should only be considered if it is possible to reach such a location in a short time span and without undue hardship or endangerment for the group- remember the Cold, Wet, Wind combination. If a members of the group are injured, to such an extent that they are immobile it is better to erect a tent where you stand, and stay put until help arrives.

Be prepared

Everybody on the trip should have the correct equipment - raingear, spare clothes, food, first aid kit, etc., - this equipment is carried in our packs for emergencies. Most of the time we will not use this extra gear, however when such a situation occurs, **YOU ARE PREPARED!**

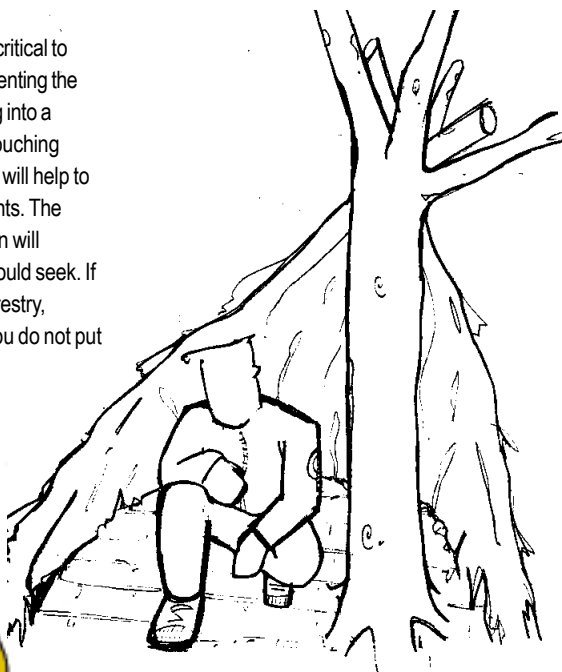
Having respect for the weather and the countryside or mountain range you are crossing will lessen the chance of a survival situation arising. Training for such situations will give you the confidence and knowledge to cope with any situation quickly. Practice, in safe conditions, erecting shelters, carrying and lifting patient, signalling for help etc., so that, if you are caught out in such a situation you will be able to adapt to your circumstances and survive your ordeal.



Shelter



Shelter from the elements is critical to maintaining warmth and preventing the onset of hypothermia. Getting into a survival bag and sitting or crouching behind a rock or bog outcrop will help to lessen the force of the elements. The conditions you find yourself in will determine the shelter you should seek. If possible make for trees or forestry, providing that in doing so, you do not put yourself at further risk.



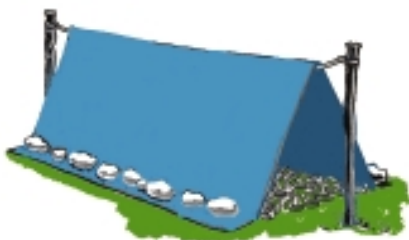
If you are caught in extreme weather conditions in open countryside, without immediate shelter, you could get into your bivvy bag and sit it out. Put on extra clothing to keep warm and leave a wide opening for air to circulate.

Boulder snow shelter



In winter conditions, seek shelter around the spreading boughs of trees or rock outcrops. You can construct a shelter with a bivvy sheet and snow walls or use rocks and boulders as the main protection and build snow walls between them.

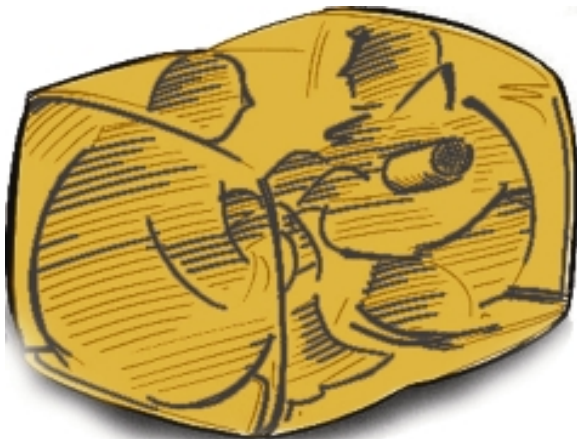
Rucksacks, sticks and skis, can be used to support the roof. Insulate yourself, from the ground, by sitting on rucksacks or insulated mats. Your priority is to get under shelter as quickly as possible, rather than construct fancy snowholes. In general, go for the simplest option first. If you are unlikely to be rescued for some time then consider a more permanent structure. Do not fully close up any snow shelter - allow air to get in easily. You may have to keep an eye on the air hole or entrance to prevent snow build up. Place a marker or flag outside your shelter to signal your location to rescuers.



Survival Tents

If you are caught out in bad weather - driving wind, rain or blizzard, or you wish to get under cover for a short period to read your map or have your lunch, special storm/survival shelters are

available. They are like a tent without poles! You climb inside and your body is used to keep the tent shape. They are a useful bit of kit to have. They are very light and can easily be carried by one of the team. In an emergency situation they are ideal, as the patient can quickly be placed under cover until help arrives.



Rescue Card

An incident has taken place and we need help.

Location (grid reference)

Patient's name

Number in party

Description of location

Injuries

Time of incident

Type of incident

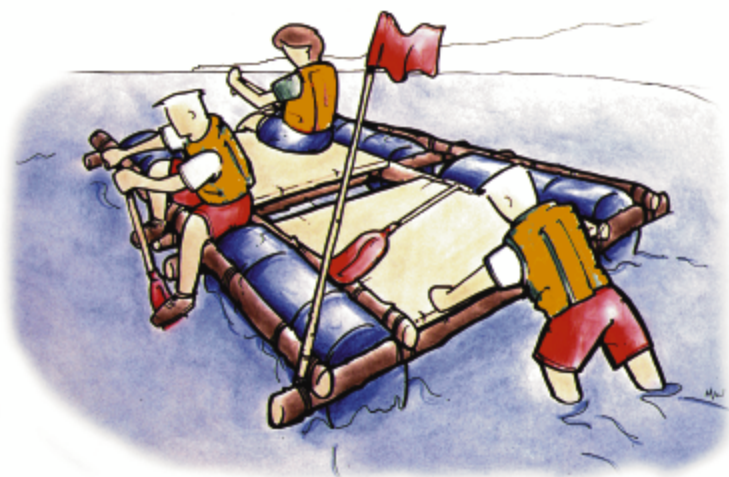
What we intend to do.

We will stay put

We will evacuate to

We can overnight safely

On the Water



Water safety



Activity on water is always great fun, however care needs to be taken at all times to prevent injury. Open water, such as lakes, rivers and sea can be dangerous.

First and foremost you need to be able to swim. If you don't know how to swim then join a swimming class and learn.

For most boating activities, it is advisable that you can swim a distance of at least 50 metres, and stay afloat for 2 minutes without the aid of a lifejacket.

Always make sure you wear a lifejacket or buoyancy aid as appropriate on all water based activities, even if the water is shallow. Water activities require a level of skill. The pages of this chapter are only an introduction to the many possibilities. In all cases special training will be required.



Buddy system

In all Scouting water activities we use the Buddy system for safety. Each Scout is asked to team up with another Scout while taking part. Your job as a Buddy is to look out for your partner and he/she has to look out for you. If you are a Patrol Leader you will have the additional responsibility of looking out for all the members of your Patrol.

From time to time the activity leader will call for 'Buddies'. At the signal you should find your Buddy - who should be close by, and hold his/her hand out of the water so that you can be clearly seen. Once



everyone is checked you can resume your enjoyment.

It's a simple idea that everyone can understand, a simple idea that can save a life.

Open water is always cold. Water is a heat conductor and will draw heat away from your body very quickly. Wind chill also

plays a big part in the cooling down process. For this reason it is advisable to wear the right clothing when taking part in water activities. Along with your life jacket you will



need to wear a wind proof jacket, a tee shirt or light fleece and old training shoes with warm dry clothes available to change into after the activity.

If you are visiting an outdoor pursuit centre, they will probably provide you with specialist equipment such as wet suits, bootees and helmets if white water canoeing.

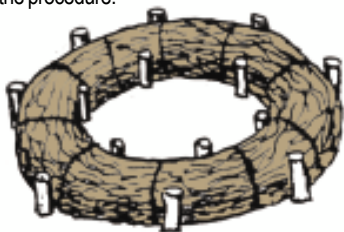
You will get wet, but be careful not to get cold. If you feel you are getting too cold or are shivering, tell a Leader. Work the Buddy system and keep an eye on each other.

Keep warm

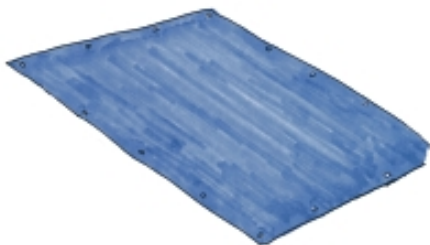
Rafts

Bush raft.

This raft is easy to make once you know the procedure.



First place a number of stakes in the ground and then pile light twigs and branches between the stakes, to make a doughnut shape. When the shape is complete weave sisal or rope around the pile to keep it together.



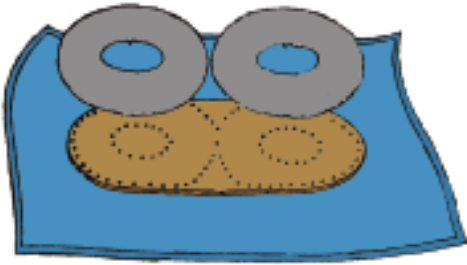
Lift the 'doughnut' pile from its frame and place in the middle of a plastic sheet or tarp. Fold over and tie the sheeting to the pile core. Your raft is now ready for use.



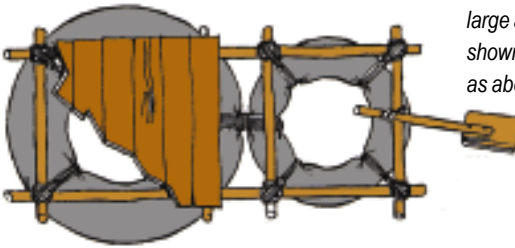
Be aware that the base of the raft is only a layer of plastic and will puncture easily. Use only on calm water such as lakes, slow moving rivers and canals.

Inner tube raft

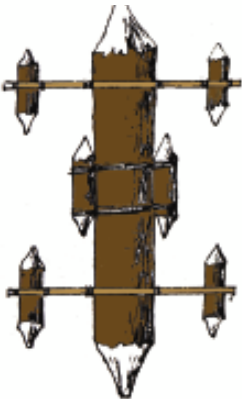
The inner tube raft is an ideal one person raft. You will need two large inner tubes, a plastic sheet or tarpaulin and a base board made of construction grade plywood. Cut out the base board as shown, and drill a number of threading holes in the base so that



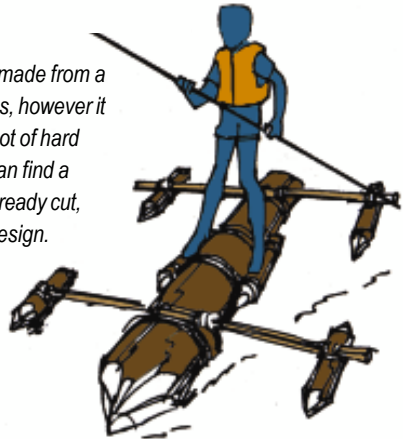
the tubes can be firmly attached to it. Now cover the base and the tubes with the sheeting and tie it off. If you have a plastic sheet with eyelets then this can be done easily.



A similar raft can be made with a large and a small inner tube as shown. Either make a baseboard as above or construct a frame to hold the inner tubes together.



A raft can be made from a number of logs, however it will involve a lot of hard work. If you can find a suitable log already cut, then try this design.



Rafts cont.



Barrel raft

Barrels are airtight and almost unsinkable which makes them ideal material for raft

building. You will need a number of medium sized barrels to make a

decent raft that will hold a number of people. Look at the barrels you have, and think of them as a body of space that will displace a body of water. The total

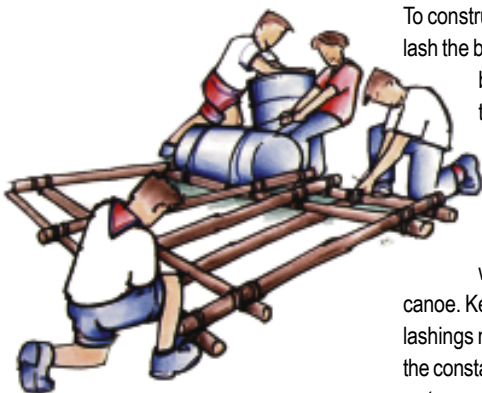
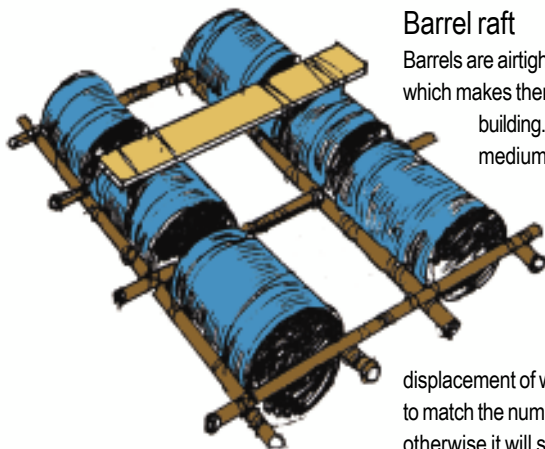
displacement of water by the barrels needs to match the number of people on the raft, otherwise it will sink below the water. In simple language you need a lot of barrels to hold a Patrol on a raft.

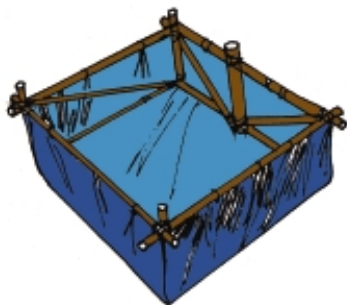
To construct a workable raft, you will need to lash the barrels to a frame. This will keep the

barrels stable and allow you to travel through the water under paddle or sail power. The frame

also needs to be balanced so that it does not topple over. Design the raft to be

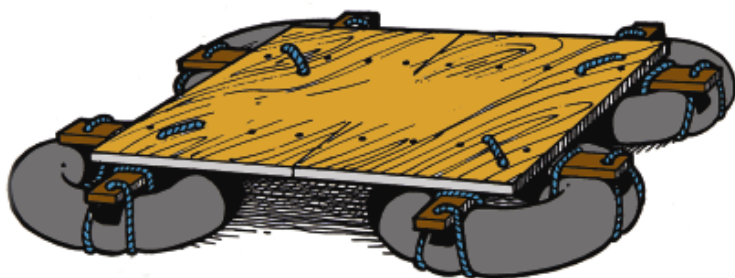
wide rather than streamlined like a canoe. Keep an eye on the lashings. The lashings may loosen due to being wet and the constant twisting of the frame in the water, so check them regularly.



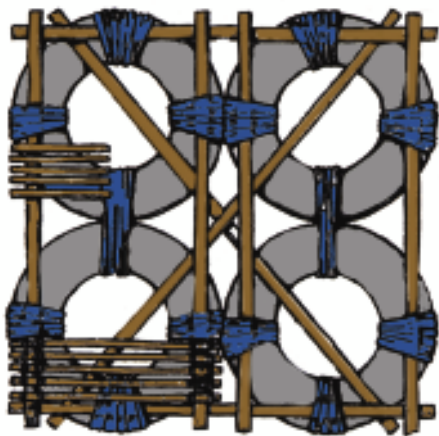


Plastic sheet raft

A plastic sheet is ideal for raft making. We have already shown designs using inner tubes and branch 'doughnuts' which use a plastic sheet or tarpaulin. This design is a simple box created with light poles and covered with plastic sheeting.

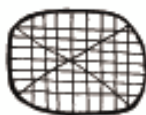


Inner tubes - truck wheel size are great for making rafts. This raft will support up to three or four young people. The tubes provide the buoyancy for the raft but they are unstable without a frame. A simple frame can be constructed as shown with standard 4X2 timber and plywood sheeting held together with rope. Alternatively you can use the more traditional method of construction using light pioneering poles. The top frame is only shown in part so that the frame design can be clearly seen. When constructing a raft it is most important to have a stable and secure frame that will not loosen and fall apart with use.



The Coracle

The coracle is a traditional water craft used for centuries by rivermen fishing salmon. It was particularly popular on the Boyne. It is an excellent and fun filled activity for Scouts and its backwood element certainly makes it a scouting skill worth possessing. They can be simply built in one day or a more permanent craft in two.



Start by collecting 32 hazel or ash rods from croppings approx. 25 mm thick across their length. The rods need to be about 2.5 metres long. Place rods evenly in the ground in a rough oval shape 2 metres long by 1.5 metres wide (traditional size 6' X 4').



The idea is to create a basket shape approx. 50 cms high. Bend the rods over from the long side first and tie together as shown

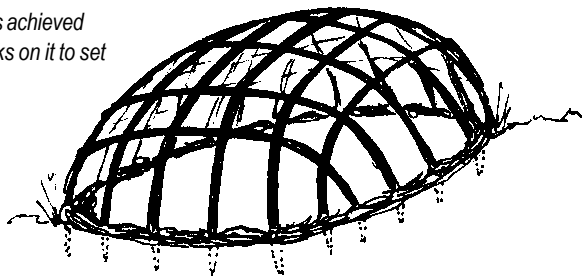


Do not trim the rods until the basket is created as minor adjustments may be necessary to get the correct shape. Work slowly and with care to avoid rods cracking.

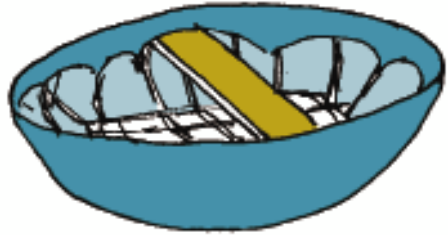
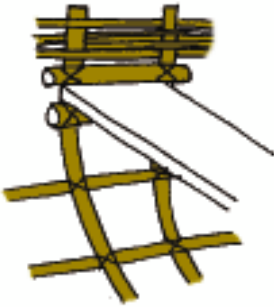
An interlacing binding is woven around the base of the frame approx. 100mm deep using light rods or willow withies.



When basket shape is achieved place planks and rocks on it to set the frame in shape overnight.

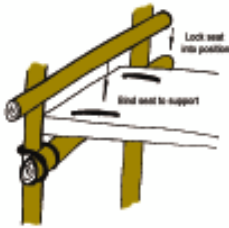


When the rods have been cut, trim and smooth the edges to prevent them puncturing your covering.



Remove the coracle frame from the ground and trim the edges. Cover the frame with plastic sheeting and you're ready to go.

The seat is fixed in the middle of the coracle. Bind the edge of the seat to the frame.

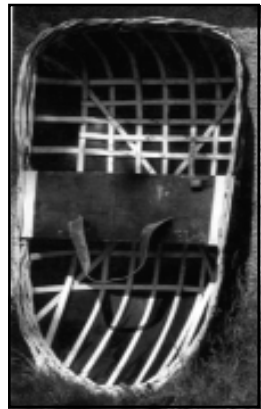


Photograph from the 1890's showing traditional Welsh coracle, built using ash lathes to form the basket, and covered in cowhide.

Padding a coracle

The coracle is paddled by leaning over the front end of the boat and moving the paddle in an 'S' movement.

This may seem odd at first but it is the traditional method of paddling the craft.

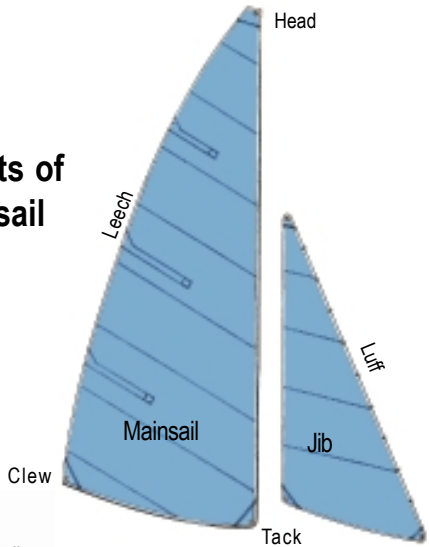


A single handed paddle is used. It can be a modern type, or constructed as shown. It is 2 metres in length.

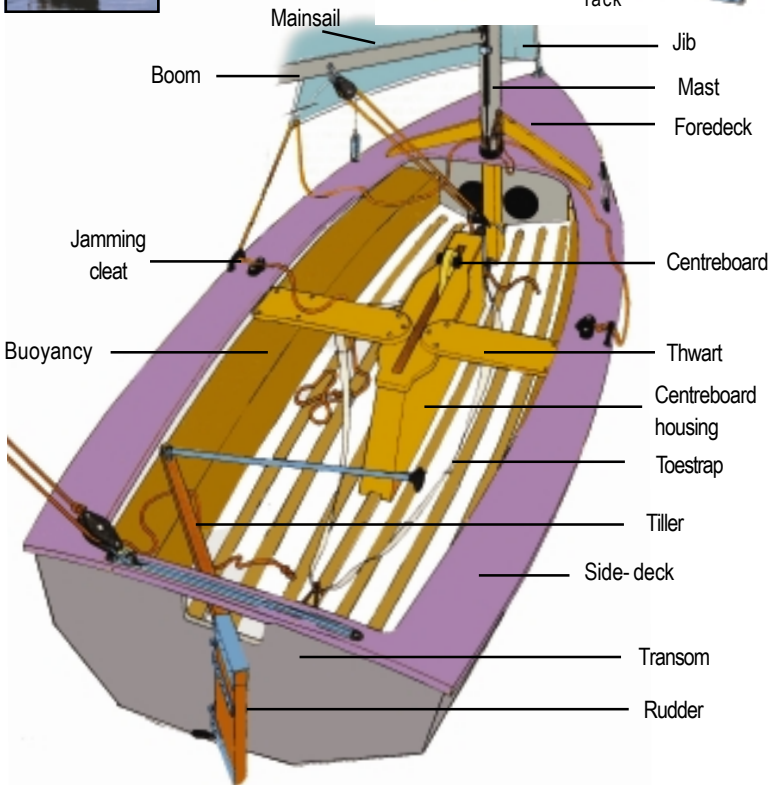
Sailing



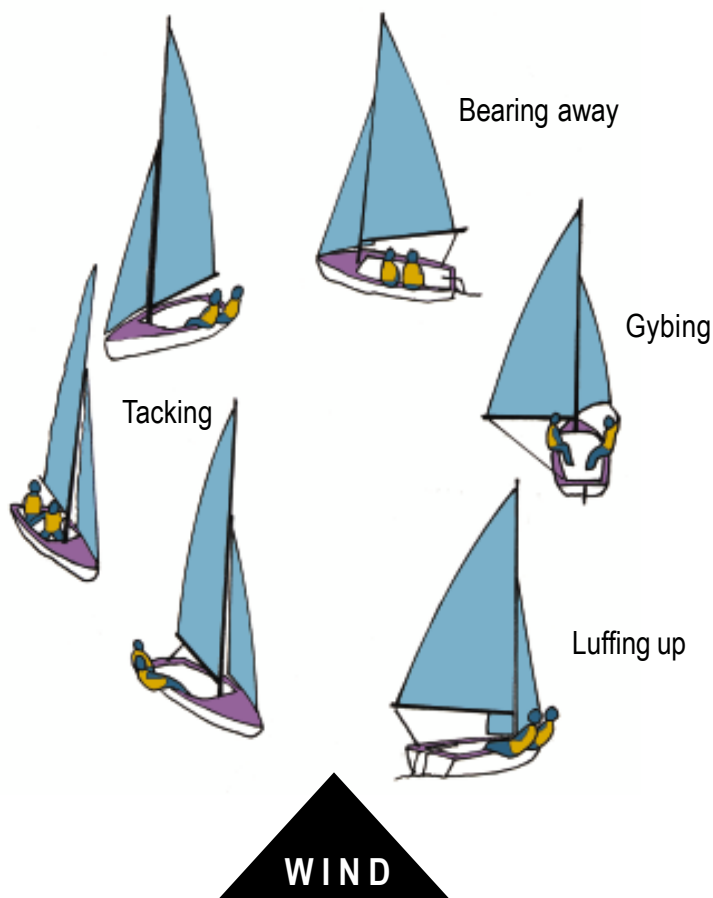
Parts of a sail



ON THE WATER

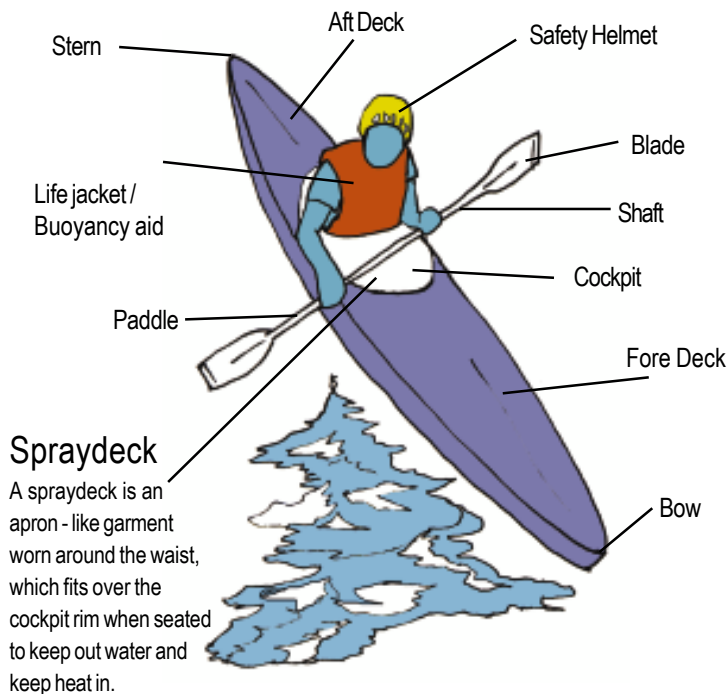


Parts of a sailing dingy



Learning to 'read the wind', and adjust the sails accordingly, so that you can travel to a desired destination, requires practice. A sailboat can use wind from any direction to take the sailor where he/she wants to go, but there is an area directly into the wind that sailors call the 'no go zone'. In order to travel into this zone it is necessary to travel at 45 degrees to the direction of the wind. This is known as 'tacking'. Progress is made by a zigzag route.

Canoeing

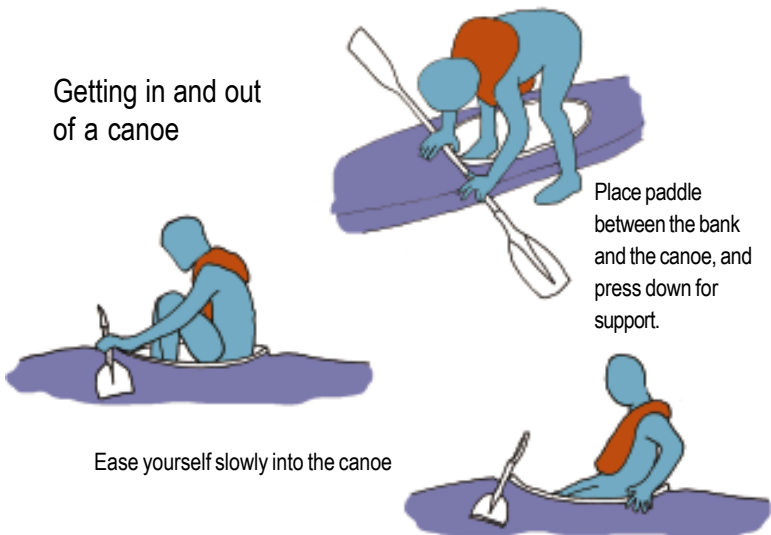


Spraydeck

A spraydeck is an apron - like garment worn around the waist, which fits over the cockpit rim when seated to keep out water and keep heat in.

ON THE WATER

Getting in and out of a canoe



Carrying a canoe

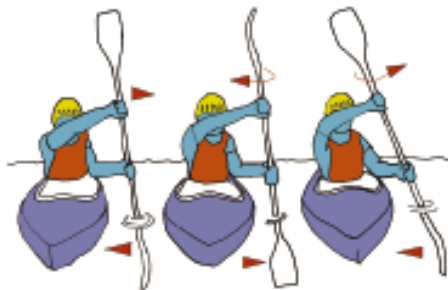
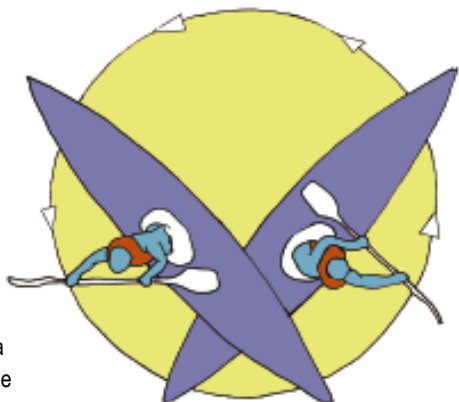


Moving forward

To paddle, lean forward, place the paddle into the water and pull on the paddle. The blades of the paddle are offset to each other so the paddle needs to be twisted slightly for each stroke. Try to maintain an even balanced movement to travel in a straight line.

Sweep stroke

The sweep stroke is a technique which allows you to move your canoe about a set point. It is completed by using a wide drawing stroke with the paddle.



Sideways pull

The sideways pull stroke can be used to move the canoe towards the bank or around an obstacle. The paddle is kept in the water throughout the stroke.

Swimming

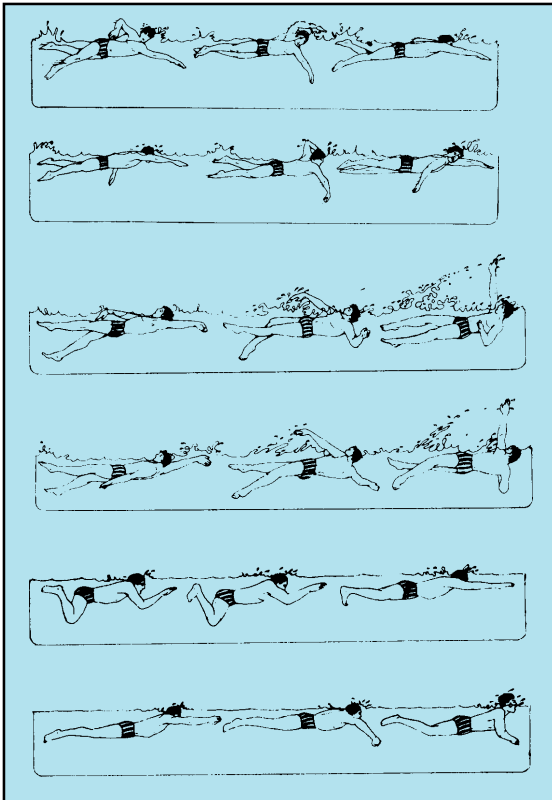
Every Scout should know how to swim. Most Scouts will probably learn to swim through a school programme in the local swimming pool.

Being able to swim opens up the possibility to take part in numerous activities which are water related such as sailing, canoeing, and rafting.

As Scouts you will be presented with many challenges which can be water related. In most cases, these challenges will take place on rivers or lakes. These locations are different to swimming pools.

The water will be cooler, and there can be currents and obstacles hidden under the water.

Be careful at all times. Always wear a buoyancy aid or lifejacket while taking part in water based activities. Only swim in an area that your Leader has checked out and has declared safe to swim in. Never swim alone. Always operate the buddy system. It is a good idea for every Scout to learn how to life-save. This can be done in your local swimming pool. Ask your swimming instructor for details of classes in your area.



Bodyworks



Being healthy and well

Being healthy and well means your body is in good working order. This means being fit, eating the right foods, having a good mental attitude and not abusing your body with drugs or substances. The combination of each of these factors ensure a healthy and happier life.

Fitness

Our bodies are machines and need to be kept working to stay efficient. If we sit around doing nothing our bodies get weak, our muscles lose their strength and we become less flexible and less supple. As a result we do not burn up the food we eat and we get fat. Our bodies become slow and sluggish and we find it difficult to spring into action. Increased weight and lack of fitness then begin to impact on our health - higher blood pressure, breathing problems, skin problems etc.

The fit body on the other hand is efficient. It is capable of undertaking activity and tasks with ease. It feels good and pleasurable to do an activity. It uses fuel, in the form of food, extracting vital vitamins and aiding to our well being. The main organs of our body are kept in working condition and will help to ward off illness and remove wastes and toxins from our bodies.

Fitness and health can improve the way you look. Your body firms up and the condition of your skin, hair and so on improves. A fit body with good posture always looks well.

Scouting encourages a good health. Camping, hiking, canoeing, backpacking, swimming, and service projects require Scouts to have an optimal level of personal fitness so that they can



participate in and enjoy every activity more fully. Scouts who don't possess high levels of personal fitness will not enjoy physically demanding activities as much as Scouts who are in good health.

Diet

Your body needs food to survive and grow. A certain quantity of food is necessary each day. The amount of food required is relative to your body size and the amount of work the body is expected to do. Your body turns any food it does not use into energy reserves - fat. The idea is to get the balance right and try to ensure that excess food is used up by your body during exercise and not converted into fat. There are a number of food types, protein, carbohydrates, fibre and fat. We need a mixture of each type in our diet - proteins to build new cells and repair damaged tissue, carbohydrates to supply energy, fats in very small amounts, and fibre to help the digestive system work. Vitamins and minerals are contained in many different food types. In general if you eat a varied diet with plenty of fresh food you are sure to get the balance of nutrients right.

Hints for a healthy diet

- Eat as much fresh food as possible.
- Cut down on fat - drink light milk, fish rather than red meat, margarine rather than butter.
- Do not overcook food, as it washes out vitamins.
- Avoid frying food - grill, steam or bake instead.
- Increase your fibre intake by eating wholemeal bread, and cereals.
- Try to replace sugary snacks with fruit or raw vegetables.
- Flavour food with herbs and spices instead of salt.

Personal fitness

Your mental health is of equal importance as your physical health. Having good friends and being able to interact socially with others is vital to your well being. Be careful to avoid stress, in school and other areas of your life. As you move towards adulthood, many changes will take place in your body and your life and these changes can cause anxiety. It is a good idea to develop a personal programme of outdoor activity, sport, school work and study and interaction with friends in equal balance. Living the Scout Law and Promise can help to foster a



healthy social life. What would your social interaction be like if you were not trustworthy, loyal, kind, helpful, friendly, courteous and cheerful? Try to live the Scout Law and Promise and exhibit these traits everyday with everyone you meet. Good friends share feelings and emotions with trust and confidence. Everybody needs a friend or friends to talk to and have fun with. In Scouting, being a constructive member of a Patrol and a friend to every Scout will help to build another framework in your life, apart from your family, in which you can develop your personal fitness. Set standards and values for yourself and live by them. You may encounter people who want you to do things you are unwilling to do. Try to do what you feel is right and do not succumb to peer pressure. If confronted by a situation you can offer alternative ideas and if others do not follow or ignore these suggestions then walk away. It is better to be a leader than a follower in such situations.

Substance abuse

Substance abuse is nearly always driven by peer pressure and a feeling of low confidence and self esteem. If you are fit and healthy then there will be less temptation to seek false pleasure through the abuse of drugs. A healthy body and mind plus a circle of true friends will provide you with a strong and positive mental attitude which will enable you to resist peer pressure and the slide into substance abuse.

Searching for an identity is a challenge for all young people as they progress towards adulthood. There is no need to choose drugs, smoking, drinking or delinquent behaviour to gain attention. If you are taking good care of your body, accepting responsibility, taking pride in your achievements and participating in healthy activities with friends and family, then you will feel good about yourself and what you are doing.

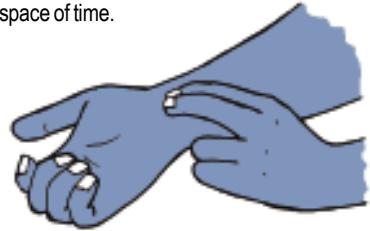
How fit are you ?

In order to determine how fit you are, a number of factors need to be taken into account. Firstly, everybody is different and a number of tests need to be done before you can place yourself on a scale of fitness.

The most important consideration is your pulse rate (see chart below). When you exercise, your pulse rate increases to supply oxygen rich blood to your muscles. If you are unfit, your heart will have to work harder and as a result your pulse rate will be higher. On the other hand, if you are fit, your pulse will increase but stay within a safe pulse rate - target zone. If you are not active enough then the your pulse rate will be in the blue zone. Generally speaking most people will fall within the blue zone when they first start a fitness programme. Aim

to increase and control your pulse rate, through a careful programme of activity, so that it falls within the target zone so that your body is working efficiently. If your pulse rate increases to the extent that it enters the red or danger zone then you are working too hard, and may damage your heart and cause exhaustion.

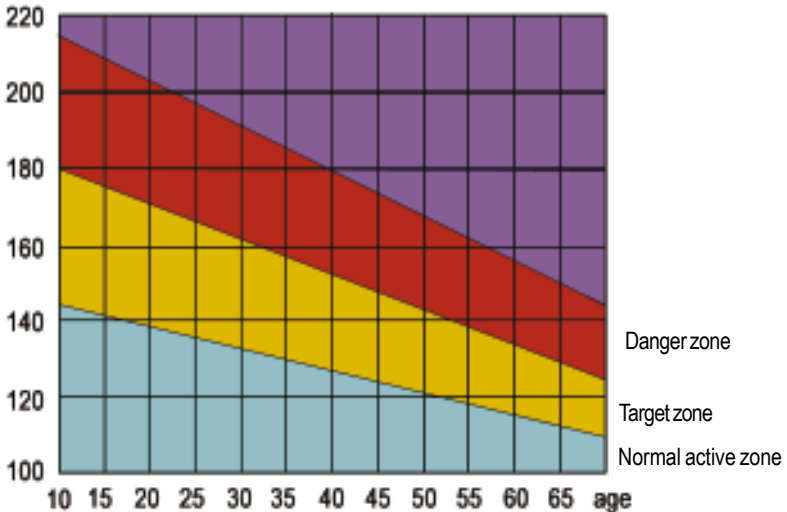
Take your pulse before you start exercising and again when you stop - note the difference. Take your pulse about 20 seconds later and again at 60 seconds and it should have decreased. As you get fitter your pulse rate will return to normal within a shorter space of time.



Take your pulse by pressing on the artery on the inside of your wrist as shown.

BODYWORKS

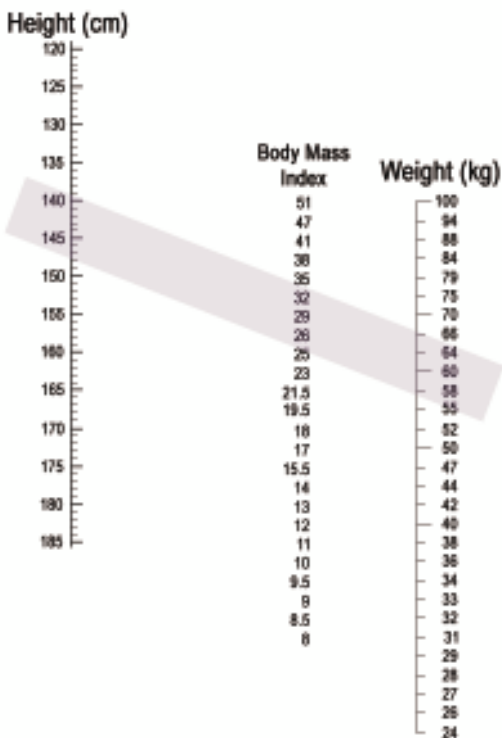
Heart beats per minute during exercise



Body mass index test.(BMI)

Body mass index indicates the ideal weight of your body to your height.

To get your body mass index number, take your height and your weight measurements. Using a ruler place one end on your height scale along side your height measurement and the other end on the weight scale along side your weight measurement. You will find your BMI number where the ruler crosses the BMI scale.



A number of other tests need to be completed to determine fitness level

One mile run

Run a mile at normal pace - not racing but jogging so that you can cover the distance without stopping. If you are tired jogging, then walk rather than stop, until you can resume. This needs to be timed by a friend or your Leader.

Some test exercises

Complete the following exercises against a set time of 1 minute. These exercises are shown on the next page. You will need the help of a friend or Leader. These exercises

will determine the suppleness and strength of your body.

When they are completed, you will have a number of measurements;

- Your body mass index.
- Your stamina.
- Your suppleness.
- Your strength.

From these measurements you will be able to grade yourself according to your age on the General Health Fitness Chart. This will give you an indication of how fit you are, relative to other young people of your age. If you fall below your age norm then getting to the norm should be your first target. If you are at the norm or above it then new targets can be set by your P.E. teacher in school.

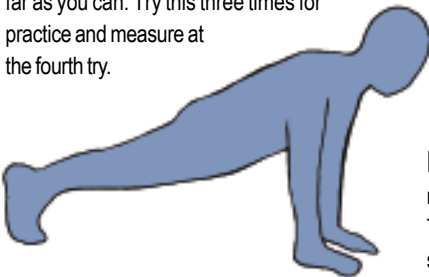
Test exercises

The curl - up exercise is for testing purposes only and should not form part of a regular exercise routine

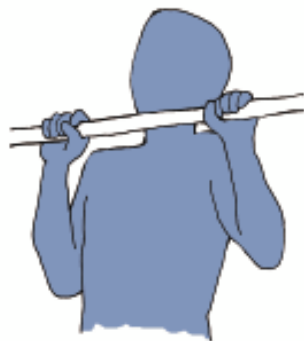
Lie on a flat surface with your knees bent and feet about 30cm from your buttocks. Cross your arms on your chest and have a friend hold your feet flat. The curl -up is completed as follows. Lift your back so that your trunk touches your thighs. Then return to the starting position. Do this movement in a controlled manner so as not to strain or cause injury to yourself. Do as many as you can in one minute.



V-sit reach; sit on the floor with feet 30cm apart on a line marked on the floor. Clasp your hands together so that palms are facing down, then place them on the measuring line. Have a friend hold your knees straight. As you reach forward exhale and reach as far as you can. Try this three times for practice and measure at the fourth try.



Partial curl-ups:- lie on your back as with curl - up exercises but this time place hands flat on thighs and have a friend support your head. Partial Curl - ups are completed by raising your body so that your fingers touch your knees and returning to start position. Do one exercise every 3 seconds until you cannot complete one at this pace. This exercise can be used for regular exercise.



(Pull ups may be difficult for young people under 11 years of age but will be possible as they get older and improve arm strength.)

Pull ups and push ups; do as many pull ups as you can in 1 minute. Try to complete a push up every 3 seconds if possible.

When you have completed your test exercises compare them to the chart below to discover your position in relation to the norms. This will give you a general idea of how fit you are and the work you will have to do to maintain or better your result. Use these charts as a general guide only. Have a proper test done by your P.E. teacher in school.

General health fitness

	age	partial curl - ups	1 mile run	V - sit reach (mm)	Pull ups	Body mass index
Male	10	20	09.30	25	1	14 - 22
	11	20	09.00	25	2	14 - 23
	12	20	09.00	25	2	14 - 24
	13	25	08.00	25	2	15 - 24
	14	25	08.00	25	3	16 - 25
	15	30	07.30	25	4	16 - 26
	16	30	07.30	25	5	17 - 26
17	30	07.30	25	6	17 - 27	
Female	10	20	10.00	50	1	13 - 22
	11	20	10.00	50	1	14 - 23
	12	20	10.30	50	1	14 - 24
	13	25	10.30	75	1	15 - 25
	14	25	10.30	75	1	16 - 25
	15	30	10.00	75	1	16 - 26
	16	30	10.00	75	1	16 - 26
	17	30	10.00	75	1	17 - 26

The standard norms for young people listed in this chart are adapted from Amateur Athletic Union Physical Fitness Programme, Cooper Institute, and YMCA Youth Fitness Test and form the basis of the Presidential Fitness Award in the USA. The chart represents the norm for generally active young people.

Target health fitness

	age	curl ups	partial curl - ups	1 mile run	V - sit reach (mm)	Pull ups	Body mass index
Male	10	35	24	09.30	50	2	14 - 22
	11	37	26	09.00	50	2	14 - 23
	12	40	32	08.40	50	2	14 - 24
	13	42	39	08.00	35	3	15 - 24
	14	45	40	07.44	50	5	16 - 25
	15	45	45	07.30	75	6	16 - 26
	16	45	37	07.10	75	7	17 - 26
	17	44	42	07.04	75	8	17 - 27
Female	10	30	24	10.00	100	1	13 - 22
	11	32	27	10.00	100	1	14 - 23
	12	35	30	10.30	100	1	14 - 24
	13	37	40	10.23	100	1	15 - 25
	14	37	30	10.06	120	1	16 - 25
	15	36	26	10.00	130	1	16 - 26
	16	35	26	10.00	130	1	16 - 26
	17	34	40	10.00	130	1	17 - 26

This chart is adapted from Amateur Athletic Union Physical Fitness Programme, Cooper Institute and YMCA Youth Fitness Test, and form the basis of the Presidential Fitness Award in the USA. The chart represents the target norms that young people who embark on a fitness programme will achieve over a period of time.

Getting Fit

Overweight and over fat do not always mean the same thing. Some people are quite muscular and weigh more than the average for their age and height. However, their body composition, the amount of fat versus lean body mass (muscle, bone, organs and tissue), is within a desirable range. This is true for many athletes.

Each pound of fat your body stores represents 3,500 calories of unused energy. In order to lose one pound, you would either have to eat 3,500 less calories than you need over a period of time or better still do 3,500 calories worth of exercise. It is recommended that no more than two pounds (7,000 calories) be lost per week.

Adding 15 minutes of moderate exercise, say, walking one mile, to your daily schedule can use up 100 extra calories per day. Maintaining this schedule would result in an extra 700 calories per week being used up, assuming your food intake stays the same.

Exercise and Modern Living

One thing is certain, most people do not get enough exercise in their ordinary routines. All of the advances of modern technology - from electric can openers to computers - have made life easier, more comfortable and much less physically demanding. Yet our bodies need activity. Satisfying this need requires a definite plan, and a commitment. There are two

main ways to increase the number of calories you expend.

1. Start a regular exercise programme if you do not have one already.
2. Increase the amount of physical activity in your daily routine.

The best way to control your weight is a combination of the above. The sum total of calories used over time will help regulate your weight as well as keep you physically fit.

What Kind of Exercise?

Although any kind of physical movement requires energy (calories), the type of exercise that uses the most energy is called aerobic exercise. The term "aerobic" is derived from the Greek word meaning "with oxygen". Jogging, brisk walking, skipping, swimming, biking, and aerobic dancing are some popular forms of aerobic exercise. Aerobic exercises use the body's large muscle groups in continuous, rhythmic, sustained movement and require oxygen for the production of energy. When oxygen is combined with food (which can come from stored fat) energy is produced to power the body's muscular systems. The longer you move aerobically, the more energy needed and the more calories used. Regular aerobic exercise will improve your cardiovascular endurance, the ability of your heart, lungs, blood vessels and associated tissues to use oxygen to produce energy needed for activity. You'll build a healthier body whilst getting rid of excess body fat.

In addition to aerobic exercise, supplement your programme with muscle strengthening and stretching exercises. The stronger your muscles, the longer you will be able to keep going during aerobic activity, and the less chance of injury. You can do different types of aerobic activities, say walking, one day, riding a bike the next. Make sure you choose an activity that can be done regularly, and is enjoyable for you.

Playing

Don't forget your regular play activities with your friends, exploring, lifting and carrying things, building, running about in fields, playing football or basketball and other games. The object is to keep active and stay away from the television and the computer screen.

Getting fit

There are many sports and activities you can do to improve your stamina, strength and suppleness. Many sports appear under more than one heading: these are good for improving fitness in general. If, however, you are interested in developing

one aspect of fitness, (say, your strength), you should concentrate on a selection of the sports listed under that heading. Sports which are especially good for developing a particular aspect of fitness are shown in bold type.

STAMINA

Athletics
Badminton
Basketball
Boxing
Cycling
Dancing
Football
Gymnastics
Brisk walking
Hiking
Hockey
Jogging
Rowing
Running
Skating (roller and ice)
Skipping
Squash
Swimming
Tennis
Wind-surfing

STRENGTH

Athletics
Badminton
Boxing
Canoeing
Fencing
Football
Gymnastics
Hockey
Horse-riding
Hurling
Judo
Rowing
Running
Sailing
Skating (roller and ice)
Squash
Swimming
Tennis
Weight-training
Wind-surfing

SUPPLENESS

Athletics
Badminton
Dancing
Fencing
Football
Hurling
Gymnastics
Judo
Rock-climbing
Sailing
Skating (roller and ice)
Squash
Swimming
Table-tennis
Tennis
Yoga

Exercising

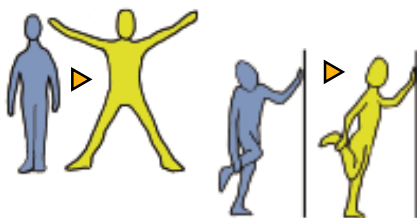
To improve your level of fitness set up a regular schedule for exercising. You are more likely to see improvements when you have a regular schedule for exercise. Don't exercise if you have medical problems (asthma/injury) or are taking medication until you have consulted your doctor.

For your muscles to get stronger, or your body to get fit, you must work harder when exercising than when you are at rest. Your heart should beat faster and your breathing should increase when you are performing aerobic exercise. Do not overdo it. Gradually increase the number of times you do an exercise, the length of time that you perform an exercise, and how hard you exercise. It generally takes 6 to 8 weeks to be able to see some physical improvements, but you will feel better shortly after starting to exercise.

The following is an outline of how you should exercise:

Warm-up

Before you exercise you should always warm up your body. When you warm up your body, you increase the blood flow and get your muscles and joints ready to exercise. Warming up decreases your chances of being injured during exercise. Once you have warmed up, you can complete stretching exercises that will prepare your whole body and the muscles that will be used while you are



Warm up and stretching



actively exercising.

Strength and stamina

Complete the exercise activities in which you choose to participate. Always make sure to take appropriate safety precautions when participating (e.g., wear protective gear) and to exercise for a duration, and at an intensity that is appropriate to your fitness level. (Determined by fitness chart or P.E. teacher)

Cooling Down

Once you have completed exercising you are ready to cool down. It is just as important to cool down after exercise, as it is to warm up before exercise. When you cool down you should let your breathing return to normal. It is best to walk around for a few minutes while your breathing and heartbeat return to normal.

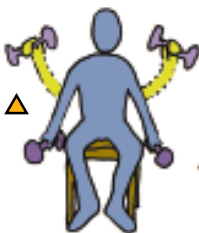
Strengthening exercises



Stomach exercise.
Lift up your knees, hold for a few seconds and return.



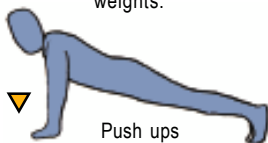
Thigh Exercise.
Kneel up straight. Lie back and lift your arms, hold position and return.



Sit on a chair. Hold a light weight in your hands. Lift as shown, and lower slowly. Increase weight slowly over a number of weeks. You could use tins of beans or peas as weights.



Lie down flat with arms by your side. Point your toes and raise your legs. Hold position for 5 secs. and return.



Push ups

Stamina exercises

Jogging, walking briskly, skipping, swimming, step aerobics and cycling are all good examples of stamina building exercises. Exercise continuously for at least 20 minutes during your training session. Start off slowly a few minutes each day until you reach the 20 minutes target. If you feel tired then slow down and take a rest.



General

Take advantage of daily opportunities - walk instead of taking a car or bus, climb the stairs instead of using the lift. However, you can't get fit in 'one minute a day' no matter how much you try, so set aside at least 30 minutes a day for planned exercise.

Typical exercise routine - six day plan - seventh day rest

10 minutes everyday

Warm up and stretching

Stamina

30 minutes Day 1 & 4,

Exercises and activities

Strengthening

30 minutes Day 2 & 5

Strengthening exercises

Being Active

1 hour playing games or sport day 3 & 6

Creative thinking

As Scouts you will work in a Patrol. The game of Scouting will challenge your Patrol in every way both physically and mentally. The Patrol will be presented with many problems to solve. The solution to these problems will involve team work, leadership and creative thinking.

Creative thinking involves using a number of techniques which will enable you and your Patrol to think in new ways and be more effective as a team.

There is nothing more excitingthan thinking of a new idea.

There is nothing more rewarding....than seeing a new idea work.

Creative thinking comes about by having the ability to create new ideas by deliberately joining two or more unrelated ideas, thoughts or concepts, together.

Thinking

Human beings are sometimes lazy and will not push themselves beyond what is necessary. So most people are happy to limit their thinking skills. That's

'impossible', 'I can't do that' or 'I give up' are statements we all say when we are confronted with tasks and thinking which require effort.

Nothing is impossible, it is only so because we can't think of a way to make it possible. By forcing yourself to think in new ways, many alternative approaches and ideas can be generated to solve the same problem.

The brain divides its thinking into two forms: left hand thinking and right hand

thinking. The left hand side of the brain controls most of our thinking and tends to dominate it. This side of the brain controls logic, calculations, analysis, ordering facts and figures, whereas the right hand side of the brain controls music, colour, art, scale, rhythm.

Generally speaking, the right hand side of your brain tends to be the more creative side of your thinking, and can visualise and connect ideas that the left hand side may reject as 'impossible'. This is often the case when trying to solve a puzzle or code. The left hand side rejects the coded message as impossible because it does not recognise the language or sequence of letters. The right hand side however can visualise a language which uses numbers or shapes instead of letters and so may provide alternative thinking. The solution therefore is a combination of left and right thinking. As the left tends to dominate it is often hard for the right to create new ideas and so we give up, but by working at it a little longer the left will recede so that the right can dominate and supply new thinking.

Group thinking

Creative thinking is best done with others. Each member of a group can contribute an idea and this will spark other ideas, culminating in a pool of ideas. This technique is called brainstorming. During a short brainstorming session ideas are contributed no matter how mad or wild. Each idea is then assessed for workability and finally a number of possible ideas are explored.

Another good method is daydreaming, best done in a tent late at night or sitting around a campfire. Everyone is allowed to contribute their wildest daydreams - 'wouldn't it be great if...?' or to expand on, or explore other peoples ideas. It is normally best to stick to a theme or subject to get best results. When daydreaming try to imagine what it would be like in reality. By doing this it is often easier to see how it can happen in the future. There is a famous quote which goes along the lines of 'If you can dream it, you can do it'

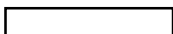
Refining

Coming up with an idea can sometimes be the easy part, making it work is the hard part. There are a number of ways of refining your thinking so that you have a clearer understanding of what has to be done to make it happen.

Edward De Bono, a famous thinker and creator of a number of thinking techniques uses a method called the Six Thinking Hats. Each hat has a different colour and when you are wearing or using this colour hat you only think in a particular way for a set period of time.

By using this method it allows you to drag apart and explore an idea to the fullest and perhaps create new and more exciting ideas in the process. The technique is controlled by a leader who suggests the use of each thinking hat in turn - everyone thinks the same way - and monitors and takes notes of ideas and suggestions. The process can take time at first, but as you practice the method your speed of processing an idea will improve.

White hat



This covers facts, figures, further information we need, gaps in knowledge. The object in using this thinking hat is to assess what we

know and what we need to know to make the idea work.

Red hat



This covers feelings and emotions. The object is to find out 'gut feelings' on an idea; will it work? is it a good idea? etc.,

Black hat



This directs thinking in judgement and caution. "It won't work because....", if we do this we are in danger because....", it is a stupid idea because..." Thinking in this area should always be logical.

Yellow hat



Yellow hat thinking is positive. The object is to explore all the positive benefits and results that an idea will have.

Green hat



The green hat is the creativity hat. The object is to change, add to, expand, 'it would be interesting if...?' to think of other ways to make the original idea better.

Blue hat



The blue hat controls the overall process. Have we explored all the possibilities for this idea? Do we need to revisit a coloured hat again to review what we have done?

By using this process you should end up with a new idea that has been explored and can be used. As you work in your Patrol on a weekly basis, and on activities, you will become a collective thinking unit that will be able to create new ideas and solutions to better enhance your Scouting.

In your personal life, learning how to think creatively allows your mind to expand and increases your capacity to learn and explore.

Memory skills

Memory is the ability to store and recall information. Without memory you would react to every situation you encountered as if you had never experienced it before. So memory is closely linked to experience. As you go through life your brain experiences its surroundings through your senses (sight, sound, touch, smell and taste) and the intensity of that experience is determined by the amount of information your brain receives from your senses. For example, sleeping in a tent the first time is a stronger memory than sleeping in a tent last month. Your first experience is filled with sounds, smells, touch as well as sight. The sound of the dawn chorus and the wind blowing outside, the smell of canvas and fresh air, the hardness of the ground you sleep on, each sense adds an element to intensify the experience.

There are three stages of memory,

Immediate memory Short term memory Long term memory

All memory starts as immediate memory. The brain decides if it wishes to retain it, and if so, it is passed into short term memory stores. This area of the brain will store the basic facts for a while but unless the information is revisited or revised, it will in time, be rejected rather than passed to the long term memory banks. New skills learned, either in school or in Scouting, need to be revised a number of



times before they are permanently retained. A simple thing like tying a knot is easy to learn, but without practice and practical application is quickly forgotten. Therefore in order to remember things we must ensure that we place them firmly in our memories. Revise, study, rethink situations, names, places and experiences to ensure their movement from immediate to long term memory. You can't remember everything so your brain will shift through your memory banks to sort out and decide what is important, little things like your attention and concentration level will determine their importance. When receiving information you wish to retain, use as many senses as you can to make the experience more memorable. When you are introduced to people - listen to their names, spell them to yourself, compare the names to other people you know with the same name. Notice details about the person, colour of their eyes, shape of their mouth, colour of their hair. In shaking their hand - is their hand soft or hard?, is it a firm handshake or a loose handshake?, is their hand hot or cold?. When talking to the person repeat their name a couple of times - 'yes, John, that is interesting'. Each extra piece of information will enable you to build a fuller picture of them in your mind, and aid your memory of

their names and faces.

In remembering things it is best to use a number of memory skills to help you - organise the information, visualise images, link information to other things or numbers, break down the information into smaller bits and use as many senses as possible to compile the information.

The Room system

Visualise a room you know well. When you have items to remember you place them in the room. For example, "I need to write a letter to John". Visualise John sitting at the table with the letter written on the table cloth. Or the name of a book you wish to buy - think of its name burnt into toast that has just popped up in your toaster. It sounds like a mad system, but it works!

Test yourself

Look at the objects below for 30 seconds. Then list as many as you can remember. Try the exercise again with a collection of household objects and use one of the systems suggested - is it any easier to remember the items?



The link system

For each item you wish to remember, create a visual image and then link the images together to make a story. As you recite the story in your mind the images will be remembered, and those images will link to your items.

Mind maps

Mind maps are interlinking charts which combine pieces of information in much the same as your brain does. Start by taking an item you know, and then adding four or five pieces of information you remember immediately to this item. Then take each of the five pieces, and in turn link another five or six pieces of information until you have created a web like map of interlinking pieces of information. This method is particularly good for study or school work. You will be amazed at how much you actually know about a subject. The information is stored in your brain you just need a key to unlock it.

Body care

Keeping yourself clean is an important part of staying healthy. As you exercise, your body becomes dirty from sweat and grime. This can block up pores and increase germs on your body which can cause skin problems and spread infection. You need to shower and wash regularly, particularly after exercise to clean and refresh your body. Your hair, teeth and feet also need direct attention. Wash your hair at least twice a week using a suitable shampoo, and comb and brush it regularly. Take care with dyeing and current hair trends as they can damage your hair. Your teeth need constant care to maintain your smile. Your feet spend most of their lives covered by socks and shoes which make them prone to fungal infection. Wash and dry your feet carefully, particularly when hiking for any period of time. Watch out for blisters caused by

rubbing, bunions caused by footwear being too tight and Athlete's Foot. This is caused by a fungal infection which results in itching and skin peeling between your toes and is very painful. Make sure your toe nails are cut properly - straight across to prevent ingrown toenails which are also very painful.

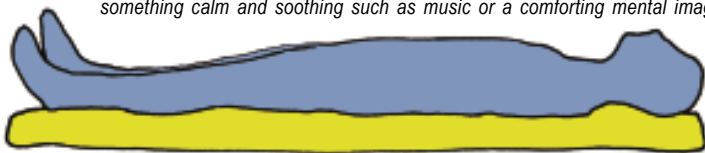
Sleep and relaxation

Sleep and relaxation are as important to your body as exercise and a healthy diet. Your body is like a battery and needs to be recharged, while you sleep. Young people need at least 8 hours sleep a night, your body is still growing and needs this time to stimulate body tissues to grow and repair. Your brain also needs time to download and sort all the information it has gathered during the day. When you dream, your brain is at work filing and placing thoughts and preparing itself for the next day.

In a fast paced world you need to set aside time to relax. Your mind may be troubled, you may be anxious about friendships, school work, or you may just need time to think and chill out. Stress caused by worry and anxiety is damaging to your health, so you need time to calm down. If you have serious concerns about anything then talk to someone you can trust, don't store up these feelings.

Relaxation

Find a quiet place. Lie on the floor or on your bed. Tense your toes as tightly as you can, then slowly relax them. Carry on up your body, tensing and relaxing until your body is at rest. Relax your mind by concentrating on something calm and soothing such as music or a comforting mental image.



Maintaining a fit and healthy body will increase your confidence and improve the way you look and feel. The condition of your skin, hair, teeth and posture will aid your appearance and make you feel good about yourself.

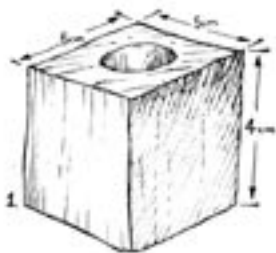
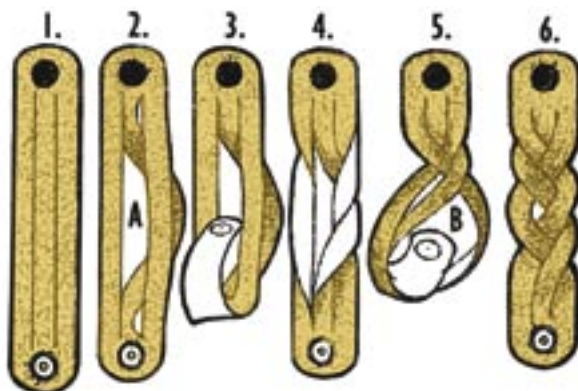
Scout Stuff



Woggles



The traditional woggle - plaited leather and press stud - can be easily made with a thin strip of leather and a press stud kit. The illustration below will show you how to plait the leather to create the woggle. It is more likely that the illustration will be used to re-plait an existing woggle that has been unraveled.



In each diagram the shaded area indicates the front of the woggle.

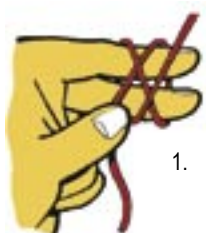
1. Lay flat
2. Fold the centre strip behind the right strip.
3. Pass the bottom portion of the woggle from the front through the gap marked 'A'.
4. You now have a weird looking plait as in diagram 4.
5. Make another plait as shown in diagram 5 and pass the bottom portion of the woggle from the front through the gap marked 'B'.



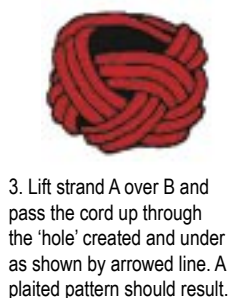
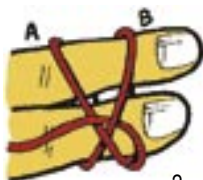
Woggles can be made from all types of material. Try carving a woggle from wood.

Turks Head Woggle

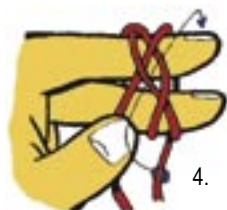
1. Holding one end of the cord with your thumb against your middle finger turn the cord loosely around your fingers twice, as shown.



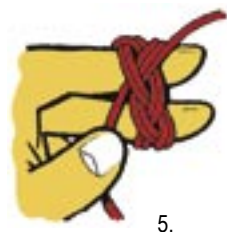
2. Turn your fingers over and pass the end of the cord under B as shown.



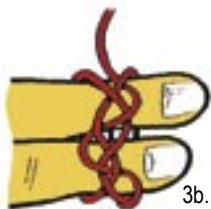
3. Lift strand A over B and pass the cord up through the 'hole' created and under as shown by arrowed line. A plaited pattern should result.



4. Turn your fingers over and bring cord up the gap as shown by arrowed line so that it lies beside the starting point. The first strand of the woggle has been created and you can remove it from your fingers if you wish.

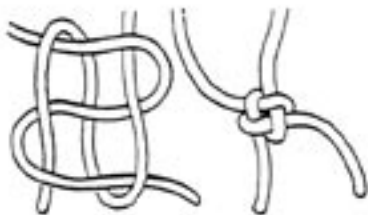


5. Continue following the line with your cord to create the second and the third strand. Tighten up and tidy up the ends and you have your woggle.

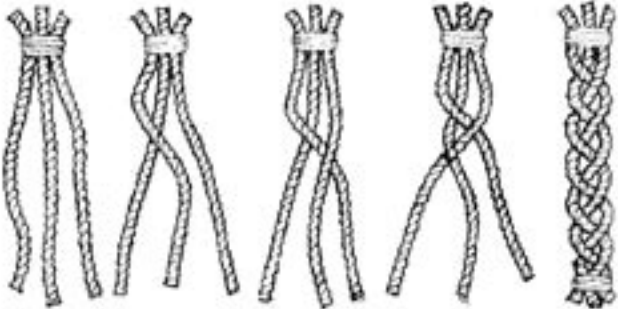


The Square Knot

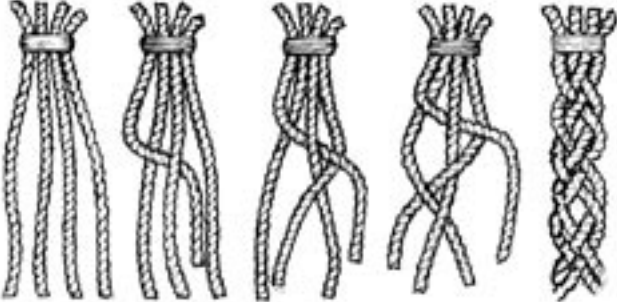
The square knot is a handy and decorative way of tying your neckerchief if you do not have a woggle. The knot is tied with the ends of the neckerchief and it is worn on the neck in an open fashion.



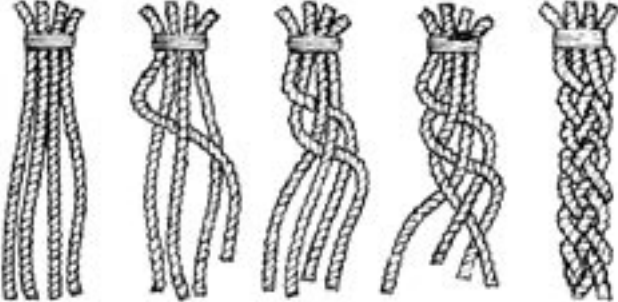
Decorative Knots



3 stranded plait



4 stranded plait - sennit





Ocean plait

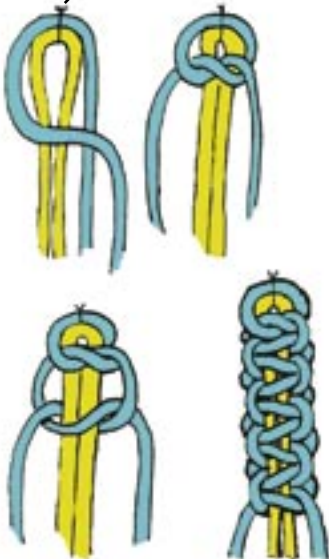
This plait creates a flat weaved mat. The design can be expanded easily so that a rope mat can be created using larger ropes. The design shown using light cord will allow you to learn the technique and make a 'scouty' key flop.



In line plait

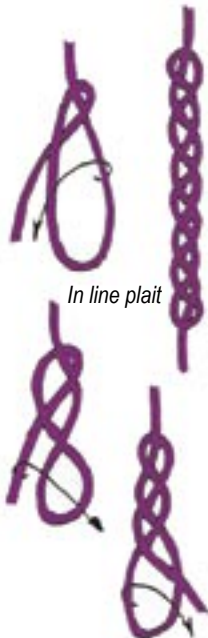
A simple plait which can be used to make bracelets or shortening ropes and cords.

Tie together with thread



Lanyard knot

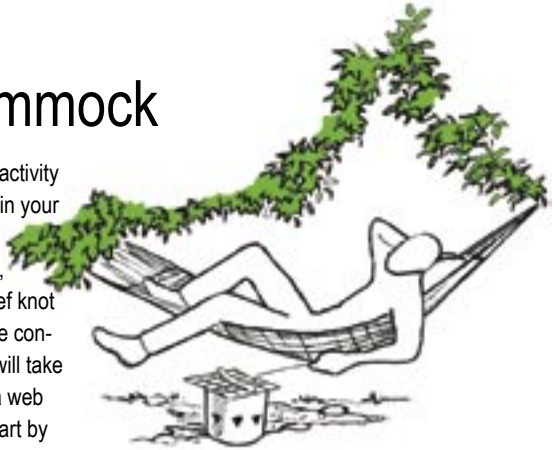
The lanyard knot is made using two pieces of cord. One piece of cord acts as the core of the knot (yellow) and the other (blue) is tied around the cord. The two pieces of cord are tied together with a small piece of thread to prevent the core slipping as you tie the knot. It is a good idea to hang the cords on a hook to make tying the knot easier and maintain tension in the lanyard.



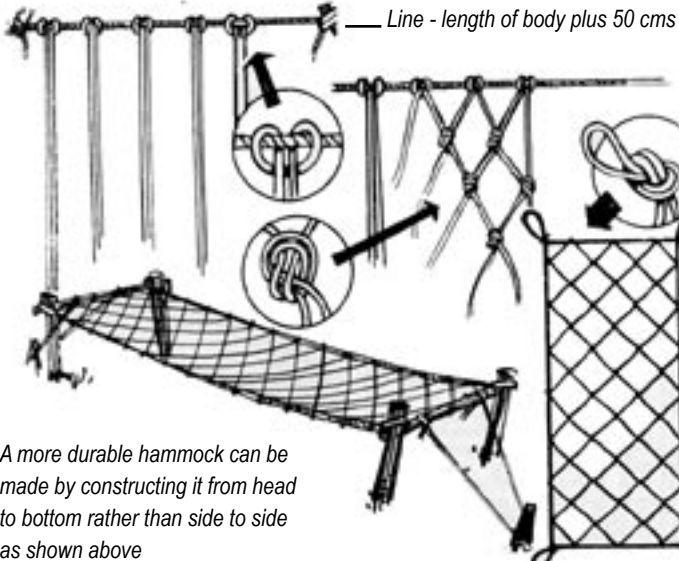
Camp Hammock

A camp hammock is a fun activity you can make on camp or in your back garden.

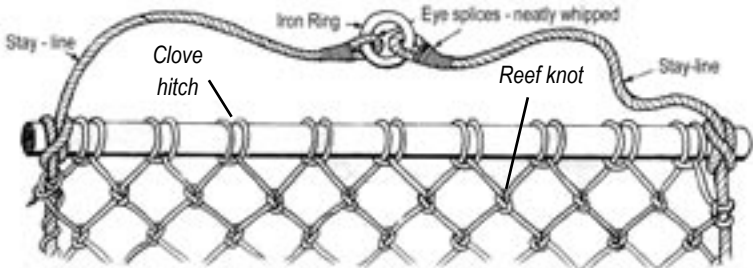
The knots used are simple, the larkshead knot, the reef knot and the overhand knot. The construction of the hammock will take time and care to produce a web structure of similar size. Start by creating a 'line' similar to a clothes line on which to create your web.



Always ensure your hammock is safely secure before you use it.



A more durable hammock can be made by constructing it from head to bottom rather than side to side as shown above



Scout Stave

A stave is a basic tool for the outdoor traveller. For thousands of years, the walking stick has been a symbol, weapon, record, and support for the tired feet and legs of the wanderer. Even today, on the trail or in camp, it has a hundred uses. For centuries, labourers used the stave to support loads and defend themselves against man and beast. The ancient Druids, who believed each wood copse had its own living spirit, apologised to a tree before cutting it to make a stave.

In B - P's day, the stave was considered an important part of a Scout's outdoor equipment. Today, a stylised figure with a stave marks trails in many modern parks and is often used to indicate the availability of hiking trails in recreation and wilderness areas.

On the Trail

A hiking stick helps make the miles glide by. It swings comfortably in your hand, offering balance and a rhythm to your gait. In dense overgrowth, use the stave to push aside brush and cobwebs, and to prevent branches from whipping into your face. You can lift up underbrush to search for berries or pry up logs and rocks to satisfy your curiosity about what's underneath. On more adventurous terrain, the walking stick is even more useful. It is a handy balancing aid when crossing log bridges. Used as a brace to lean on, it can be a life-and-sprained-ankle-saver on hills, rocky ground, and slippery-bottomed streams. Marked with a measuring scale (zero at the bottom), it is useful for measuring water depth.

A stave is handy in many emergency

situations as well. Two staves make a quick litter or stretcher. It can be a reaching aid for a friend struggling in the water. Whenever it saves you the time of having to find and cut a pole, you will appreciate having it handy. When camping, especially in open countryside, the stave can become a makeshift ridgepole or tentpole. It is instantly available for lifting hot pots off the fire or for propping up a billy of tea.

Making a Stave

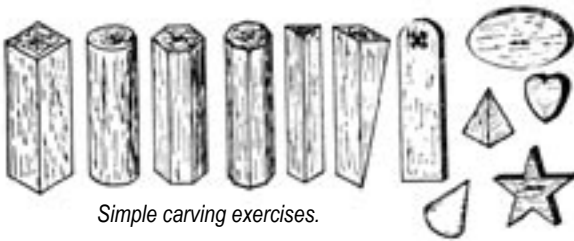
You can make a stave or walking stick from almost any type of wood. Hardwoods such as ash, oak, and maple are good. Hazel is a good choice and conifer saplings are usually straight, light, and strong. Use whatever you can find in your area. Choose standing deadwood that is straight and free from checks (splits) with the bark firmly attached. When you are ready to strip off the dried bark, a draw stroke works best. It isn't necessary to take off all the bark: simply smooth the stick at the handgrip. Those who are not into rough and rustic looking staves can sand or plane the stave and add a finish of any outdoor varnish or occasionally apply a coat of stain or oil. Raw wood takes on a beautiful sheen from perspiration, and you may achieve the finish you want just by handling your stave. Kilometre after Kilometre.

If your choice of stave is not straight it can be straightened by heating over a fire or with a hot air blower, like those used for stripping paint. As the stick heats up bend it a little at a time to the desired shape and hold in that position until it cools down. Do this a little at a time to prevent it splitting. Every member of a Patrol should have a stave. A Patrol with access to eight staves will be able to overcome most problems,

Carving and Whittling



As you sit around the fire with evening approaching there is no better activity than to be able to carve or whittle a design or logo onto a stave or piece of wood. All that is required is a sharp knife - penknife. Start first with simple cutting and carving exercises to get used to the feel of the knife and the many ways you can cut and carve a piece of wood to create your



Simple carving exercises.

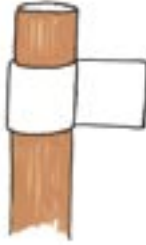
SCOUT STUFF



Try carving a propeller - a good exercise in understanding the grain

The Scout sign is a nice carving project, once the basic cuts are created in your carving wood. Use your own hand for reference as you work. Work slowly to avoid mistakes.





1. Start by wrapping a strip of paper around the stick to determine its size.

When carving it is best to sit down so that your arms rest on your legs. Always cut away from your body. Cut small pieces rather than large strips. Keep your knife sharp, as a blunt knife can be more dangerous than a sharp one.

Carve a rope effect



3. Wrap the strip around the stick again and mark lines on stick as shown. There will be three marks roughly 120 degrees apart.



2. Stretch out the strip of paper and divide in three using pencil marks.



5. Cut into the spiral cuts from top and bottom to create a smooth rope effect. Use a small wood file or sandpaper to finish.

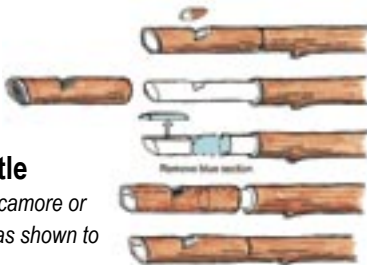


4. Create further marks by placing the strip of paper down the length of the stick, at least twice so giving 6 marks. Join the marks by pencil lines so as to create a grid diagonally around the pole. Cut into the diagonal lines lightly with a knife or small saw to make spiral lines around your stick.

Thumb Stick

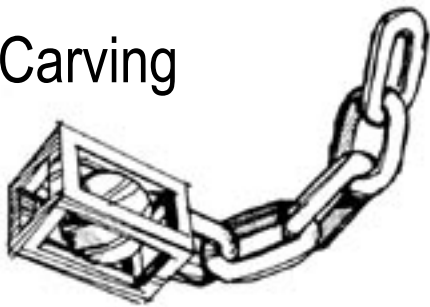
Make a whistle

Cut a length of sycamore or chestnut and cut as shown to create a whistle.

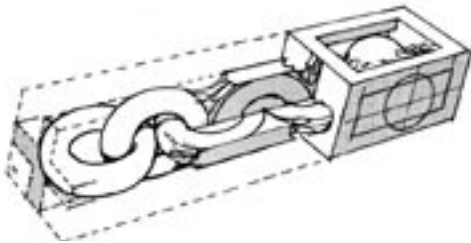
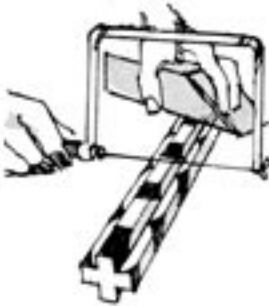


Decorate your stick with fancy ropework or branding.

Carving



Making a chain is a slightly more difficult project and involves a bit of careful picking and poking with the tip of your knife to prise the links of the chain apart. If you have done some woodwork in school or at home then prepare your carving wood before you start, to save on time. Use a soft wood as it is easier



If you want to create a crook on your staff, look out for sticks which come off the main branch, as shown in photo. Hawthorn branches are good for this type of staff.



Once you master the basic carving skills, be a bit more adventurous and try animal heads and faces. Draw a design on your stick so you can plan your carving.

Burn in fine details with heated wire, nail or metal tent peg.

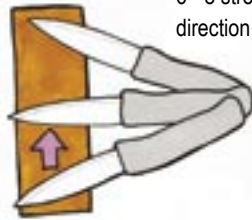


Sharpening a knife

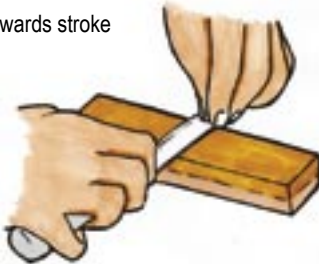
Forward stroke



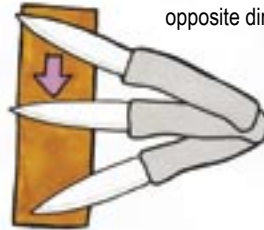
6 - 8 strokes in one direction



Backwards stroke



6 - 8 strokes in the opposite direction



Use a carborundum or other sharpening stone. It is best used dry without the use of oil. Lay knife on its back flat to the stone. This will give a fine edge for carving. You can obtain a more durable edge by raising the back of the blade to about 15 to 20



Finish off your edge on a small piece of fine grade wet and dry



In order to retain your edge it needs to be stropped using a piece of leather strapping - the back of a scout belt. You can also make a stropping board as shown with a piece of leather glued to a suitable board.

Homemade stoves

All of these burners should be tested carefully in an outdoor setting before permanent use.

Alcohol Stove 1



1. You need two empty drinks tins. Cut off the bottom of each tin as shown.



2. Punch small holes with a map pin around the edge and centre of the tin bottom as shown.



3. Half fill the other half with 'Perlite', a granular substance which is mixed into compost for pot plants. This is obtainable from garden centres.

4. Join the two halves together and crimp edges so that they stay together.



5. Half fill the burner with methylated spirits and light. Test the burner before permanent use.



You can make a pot stand by folding a coat hanger to shape.



Saw dust stove

Start by punching a number of large holes in the bottom of a tin can. Place a broom handle or round stick in the tin and pack it with sawdust. Carefully remove the handle or stick to create a tunnel. Bend a number of metal tent pegs into shape and place along the side of the tin. Start the burner by placing a burning paper into

Alcohol Burner 2



For this stove you need a drinks tin, fibre - glass, some fine mesh and a small fruit tin.

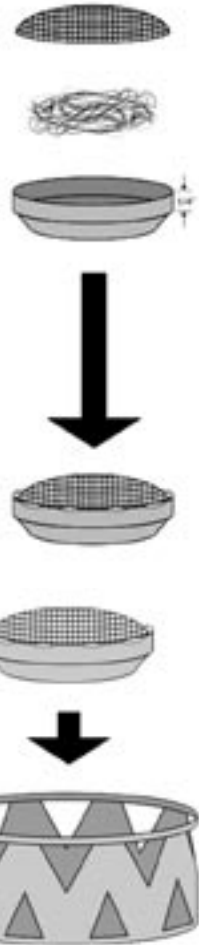
Constructing the burner is easy. Cut off the bottom of a drinks tin and leave a lip of about 10mm above the edge. Place fibre glass, firmly, but not compacted, into the tin and cover with fine mesh. Crimp tin edge to hold the mesh in place.



Cut the fruit tin as shown to make a burner frame.

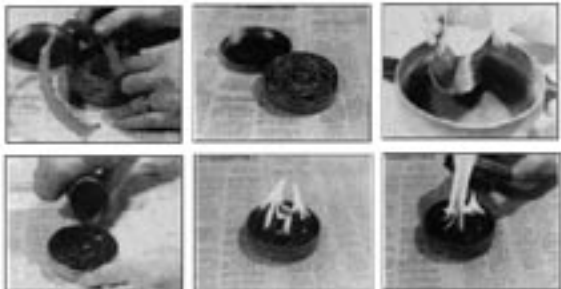
Place the burner into the frame.

Half fill the burner with methylated spirits and test burner before permanent use.

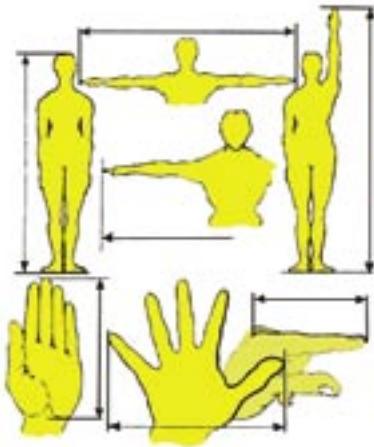


Cardboard and wax stove

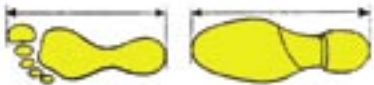
Start by cutting small strips of cardboard and place these loosely into the tin shoe polish or hard bolded sweet tin. Melt some wax - (old candles), and pour into the tin. Allow some cardboard to show through the wax. Light the cardboard and allow it to char. Quench fire and it is now ready for use.



Estimation

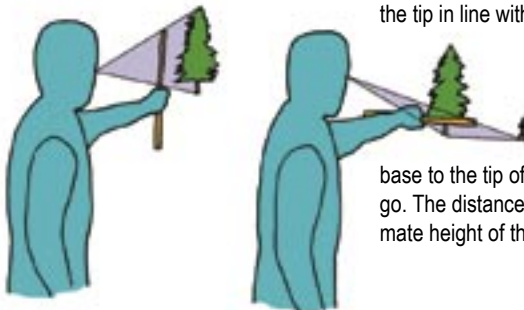


The ability to estimate is a useful skill for any Scout to have and can be used in many activities from pioneering to map reading. Knowledge of your own personal measurements will enable you to approximate many distances and sizes. Using these measurements will allow you to approximately work out measurements of many different objects. By far the most important personal measurement will be your pace. Get to know it by measuring it a number of times in normal walking - not a stretched or exaggerated pace. Find out how many paces you make in a 100 metres. Practice this on level ground and rough ground.



Estimating height Lumberman method

Hold a stick out in front of you and place the tip in line with the top of the tree. Move

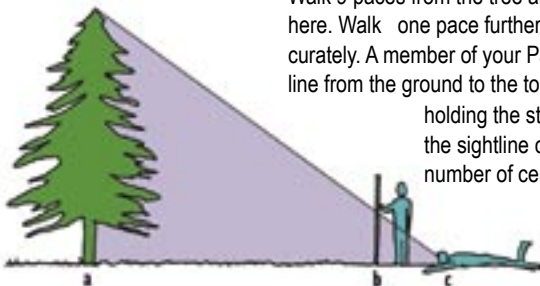


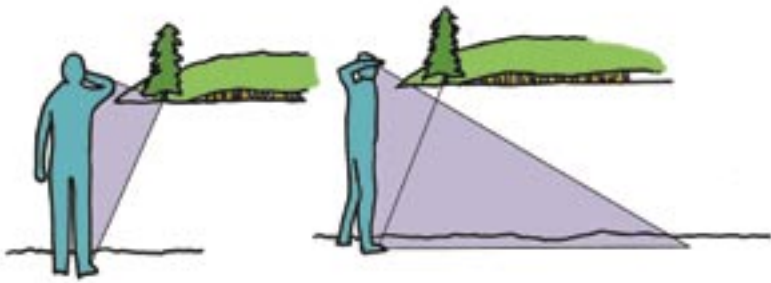
your thumb until it is in line with the bottom. Turn the stick 90 degrees and have

a friend walk from the base to the tip of the stick counting as they go. The distance travelled is the approximate height of the tree.

Centimetre to Metre method

Walk 9 paces from the tree and place the stave upright here. Walk one pace further and mark this place accurately. A member of your Patrol sights an imaginary line from the ground to the top of the tree line. The Scout holding the stave marks the point where the sightline crosses the stave. The number of centimetres from the ground to this point divided by 10 will give you the approximate





Napoleonic method

Stand on one bank and hold your hand against your eyebrows, with the palm facing downwards. Slant your hand until it appears to touch the opposite bank. Turn 90 degrees and note the point where the edge of your palm appears to touch the ground. The distance from where you stand to this point is the width of the river.

Compass method

Locate a point on the opposite river bank and take a bearing on it. Add 45 degrees to this bearing. Then walk along the bank until the compass pointer points at the object. The distance from this point to your starting point is the approximate width of the river.



Some other methods

Pencil method

Have a Scout whose height you know stand in against the object. Take a piece of stick or a pencil and hold at arms length and sight the top and foot of the Scout, on the pencil. You now have a representation of a certain height on the pencil. Estimate how many times this height goes into the height of the object. Multiply this figure by the height of the Scout and you have the approximate height of the object.

Indian method

Move away from the object to be measured and turn your back to it. Bend over and look between your legs and move slowly forwards and backwards until you can see the top of the object. From this spot to the base equals the approximate

height.

Comparison

This is the skill of comparing a distance or size with something you know- the length of a football pitch or a distance on a racing track. Practice makes perfect.

Half and half

Divide the distance to be estimated by half and then by half again until you have a short distance that you can measure. Multiply this distance by the number of

times you halved it.

Sound

Sound travels at 331 metres per second, so by counting the seconds from the time you see an action to the time you hear it, you can estimate the distance by the

Codes and ciphers

During your time in Scouting you will be confronted with games, challenges and activities that will involve the use of codes and ciphers. The traditional codes, Semaphore and Morse Code are no longer used professionally.

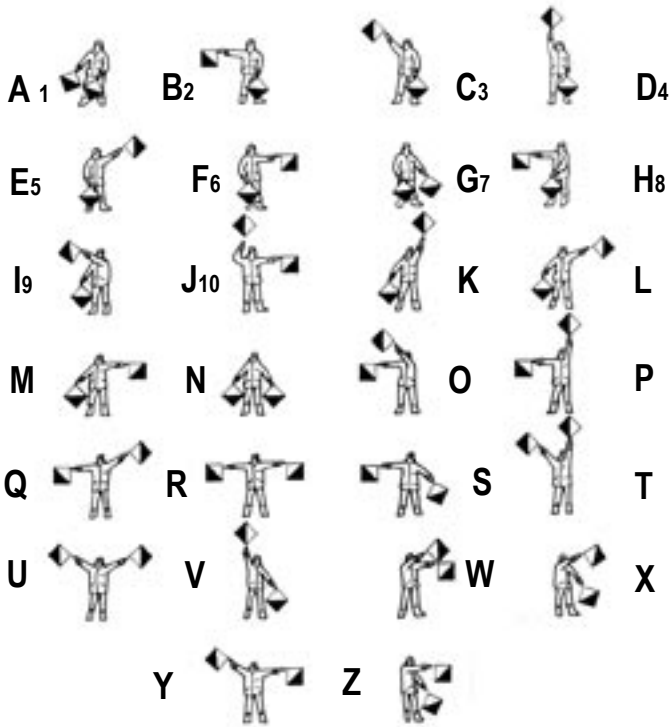
Semaphore was used by the navies and armies for communications during the last century. Morse was the primary code used in radio transmission and is now used as a back up for radio ham operators. Their use in Scouting is for

fun.

Frame codes have always been popular for games and activities as they are graphically different and appeal to Scouts. Once you know how they are constructed they are easy to remember.

During games and activities it is always possible that Morse or Semaphore will be used. Signalling by torch or tapping in the case of Morse; signalling by flags in the case of Semaphore from hill top to hill top. Usually a simpler method using a grid can be used for Semaphore. Using the grid

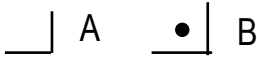
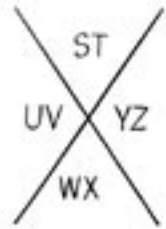
Semaphore (as seen by receiver)



Frame Code

The frame code uses a grid system to determine the position of letters. The message is then written graphically as shown. The dot indicates the second letter in the frame.

AB	CD	EF
GH	IJ	KL
MN	OP	QR



you only have to remember the first five signals.

Being able to crack a code is a necessary skill. Being familiar with the common codes will make this simpler to do. The easiest way to crack a code is to figure out what the small words are first - the, and, to, for, of, etc.

Another useful aid is to be aware of the frequency of letters. The most commonly letters used, in rank, are E, T, R, I, N, O, A, S and the least commonly letters used, in rank, are Z, J, Q, K, X, B, V, W. Using this information you can make reasonable

Semaphore grid

	1	2	3	4	5
1	A	B	C	D	E
2	F	G	H	I	JZ
3	K	L	M	N	O
4	P	Q	R	S	T
5	U	V	W	X	Y

Example the letter N = 4, 3.

Morse Code

A	● —	N	— ●
B	— ● ● ●	O	— — —
C	— ● — ●	P	● — — ●
D	— ● ●	Q	— — ● —
E	●	R	● — ●
F	● ● — ●	S	● ● ●
G	— — ●	T	—
H	● ● ● ●	U	● ● —
I	● ●	V	● ● ● —
J	● — — —	W	● — —
K	— ● —	X	— ● ● —
L	● — ● ●	Y	— ● — —
M	— —	Z	— — ● ●

1	● — — — —	6	— ● ● ● ●
2	● ● — — —	7	— — ● ● ●
3	● ● ● — —	8	— — — ● ●
4	● ● ● ● —	9	— — — — ●
5	● ● ● ● ●	0	— — — — —

Orienteering



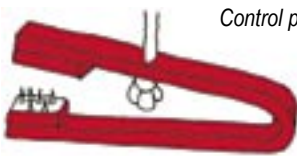
Orienteering is a sport set around the skills of map and compass reading. Normally the route is set on open countryside over a variety of terrain. The skill of the orienteer is to get around all the control points in the shortest time.



Control flag



Section of an orienteering map showing controls and course sequence.



Control punch

An orienteering map is more detailed than, and coloured differently to, the standard Ordnance Survey map.

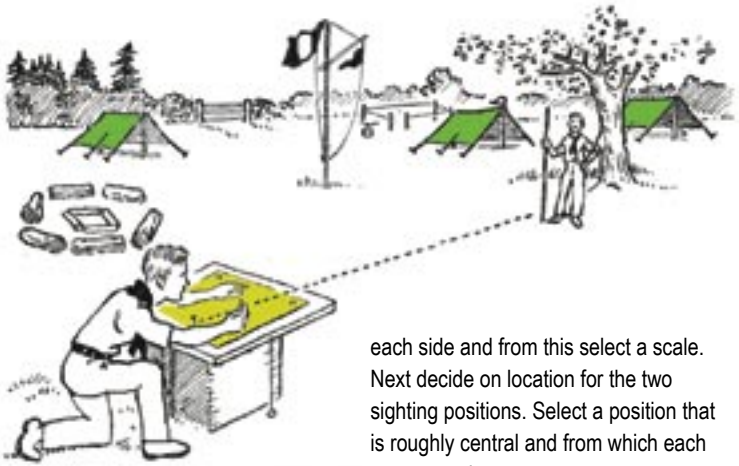
The map is marked with control points, before you start, and the best route around the course is decided before the competition begins.

Control points are marked by red and white flags, or by a letter painted on a board, and with a control punch. A control card, with your name and start time, is punched by you at each control. This card is used to verify your arrival at each control. The card is submitted to the organisers at the end of the circuit and your total

Orienteering map of Larch Hill



Plane table surveying



Plane table surveying is a method of making a simple map. You will require graph paper, pencil, ruler and a drawing board or base.

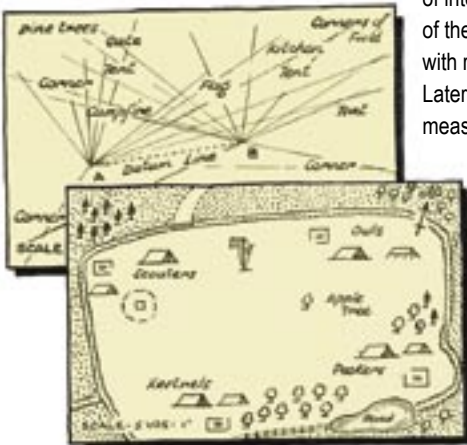
Before you start you need to determine the basic size of the area so that a scale can be struck for the survey. Walk the field and work out the number of paces along

each side and from this select a scale. Next decide on location for the two sighting positions. Select a position that is roughly central and from which each corner can be seen.

Place a pin in your drawing board and draw a line. Sight along this in the direction of your second point and mark its location exactly according to the scale decided. Place a second pin in this spot.

Now working from the two pin points sight features and key points of your camping field on the map and measure distances. Use your ruler to scale their positions on the drawing board. This will create a series of interconnecting lines. The intersection of the two lines is the location of the point with reference to your baseline.

Later draw a clearer map using these base measurements as your reference, adding



This basic method of map making is called triangulation, which is the basis for mapmaking (known also as cartography)

Tracking



Turn right



Follow this trail



Turn left



Follow this trail



Message hidden 12 paces from here



Message hidden four paces from here



Follow this trail



Do not follow this trail



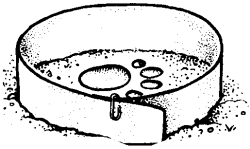
Group has split up four have taken this trail and two the other one



Gone home



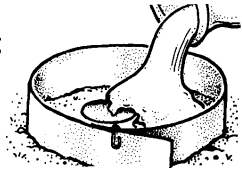
Plaster cast of an animal track



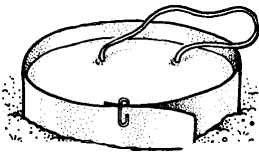
Grease some card with Vaseline and place around the track.



Mix up Plaster of Paris per instructions.



Pour the plaster into the mould and allow to set.



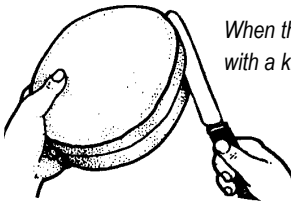
Place a piece of string, for hanging later, in the plaster before, it sets.



Lift up the cast and turn over. This is a negative image and you'll need to make another casting to make a positive one



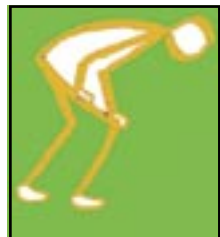
Grease the top of the casting and place new card around the cast to create a mould.



When the cast is set, work around edges with a knife and prise apart with care

Stalking

If you want to observe animals at close range you will need to stalk up (creep up) on them slowly and quietly. There are a number of techniques, from a stoop to a flat crawl - see diagrams. Always approach the animals from downwind and wear clothing with subdued colouring. Use whatever cover is available and peep out from the side rather than the top. Avoid using the skyline where an outline would



Campfires

Seated around a glowing campfire, a person feels at peace with the world. As sparks drift upward, the magical night sounds and moonlight stir thoughts that link the present and distant past.

The campfire circle is a place for creating memories and dreams. It is a place to recall past camps, old friends and good times. The most memorable part of a camping experience is often the campfire at the end of the day.

Creating Atmosphere

Good campfires don't just happen. You need to plan all the elements that come together to create an atmosphere for friendship and camaraderie. Let's look at some of the elements in more details.

Campfire Rules

Enter the campfire circle silently.

Sit in a circle around the fire. Standing, running around or horseplay are not permitted.

Do not poke sticks or throw rubbish into the fire.

Be polite to others; do not talk during a song or sketch.

Cheer all contributors for doing their best.

Keep flashlights turned off after entering the campfire circle.

Leave the campfire circle in silence.

You should wear your campfire blankets decorated with badges which you have collected.

The Fire

The focal point of the campfire now becomes the fire. Many well-planned programmes have gone awry because the fire was a failure. You need a fire that lights quickly, burns brightly and lasts only as long as the campfire programme. Never leave a fire unattended and never leave it to burn out by itself.

You can use several types of fire styles for a campfire –

The Pyramid fire – pairs of logs resting on each other and narrowing to a point – the centre of the pyramid packed with kindling

The Log Cabin fire – similar to above but box shaped and not narrowing to a point – 2 heavy logs, six mediums, three heavy, six mediums, three heavy etc.

The Teepee fire – stack the wood on end with the tops meeting like a teepee

Campfire Leadership

The most important quality of a good campfire leader is enthusiasm. You don't need to be able to sing on key but you do need enough interest and spirit to help motivate others to join the fun. A campfire leader prepares the programme, lists participants, their activities, roles, and timing. Smutty songs or ethnic jokes turned into sketches are not appropriate or welcome at a Scouting event.

Flags

As a Scout you may be called upon to carry the Troop or Patrol Colours. A flag is the symbol of the honour, tradition and sometimes the history of the country or body it represents. It should therefore be treated with great respect. When not in use it should be put away carefully. Never let a flag touch the ground.

Always stand at the alert when the colours march past. If in uniform and not under Parade orders, salute National and Scout colours. When the Flag has become so worn or frayed that it is no longer fit for display, it should be destroyed by burning.

Flying

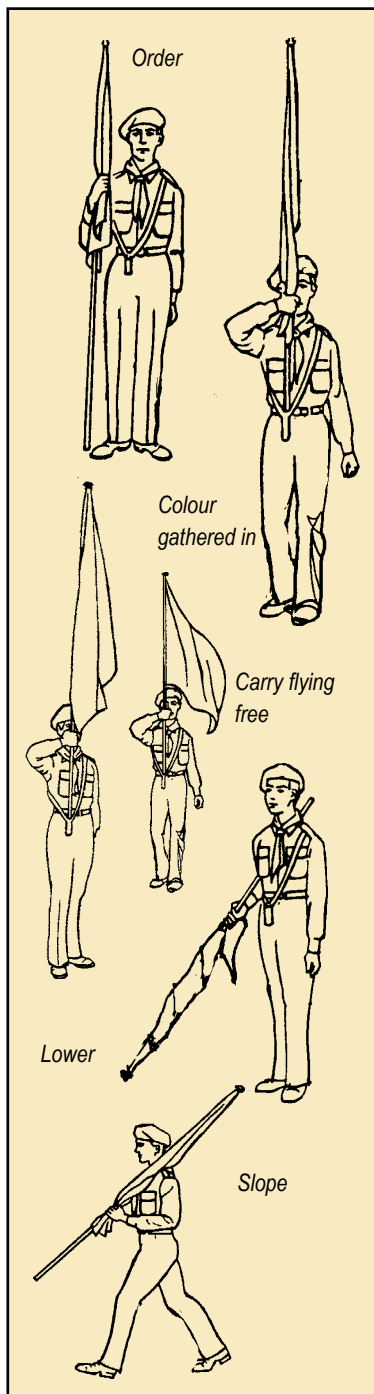
No flag or pennant should be flown above the National Flag. When the National Flag is carried with another flag or flags, it should be carried in the place of honour. When the National Flag is flown from a group of flag poles of equal height, it should be the first on the right of the line. This is the observer's left as he faces the flags. If the flag poles are of different heights the National Flag flies from the highest flag pole.

Escorting Flags

A flag when carried on parade should be escorted by two Scouts who should march on either side of the flag bearer and slightly to the rear.

Flag Carrier

The flag carrier belt should be worn over the left shoulder and should be so





Rope problem



The challenge

You need to place a rope on a branch on the opposite side of a ravine or river - how do you get the rope around the branch?

Start by using a lighter rope or line than the rope you intend using for your bridge or swing. Create a loop in the end of the rope and place a small stick across the loop using the lay of the rope to hold the stick in place.

Next you need some light line or string to which you attach a hooked stick. (see illustration). The heavy line is thrown the branch - or you can use a light line (with a weight on it) first, and then draw the heavy line over the branch.



Use the hooked stick attached to the light line and try to pass it through the loop. Once you snag the loop pull the heavy line to you. You now have your line attached to the opposite bank and it will be easy to



Patrol Leadership



Patrol Leadership

The Patrol is the basic group of Scouting - a group of young people of similar age under the leadership of one of its members. Normally a Patrol will consist of 6 - 8 members and will be part of a Troop made up of 3 - 4 Patrols.

The leader of the Patrol is the Patrol Leader, a young person who is usually an experienced Scout and is elected or chosen by the members to be their Leader.

All activity within the Scout Troop is done through the Patrol, so the Patrol is in effect a team of young people working together to overcome the challenges,

experience the adventure and enjoy the friendship of Scouting. The job of the Patrol Leader is to work with the members of the Patrol so that they can become an effective working group and can undertake the challenges, Scouting offers, with ease. To win the cup, a football team needs to work together as a group, putting their collective talents together so that they are unbeatable. The strength of the team lies in the fact that it consists of good players but also in the fact that those players work for each other. The whole team works towards a 'goal' and at the same time defends their own goal from attack. No one player can do all the work, nor play on every part of the pitch.

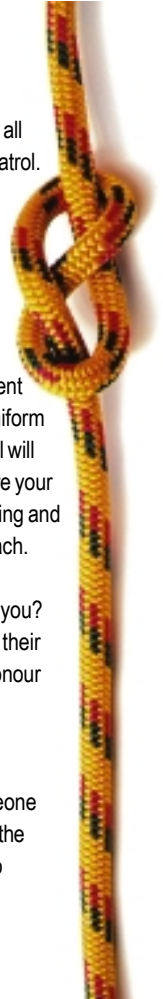
Similarly, a Patrol is a collection of individuals, each with their own talents and experience. The job of the Patrol Leader is to discover these talents and blend them together so that the Patrol becomes an effective working unit.



The Patrol Leaders Job

The job of the Patrol Leader is to:-

- Bond together the members of the Patrol as a group of friends.
- Discover the talents and experience of your Patrol and be able to use these talents to create an effective Patrol.
- Develop within the Patrol a spirit of Scouting and the ideal of 'all for one and one for all.'
- Be enthusiastic and encouraging so as to move your Patrol forward at all times. Seek the best and work for the best from each member of the Patrol.
- Welcome new recruits and help and encourage them in their Scouting advancement. Introduce them to the members of the Patrol and the Troop and ensure that they become full members of the Patrol as quickly as possible.
- Show example and responsibility - Maintain your own self advancement by seeking merit badges and awards. Always have full and correct uniform and correct equipment. As a Patrol Leader the members of your Patrol will look to you for guidance and direction. The Scout Law and Promise are your guides. At all times use your common sense - there is a time for messing and there is also a time for seriousness. Know when the time is right for each.
- Talk and listen to the members of your Patrol, what are they saying to you? what do they want to do? what are your plans? Only when you know their dreams and expectations can you represent their views at Court of Honour meetings.
- Delegate the work load - give each member of the Patrol a job to do. An effective Patrol is a busy Patrol. Many jobs need to be done, someone to look after the gear, someone to write up the log, another to look after the money. As the Patrol Leader your job is to co-ordinate and lead, not do everything yourself.
- Represent your Patrol - in particular at Court of Honour Meetings but also on many other occasions that will arise.



Organising your Patrol

The Patrol is a collection of individuals each with their own strengths and weaknesses.

As the Patrol Leader your job is to create a Patrol.

that has identity
that has tradition
that has honour
that has loyalty
that has plans

and will work together to carry out those plans.

Making discoveries

Sit down with your Assistant and get a piece of paper and pencil. On the paper create two columns. At the top of one write 'strengths' and on the other 'weaknesses'. Now list under each column those items that you consider belongs under each category. For example you might identify the following under strengths :-

Paul is good at first aid.
We have a Patrol box.

All the members of the Patrol have at least 3 merit badges.

We are good at pioneering.

Mary likes writing.

whereas you might write the following under weaknesses

Our Patrol Corner is poor

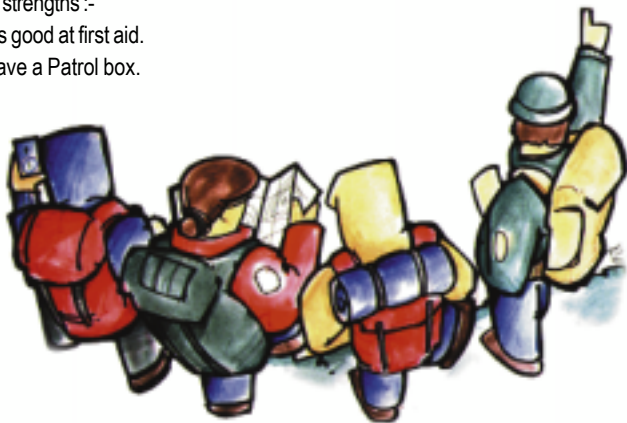
We don't have any merit badges.

We rarely win against the Lion Patrol.

We are useless at map and compass.

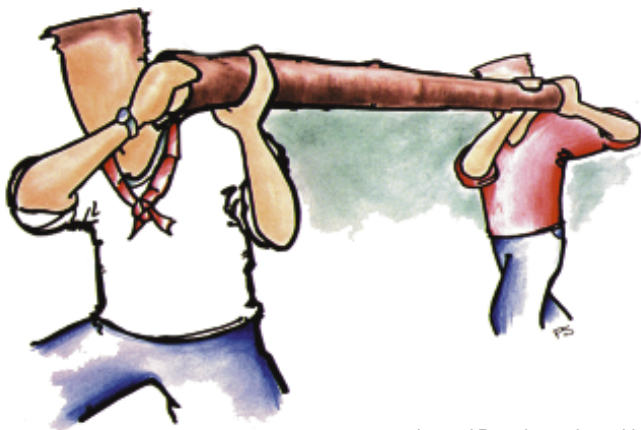
We never had a Patrol camp.

By listing your strengths and weaknesses in this way it is easy to see what you are good at and what needs attention. From this list decide on what actions are required in order to improve your Patrol. For example, you identified, that Mary is good at writing. Is Mary the Patrol Scribe? If not, then maybe she should be. You also identified that you are useless at map and compass. How are you going to get better? Ask the Scout



Leader to give you special instruction. Get a handbook from the library and learn how to do it better. Take part in an orienteering competition. Set yourself a challenge to be experts.

By identifying solutions to some of your problems you will be creating a number of objectives for yourself and your Patrol. Obviously it will not be possible to solve all your problems immediately, so you should discuss your list with the Patrol and decide on a plan of action. To be an expert in map and compass will take time. What steps are necessary in order to become an expert?



Learn how to read a map. Learn how to use a compass. Take part in a compass trail. Lead a section of a cross country hike. Plan a hike using a map and make a route card. Pin point your position on a map. Take part in an orienteering competition. Each step needs to be completed before you move to the next level. By outlining these steps for each of the items on your list you will see how a complete plan can come together. Each part of your plan will require work. As Patrol Leader you may have to be trained first, so that you can pass on that training to the Patrol. A Patrol box may have to be

made, the price of equipment investigated, items for the Patrol corner made or reports written up. An enthusiastic Patrol will be ready to take up the challenge. In the first place ask for volunteers. Those who are interested in woodwork for example will probably choose to make the Patrol box, others will relish the thought of searching out the best deals on equipment. As Patrol Leader you should be aware of the opportunities these tasks present to the Patrol members, you may choose to delegate certain jobs to individuals so that they can be directed towards new areas and new responsibilities. It is a good idea to team up

an experienced Patrol member with a new recruit so that skills and expertise can be passed on. New recruits will never advance unless they are given such opportunities.

When you have created a plan for your Patrol, write it down and if possible put a time limit on each section. You might like to present your plan to the Court of Honour.

You should monitor the plan at regular intervals to see what is being achieved and what corrections need to be made, if any, because of changing circumstances.



Jobs in the Patrol

Give each member of your Patrol a job. Some of the jobs that need doing:-



Patrol Leader
 Assistant Patrol Leader
 Patrol Treasurer
 Patrol Quartermaster
 Patrol Scribe/Secretary
 Patrol First Aider
 Patrol Corner upkeep
 Patrol Librarian/researcher



As each of the jobs in the Patrol has a certain level of responsibility they are suited to particular levels of experience. It would be unfair to land a new recruit with the job of quartermaster whereas the Patrol corner upkeep would be a better starting point. The jobs of the Patrol should change, perhaps yearly, so that the Patrol have an opportunity to learn from each position. It is normally a wise decision to keep yourself and your assistant Patrol Leader free from the regular jobs of the Patrol so that you can keep an overview of the situation prevailing in the Patrol. Other work will have to be done which will keep you and your assistant busy, for example, training in new recruits or planning Patrol meetings and activities such as hikes, camps and preparing menus.



Leadership skills

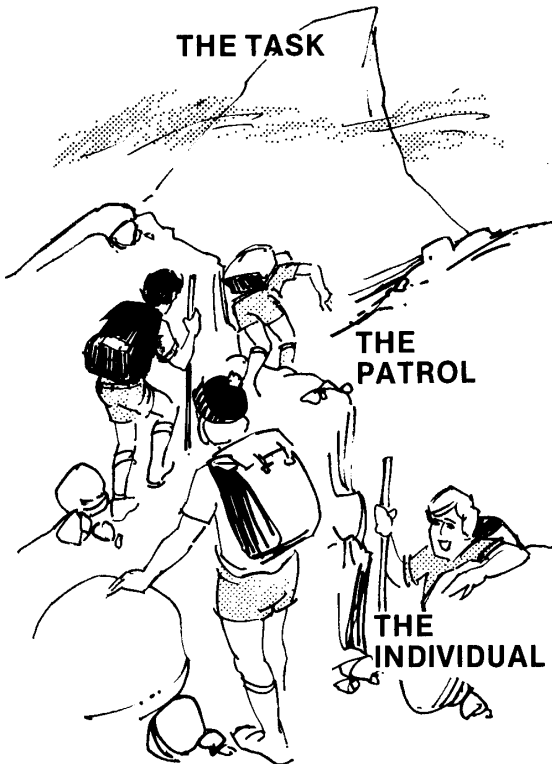
As you travel along the Scouting trail your Patrol will be presented with many opportunities and challenges. As Patrol Leader you will lead your Patrol with enthusiasm towards the successful completion of the challenge. Sometimes it will be taking part in an incident trail or game, at other times it will be a Patrol hike or camp. Each requires different levels of leadership but at all times the same basic tools are

used. These same tools are used by all people in leadership positions and are explained below.

Effective leadership is achieved when each of the elements - the individual, the Patrol and the task are mixed in the correct measure.

The task

The task is simply what you and your Patrol are expected to do. In determining what you have to do it is most important that you listen and ask questions so that you understand clearly what is expected. In the case of a game - how the game is to be played, what are the rules, how you win the game. In the case of an emergency situation - what has



happened, what treatment is needed, what needs to be done, sending for help. Each question will help to clarify the true picture of the task to be completed. Sometimes, over-enthusiasm to undertake the challenge, may lead to it being attempted in a 'half cocked' manner, which will affect how it is approached and probably have a big bearing on the result. So be cool, be calm, be collected, in your approach to all challenges, particularly in emergency challenges.

The individual

Each individual within the Patrol has a certain level of expertise, knowledge and talents and each has a role to play in solving or overcoming a problem or task. As the leader of your Patrol you need to be aware of these qualities and be able to mix and match the skills and experience of your Patrol to achieve the best result. Sometimes that might even mean handing over the leadership of the Patrol to another member who is better qualified to lead that part of the task.

The Patrol

The Patrol is a team and the collective effort of the team is required to complete the task. It is the role of the Patrol Leader to direct and maintain the qualities of the Patrol with the individual skills of each member, and the task in mind. Each part of the machine must work at the right time. Remember, the phrase, 'all for one and one for all'. Everyone in the Patrol should stay focused on the task so that when they have completed their part they can assist others to complete theirs. Each element is important in its own

right and it is impossible to complete the task by using one element alone. The job of the Patrol Leader is to find the correct mix for each challenge that is presented, so that the task is completed successfully. This can only be learned by experience. Each time the Patrol springs into action you will need to apply leadership skills to the situation. Be prepared to learn from your mistakes. This is the art of true leadership.

The Patrol Leader who wants to ensure the Task, the Patrol and the Individual are taken into account can make use of several leadership skills. These skills are summarised in the following checklist. They can be applied to any activity, programme or meeting.



The good Patrol Leader should constantly be asking:-

In achieving the task....

- Did I plan for it carefully with the Patrol?
- Did I continuously evaluate how it was going?

In working with the patrol...

- Did I share the leadership of the Patrol; were they fully involved in making and carrying out the plans?
- Did I use all the resources available to me, and within the Patrol?
- Did I co-ordinate the Patrol, so that it worked effectively as a team?
- Did I ensure that the Patrol's interests were properly represented when discussing them with other people? (Scout Leader/C.O.H.)

In encouraging and helping each individual....

- Did I communicate with every member of the Patrol?
- Did I help others to learn new skills ?
- Did I set an example to the Patrol?



The Court of Honour

In Scouting for Boys, under the heading of 'The Patrol System', Baden Powell wrote the following:

'The Court of Honour is formed of the Scoutmaster (Scout Leader) and the Patrol Leaders, or, in the case of a small Troop, of the Patrol Leaders and Seconds (APL's). In many Courts of Honour the Scoutmaster (Scout Leader) attends the meeting but does not vote.

The Court of Honour decides rewards, sanctions, programmes, camps and other questions affecting Troop Management. The members of the Court of Honour are pledged to confidentiality; only those decisions which affect the whole Troop, e.g. appointments, competitions, etc. would be made public.'

As you can see from the quote, the Patrol Leader has a major part in the running and management of the Troop. A Scout Troop is a collection of Patrols and not a collection of Scouts. This is a unique part of the Patrol system. The Patrol Leaders, working with the Scout Leader, run the Troop. It is not the job of the Leader to decide on and do everything, but rather to consult, advise and support the actions of the Patrol Leaders. Certainly, a Leader is going to step in if the Patrol Leaders are doing something wrong or unwise but the good Leader will know when to step back and let you get on with it. You, as a Patrol Leader, ought to regard the Scout Leader as an adviser, a person who will suggest to you and the other Patrol Leaders things which you might like to consider. The good Leader will keep you on the rails when you are liable to go off them, and will keep the Court of Honour doing its proper job, but not interfere unless it is really necessary to do so.

Apart from the day to day running of the Troop, which we will discuss shortly, the Court of Honour is concerned primarily with the honour of the Troop, which means it is



concerned about the individual behaviour of each Scout in the Troop. This is a serious undertaking and from time to time it may be necessary to discuss in detail Scouts who have let the Troop down in some way. These conversations are private to the Court of Honour. Court of Honour meetings should remember their 'pledge of confidentiality' - which means that matters discussed are private, because divulging them to others could lead to gossip, rumour and speculation, and this would not be good for the morale of the Troop. A Scout's Honour can always be trusted.

all badges within the badgework scheme, where justified, and the movement from one level of the scheme to another. Only the Patrol Leaders who are working closely with the members of their Patrols will be aware of the level of expertise of each individual. One Scout may have a natural ability at tying knots whereas another is all fingers and thumbs. Each is capable of passing the test but will be required to do different amounts of work to complete it. A Scout's promise is to do their best. It is the job of the Court of Honour to determine the best that an individual is capable of. So in certain cases



Some matters that could come up for discussion could be; lack of loyalty to a Patrol and the Troop, messing to an extent that it is interfering with the running of the Troop, wearing of improper uniform. Constant non - attendance at Patrol Activities or Troop activities as well as more serious matters such as bullying, stealing or damage to property. Such matters will not be discussed at every meeting but you should understand the seriousness of such discussions and the need for Honour among the Patrol Leaders. The Court of Honour approves the awarding

more is expected of some Scouts but each will achieve the badge. The COH will discuss and decide on such matters and will approve in all cases the awarding of badges.

The Court of Honour should also concern itself with the progress of the Troop. Are all the members of your Patrol invested? How many are seeking merit badges? Each Patrol Leader should pay particular attention

to training new recruits for investiture and encouraging the members of their Patrols towards the various badgework stages. As a Patrol Leader you should continue with your own progress. Your Patrol will look up to you and use you as a role model, so lead by example. The Court of Honour may need to set objectives e.g. every Scout to have a particular badge before Annual camp. Setting such objectives can determine the programme for the next few months for both the Troop and the Patrols.

before approaching the Scout Leader - remember the honour of your Patrol is at stake. Courts of Honour can discuss this matter in their own Troops and decide what is best for them.

The Court of Honour may also have to decide on prizes for competitions such as Scout of the Year, Best Camper etc.

Sanctions

One aspect of Court of Honour business that is not much fun, is the duty of the Court of



The Court of Honour should set guidelines for the setting and passing of badges. Some Troops allow the Patrol Leaders to pass only the requirements for investiture, with the Scout Leader passing all other stages. This is a good idea, however it is wise for all Patrol Leaders to check that Scouts in their Patrols know their stuff

Honour with regard to sanctions. In the event that a Scout misbehaves or dishonours the Troop the Court of Honour will need to take corrective action. Such sanctions must never be taken lightly, but only after serious and private discussions. The Court of Honour must decide if the Scout Law was broken,

and to what extent. The case of the offending Scout should be presented by the Patrol Leader. If the situation is unclear then the Scout should be asked to attend the meeting and explain. In determining whether a Scout has stepped out of line the Scout Law is the deciding factor.

Each Scout should know the Troop rules regarding the honour of the Troop, for example, continuing to 'misbehave' after three warnings, this would then become the business of the Court of Honour. This is a good rule of thumb in the case of minor incidents which need attention. Minor incidents like , being late constantly, not wearing uniform, using bad language, not turning up for activities, can be dealt with by imposing minor sanctions, such as not allowing the Scout to take part in popular games or events. This corrective action should have the desired effect.

More serious situations like bullying or theft will require stronger sanctions, such as suspension, from all activities for a number of weeks. Upon return the Scout should be asked to give a promise of good behaviour. No matter what situation that may arise, whether a small matter of bad language or the serious crime of theft the parents of the Scout should be informed in writing of the situation.

Very serious matters must be dealt with solely by the Scout Leader and the Court of Honour should accept this. In cases like this the Scout Leaders only, will communicate with the parents of the Scout in question.

In matters regarding sanctions, corrections and discipline within the Troop the Scout Leaders have the final say.



This right should be respected by all Patrol Leaders. In general, matters relating to discipline should be 'nipped in the bud' by Patrol Leaders.

The programme

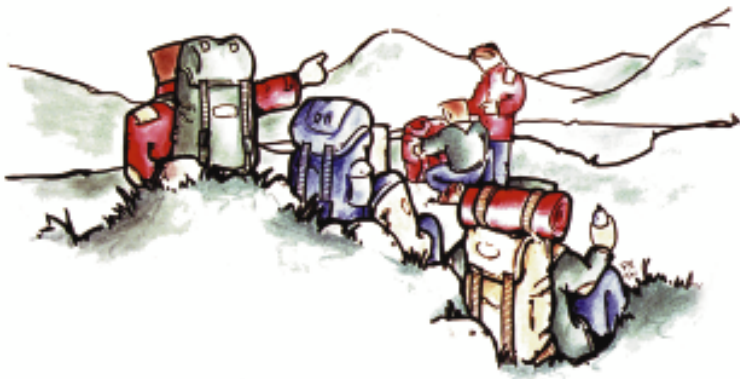
What happens in the Troop with regards to programme is decided upon by the Patrol Leaders in Court of Honour session. Patrol Leaders should seek the opinions of the members of their Patrols regarding programme before attending the meeting. Such matters can be discussed at Patrol meetings. The collective response of all the Patrol Leaders will provide much discussion. The Court of Honour may also have a number of objectives which are ongoing e.g.

badgework, more hiking, winning the Regional camping competition, all of which will provide many programme opportunities.

Each idea presented should be discussed on its merits and practicalities and from the suggestions it should be possible to construct the bones of a programme for

the coming weeks. When deciding on what to do it is also useful to have a number of 'idea' books available. For example, the Fox Patrol may suggest doing more map and compass work, yes, a great idea but what can we do? - an 'idea' book will suggest games, projects, incidents etc.

It is not suggested that the Patrol Leaders plan everything out in detail. That is the job of the Scout Leader, but it is necessary to provide the Leader with a good framework for each meeting. Normally it is best to plan about 4 - 6 meetings ahead. Outdoor activity should form the major part of your programme and weekly meetings should be complemented with Patrol meetings, Patrol activities and Troop hikes and camps. As a general rule, 70% of your programme should be out of doors and 30% indoors.



In planning programmes many lessons can be learned from reviewing past events so at each Court of Honour Meeting set time aside to discuss the positive and negative aspects of the programme you have just completed. What could we have done better? What did we do well? What did we learn from the experience?

Running the meeting

As you can see from the above, the Court of Honour has a number of items it must discuss at each meeting. In order to get through the work effectively you need an agenda and someone to act as chairperson. An agenda is a list of the items to be discussed, set out in an orderly fashion with a set time allotted for each subject. It is the chairperson's job to manage the agenda so

that all the business can be discussed, within the time allowed. Some Courts of Honour elect a chairperson for a year while others rotate the chairpersonship so everyone can learn to chair a meeting. Each Court of Honour selects the method which best suits them. A Court of Honour minute book is required to record decisions and actions.

Courts of Honour should meet on a regular basis, perhaps monthly.



Patrol Activities

A good Patrol will want to do its own activities, activities that they want to do together and have planned at Patrol meetings. Such activities may be hikes, cook outs, visits, sports, training days or the ultimate challenge organising and running their own Patrol Camp.

The secret to planning any activity or event is Who? What? When? Where and How? Answer all of these questions and the chances are your activity will be on the road to success e.g. Who is going on the activity? What exactly are we doing? When are we going? Where are we going to and How are we going to get there? Other considerations such as cost, equipment, permission, route cards

etc., will need attention, depending on the activity.

All Patrol activities should be approved by the Scout Leader who will ask you to supply details and times of departure and arrival home.

When you are out and about on a Patrol activity you are in charge of your Patrol. Act responsibly and behave as Scouts should at all times. Don't allow any messing or disregard for safety. Undertaking an activity with your Patrol can be a great adventure. Your first activity as a new Patrol Leader will be difficult and at times frightening, but the more you do the easier it will become. On your return always contact the Scout Leader to advise your safe return home. The success of one patrol activity will inspire confidence in your Leader to allow you to lead other activities with your Patrol in the future.



Some ideas your Patrol might like to consider

A Patrol camp - organise with another Patrol to a recognised campsite.

Patrol hikes can be undertaken in many forms, from the traditional hike along roads and across wild countryside to bicycle or canoe hikes.

Visits are ideal Patrol activities - visit local places of interest or perhaps a fire station or civil defence base.

Build a Patrol Box or repair camping equipment.

Visit the beach for a swim and beach games.

Make and fly kites or buy stunt or power kites.

Have a survival weekend at your local campsite. Bivvy out and cook all food backwoods style.

Build a pioneering bridge or a tower at your Scout Hall or Den, or better still on your local campsite.

Take part in or organise a service project in your local community.

Challenge another Patrol to an incident trail. Each Patrol builds a number of obstacles or challenges and then take part in a time based competition.

Set up a screen printing stand and print t-shirts and neckerchiefs for your Patrol.

Challenge another Patrol to a cooking competition. Invite a guest to judge the results.

Organise your Patrol to take part in Jamboree on the Air. You need to contact a radio ham operator.

Make a coracle or a canoe - see 'On the Water' chapter for ideas and suggestions.

Challenge another Patrol to an orienteering competition.

Contact a local archery club or better still make your own bows, arrows and targets and have a go.

Can you sail a boat ?? Contact a local sailor or sailing club and ask them to help you and your Patrol get on the water. You could also visit the National Water Activities Centre and take part in a sailing course.

Gone fishing - spend an evening by the local river or pier. Catch yourself a fish and then cook it on a portable bar - b- que.

Always consult your Patrol for ideas. Many will have hobbies they can share with the other members of the Patrol.

Get out. Scouting is about getting out in the open. Hiking and camping should be a major part of your Patrol activity each year.

Be sure to inform and have the approval of your Leader for any Patrol activity you are planning.

Patrol Meetings

A Patrol meeting is just that - a meeting of the members of your Patrol. A Patrol meeting can take place on a hike, at camp, in Mc Donalds. At such a meeting the Patrol may discuss matters affecting it and plan activities and things they want to do in the future. However, a Patrol meeting can do more than discuss things. It is an ideal place to learn new skills and practice those skills you already possess. Often at Troop meetings there is not enough time to practice working together as a team or brushing up on map and compass etc., and Patrol meetings are an ideal way of allowing the Patrol to do such things themselves.

Most Patrol meeting take place in a member's house or garden. If you have

a Scout hall you may be able to meet there and better still you may even have your own Patrol den.

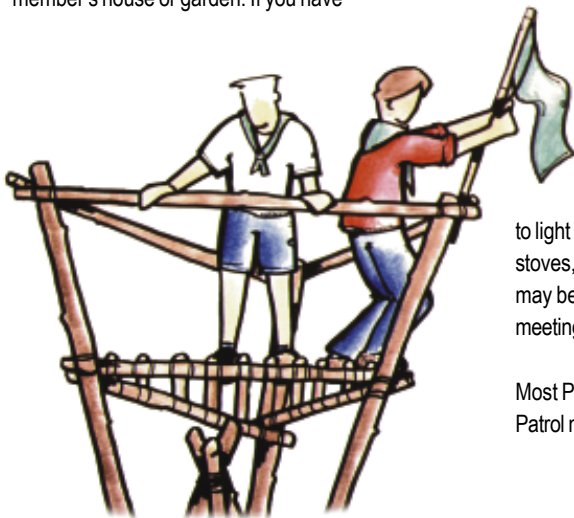
Plan your Patrol meeting much the same as the Patrol Leaders plan the Troop meetings. With your Assistant Patrol Leader work out the structure of the meeting - time spent discussing things, time spent on skills training and time spent in play. A Patrol meeting would normally last for an hour or an hour and a half depending on what is planned. Meetings could be held after school or on the weekend.

As a member of the Court of Honour you will be aware of those challenges that will confront the Patrol at coming meetings. The Patrol meeting can be a good place to practice putting up a tower in the shortest time and perhaps defeating the Lion Patrol for once. You could also use the time at Patrol meetings to help the members of your Patrol with testwork or going over the testwork before presenting it to the Scout Leader.

If you have any new recruits then you will need to bring them through the investiture requirements. From time to time you may need to brush up on such things as how

to light stoves, cooking on stoves, firefighting etc., and it may be best to hold such a meeting at the local campsite.

Most Patrols try to hold a Patrol meeting once a month.



Some ideas you may like to try at your next Patrol meeting

Make a stretcher and carry a member of your Patrol around the Scout Hall.

Test the efficiency of different stoves. How easy are they to use and how quickly do they boil a pot of water?

Try to pitch a tent blindfolded.

How are your Patrol at knots? Can they tie all the knots required for the Explorer badge.

Practice lighting a fire using friction.

Make personal survival kits.

Make a Patrol bivvy sheet.

Practice creating route cards for your next hike.

Rucksack packing - can you pack a rucksack correctly? What is the lightest pack possible, to include all the essential equipment? How can you save weight?

Run a keep fit programme for your Patrol to keep them in tip top form for Troop games and challenges.

Map reading and compass work always need polishing up and practice is the only way to ensure expertise in this skill.

How many merit badges do your Patrol have displayed on their arms? There are thousands of opportunities for programme

items in the badgework requirements. Challenge each member of your Patrol to achieve one new merit badge.

Patrol organisation - how good are your Patrol at getting things done on camp or at Troop meetings? Practice makes perfect. Discuss any regular activity - lighting a fire, putting up a tent, erecting a simple tripod tower. Work out the best way to go about the task and practice how the Patrol works together to overcome the challenge.

Hold a joint Patrol Meeting with another Patrol. The programme can be challenging and game based.

Codes and ciphers. Does your Patrol always struggling during wide games trying to crack a coded message?. Have a look at some of the popular codes used by your Troop and see if you can discover how to crack them.

What about your Patrol identity - have you a Patrol Corner, Patrol Flag, Patrol 'Logo'? If not, then set about working up a few designs.

All Scouts need to know basic scout skills. These are best learned at Patrol meetings when you have time to teach and practice the skills in comfort. You should ensure that new recruits receive special attention so that they can obtain the necessary skills quickly.

Patrol Branding

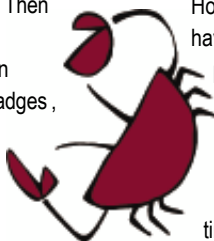
What is the name of your Patrol? Do you have Patrol logo, identity and style? No doubt you are a member of the Fox, Lion Puma Patrol and the name of your Patrol was chosen many years ago. Most Patrols will be using a traditional logo showing a silhouette of their chosen animal or bird, designs drawn sometime ago. Now is the time to upgrade, with the advent of computers and colour printers many things are now possible which would have been very expensive to undertake in the past. Letterheads, stickers, transfers, and business cards etc. are all possible at the press of a switch. Somebody in your Patrol will have access to a computer and printer and with a bit of luck will also have a clip art library. You could undertake the revamping of your Patrol image as a school project- have a chat with your computer teacher. A selection of clip arts designs are illustrated just to whet your imagination. You could also take this opportunity to rename your Patrol and select a more unusual name - 'The Cool Dudes' or the Viking Patrol. The possibilities are endless, the best prompter to get you going is perhaps to browse a clip art library and find an attractive logo that everyone likes. Then decide on a name that suits. Once you have your logo you can establish your identity, stickers, badges, neckerchiefs, signs, business cards, and log books.



Some Patrol logos and symbols

Tee - Shirts

There are ways to create a Patrol Tee-Shirt. The first is to use a screen printing or stencil process. This can be complicated as you need to create separate colour stencils for each colour in your design. However if you can do this and have access to screen printing then you can run off hundreds of tee shirts. You could use spray paint and build up the design, but it can be messy. If you have the time and are careful you could





create the tee shirt using fabric markers and paints.

The other method which is by far the easier but can be expensive is to obtain special transfer paper for your ink jet printer. Packs of special paper are available for this purpose.

You simply print out your design, cut out the logo, as close as possible to the edge of the design, and iron it on. It is possible to use this method on a wide variety of clothing that is cotton based. It is excellent for logos on the back of special neckerchiefs for camps or activities.

If you choose to use the transfer sheets then be economical with the space on the sheet. A large logo for a tee shirt, 4 medium size logos for neckerchiefs or for use on arm sleeve of tee shirt or other garment and a number of smaller logos for flags, headbands etc. Pack your sheet as best you can. This is easily done in any publisher package before printing.

Patrol mural

If you need to paint your logo onto a wall or panel the easiest way to do it is to print off an acetate with your logo on it. Then using an overhead projector, project the image onto the wall. Draw your outlines and paint away.

Small test pots of paint are ideal. If you do not have your own Patrol space or are using a building which is rented then create your own portable Patrol corner which should have its own special feel and be suitably branded to promote and identify your Patrol. Many designs are possible and the assistance of a parent to cut timber and give advice can be useful.

Making a stencil

Make a stencil of your logo by copying your design onto special stencil paper or oil card, which is available from art shops. Then, using either a stencilling brush in a dabbing motion or using a spray paint, it is possible to apply your design to a brick wall or patrol boxes. Look at some home decoration handbooks for more detailed instructions on stencil making and techniques.



A place of your own

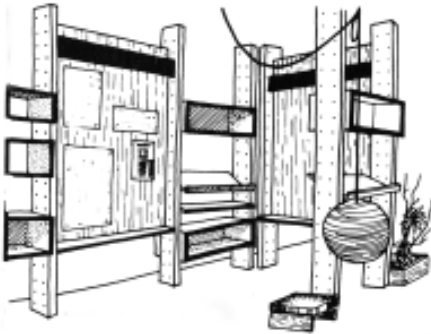
Every Patrol needs a base or a place of their own where they can discuss, plan, and have fun together. The lucky Patrols might have a hut or shed in someone's back garden, whereas others may have a room available in their dens. If you do not have your own space then create a mobile space or make a decent Patrol board and screen where you can huddle during Patrol time at meetings, or hold Patrol meetings.



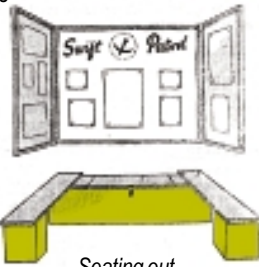
Patrol Corners

If you have limited space then you can maximise your Patrol area with some simple construction. Erect a curtain rail so as to screen off your area when required. Use fabric paints to apply your logo to the screen. This can be done using an overhead projector to make drawing an outline easier.

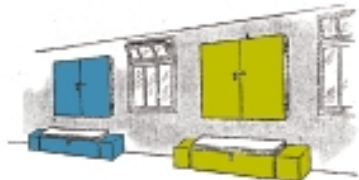
With the addition of a number of planks and square storage boxes you can simply create an area when needed. This can be packed away tidily at the end of the meeting.



Simple and modern design with adjustable shelving and screens.



Seating out.



Patrol area closed.

Patrol Flags and Banners

In medieval times, every champion had a banner or a personal coat of arms which was flown when the Knight or King was in residence. Patrol flags were very common when each Scout had a Scout stave. Today, Patrol flags could be flown or displayed at meetings when the Patrol are active or on activities and especially on your Patrol site on camp. They are simple to make. Try to design an unusual shape (examples opposite) to give your flag its own identity.



Camp Notice Board

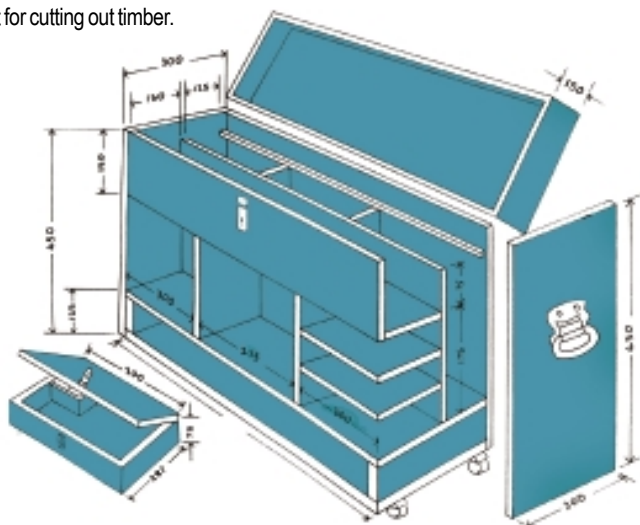
On camp you could construct a Patrol Notice board to inform others of your Patrol successes in camp competitions and information on activities and planned programmes.



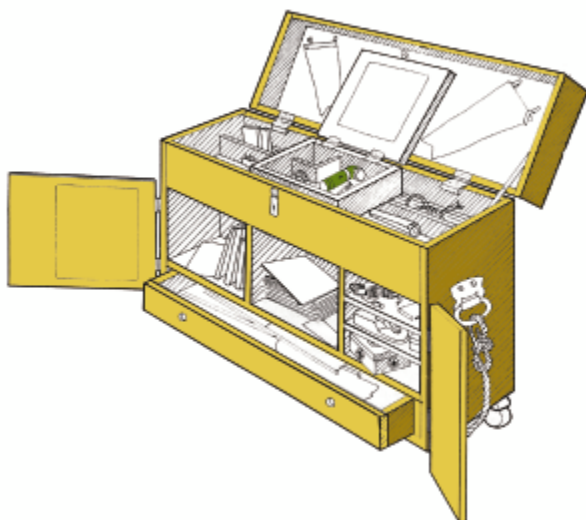
Patrol logos and symbols

Patrol Box

Each patrol should have a box for its equipment. This is a nice project for your Patrol or a member of your Patrol who is interested in woodwork. The design shown may be a bit complicated for your Patrol, but many designs are possible and a simpler design can be used. You may require the assistance of an adult for cutting out timber.



Patrol Leader's Box



The Scout Prayer

Dearest Jesus,
Teach me to be generous
Teach me to love and serve You
As You deserve
To give and not to count the cost
To fight and not to heed the wounds
To toil and not to seek for rest
To labour and to look for no reward
Save that of knowing that I do Your Holy Will
Amem

(Prayer of Saint Ignatius)



EVERYBODY
NEEDS A
BREAK
CLIMB A
MOUNTAIN
JUMP IN
A LAKE



On the move

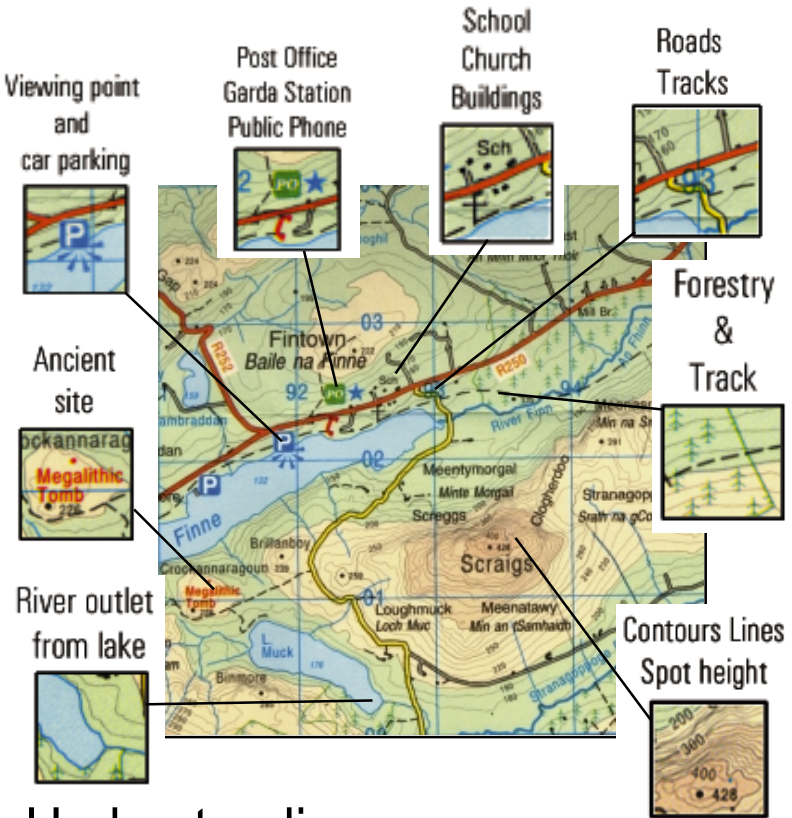


Navigation

Travelling through wild countryside is achieved by the use of a map and a compass. The map conveys a detailed picture of the landscape and terrain we are travelling across and the compass provides us with a tool that will steer us in the correct

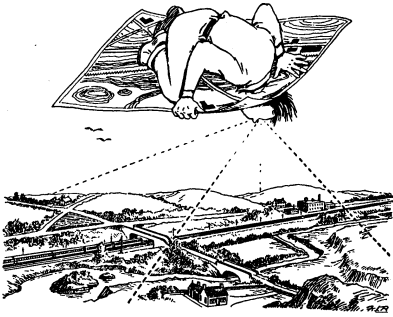
direction. The secret of good navigation is a good knowledge of map reading and interpretation. The compass although important is secondary to good map reading skills.

ON THE MOVE



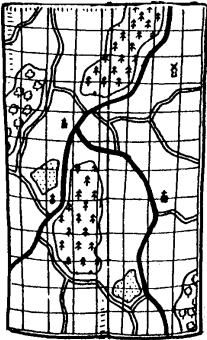
Understanding your map

The map is a representation of the landscape. It is produced from satellite pictures and on the ground surveying. The map however is only two dimensional therefore it must employ a method known as contouring in order to show the rises and dents of the landscape. A number of symbols are also used to establish such features such as forests, churches, boggy ground, fences, train tracks etc. Roads and tracks are marked on the map using a number of different coloured lines and such methods as broken lines and checkered lines. Rivers and lakes are marked in blue.



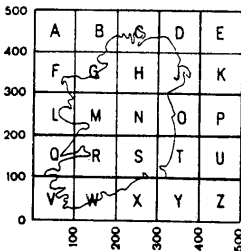
Scale

In order to draw a map of manageable size we use a process of scaling to insure the correct miniturisation of the landscape on the map. Typical scales used are half inch to the mile, one inch to the mile. In such a scaling system one inch on the map represents one mile on the ground. Therefore the bigger the scale the more information it is possible to draw onto the map. For walking purposes you will be using the Discovery Series of maps which have a scale of 1 : 50,000 or 2 centimeters to a kilometer (one and a quarter inches to a mile)



Grid lines

Overlaying all maps there is drawn a grid of light lines running from top to bottom and side to side on the map. The purpose of this grid is to allow us to identify every part of the map with a unique number system (grid reference). These grid lines which correspond with the lines of longitude and latitude also enable us to identify the north of the map and aid with compass alignment. You will notice that each line is given a number, this will enable us to create the grid reference number.



Grid Reference

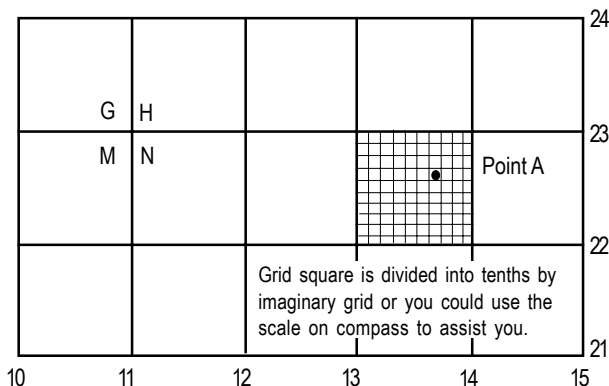
A grid reference is a series of numbers (co-ordinates) which gives us the exact location on a map. It is created by using the grid lines which appear on all ordnance survey maps using the following steps.

1. Find your location on the map. If possible choose a recognisable feature rather than a point in the middle of nowhere.
2. Find the grid letter on the national grid by looking at your map. These are printed in blue and are large in size. Quote the letter of the sector your position is in.
3. Start at the bottom left hand side of the map and move across the grid lines till you arrive at the grid line nearest your location. The number of the line is the first two numbers of your reference.



4. You should then divide up the grid square into tenths. Half way is .5, three quarter the way is .8 etc. State the location of your position as a decimal. This number is the third number of the reference.
5. Repeat the same steps for the grid lines that cross the map and this will give you the 3 figure reference for you location.
6. You now have your six figure reference for your position.

A simple rule of thumb is the phrase that states - 'go in the door and up the stairs' Which means that if you visualise a door at the left hand side of the map - then you go in the door (give the bottom line first) then go up the stairs (give the side numbers next)



Grid reference for point A is N 137 227

Aligning a map

In order to read a map correctly you must first align the map. This is done by moving the map around until the map and the landscape correspond. This is usually done by selecting a landmark or feature, finding

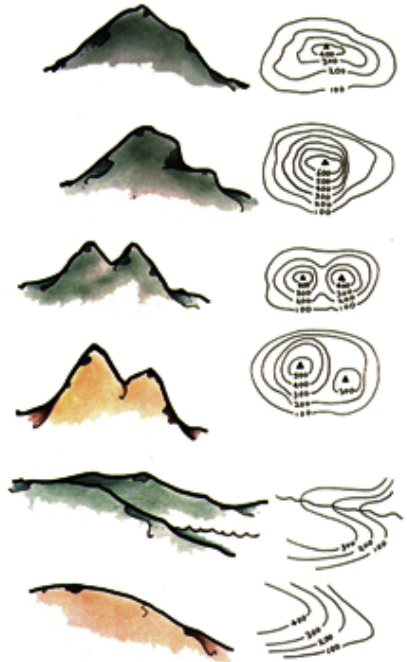


that landmark or feature on the map, then aligning the map so that when you look at the map and then at the landmark their is an imaginary line drawn between the two points. When your map is correctly aligned you will be able to identify other features from map to ground. The mountain peak on your left or the stream junction on your right. If this exercise is done correctly by aligning your map with two or three features rather than just one you can now travel by using the map alone provided you establish

correctly where you are standing in relation to these features. As each feature or new feature appears on the trail identify it on the map and re-establish your position.

Contours

Contours are the method used to convey the shape of the terrain you are crossing. They are created by an imaginary line along which every point is the same distance above sea level. These lines are drawn at 10 metre intervals and allow us to see a representation of the shape of a hill or mountain. By looking at your map you can determine whether the mountain has a steep slope (contour lines close together) or a gentle slope (contour lines spread apart). Contour lines are never or rarely circular in shape, because they are plotting a set ground level they allow us to see the gentle curves of a mountain as well as deep gullies. Practice on the ground with your map will provide you with hands on experience, and over a period of time you will get to know what variations of contour lines mean and what they translate to in reality on the ground.



The North's

A compass points to one north, your map is drawn with grid north, and the stars point to true north. What is the difference and how can you come to grips with then.

True North

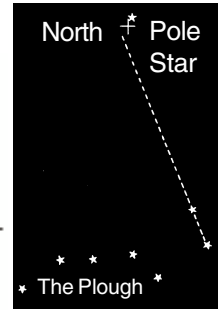
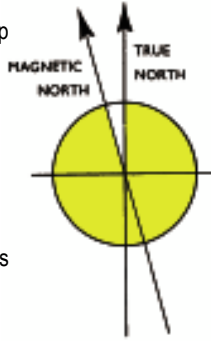
True North is determined by sun readings and from the stars and is the point we would call the north pole or very top of the earth where all the lines of longitude converge.

Magnetic North

This is the north that is indicated on our compass. Magnetic north is the location of a part of the earth which is magnetic and attracts the needle of the compass. This north is located approximately north of Canada. (8 degrees west of grid north)

How is each used

If you get lost or do not have a compass then you will rely on the sun, stars and nature signs to show you the direction to follow. The direction you will seek is true or celestial north. It is only a general indicator and no fine navigation will be done by this method. e.g. If you are lost and you know that from the last time you looked at a map that a road was to the east of you. What you would do is determine where north was by using the stars or sun and create a compass in effect. If you are facing north then east is to your right west is your left and south is to your back.



Every map is created with the top of the map being north, bottom south. If you have your map folded up and you can read the writing on the map (it is not upside down) it is turned in the right direction. This is an important point to remember when it comes to taking a compass bearing from your map (explained later)

Magnetic bearing

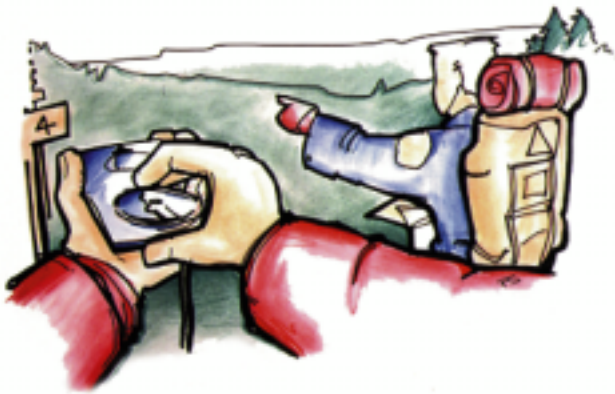
The magnetic north is the north that your compass needle will always point to. This magnetic field is constantly moving so in Ireland it moves by a number of degrees every couple of years. In Ireland the current variation is 7 degrees west (1994) See the side panel of you map to see what the current variation is. This means that your map and your compass or out of line with each other. So in order to take a directional bearing from the map and translate that to the compass for you to follow you have to add on the variation of 7 degrees (for convenience we use 8 degrees - 4 marks on the compass). This variation is different in every country so always check the side panel of your map for the variation that is particular to that location.

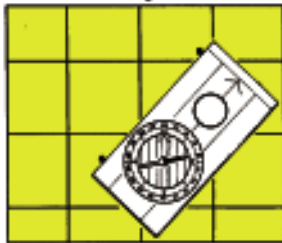
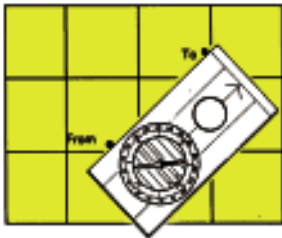
The Compass

The compass is an instrument that tells us where north is. This is done by way of a magnetised needle that is allowed to float freely within the instrument housing. Around the edge of the compass is plotted a circle on which marking similar to that on a ruler are inscribed. Each marking determines the number of degrees it is from north to this point.

There are many compasses on sale from the simple floating needle type to the more expensive plotting compasses. We will only be concerning ourselves with one compass and that is the Silva Compass. This is the best compass and only compass you should use for navigational purposes on land.

The Silva Compass is made up of three parts - the needle, the compass housing and the base plate. The needle is coloured red and white and the red end points to north the white to the south. The compass housing revolves and determines any desired bearing or direction of travel. The base plate is used to indicate line of travel.





How to use your compass

Your compass is a tool that is used in conjunction with your map. By using the compass it is possible to navigate very precisely between points on a map. Your compass can also be used to check your position on the map and check the correctness of your line of travel.

Taking a bearing

Place the compass on the map with the edge of the base plate along the desired line of travel. The direction arrow on the compass should point to the place you wish to go.

Move the compass housing until the north-south lines on the transparent base of the compass housing are parallel with the grid lines on the map. The north arrow on the compass housing should be pointing north. You should be as accurate as possible when lining up these lines as a movement each way will add or subtract degrees from your final bearing and result in bad navigation and missing your destination by hundreds of yards.

Lift up the compass from the map and read the bearing indicated on the compass dial. Say this number to yourself then add on the magnetic variation (e.g. bearing is 92 degrees add on variation 8 degrees result 100 degrees) now move the compass housing to this setting. It is a good practice to do bearings this way rather than adding on by moving the compass housing immediately so that you do not make a mistake. It is better to confirm in your mind

what the bearing is before you move the compass.

Your compass is now set. Hold the compass in your hand and move your body around until the needle of the compass is correctly aligned with the north - south markings on the housing. The direction of travel arrow on the compass now points in the direction you need to travel to your next destination.

This exercise is repeated from point to point as you travel on your journey.

Following a bearing

You travel on a bearing by sighting a recognisable landmark along its path and then travelling to that point and repeat until you reach your destination. It is not advisable to follow your bearing by looking at the compass and watching the movement of the needle. As you walk you will have to move from side to side to avoid obstacles so this method of following the bearing is discouraged in favour of line of sight identification method. However, if you find yourself in heavy fog or at night you will use the method of looking at the compass to find your way. In fog or at night you could use members of your party to line up on the bearing under your direction and you then travel to these members. This is a more accurate method than looking at the compass.

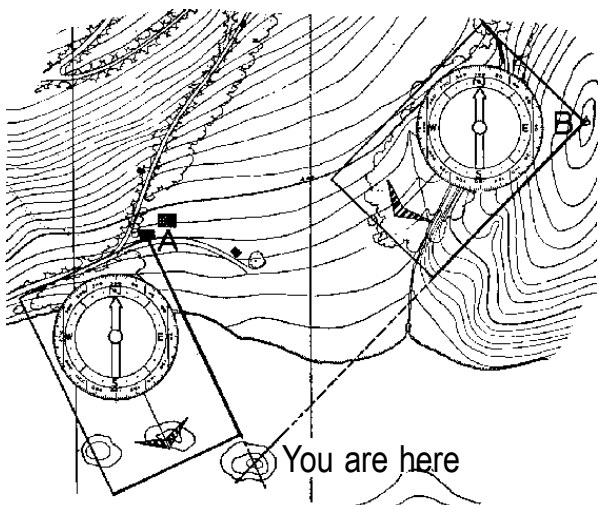


Back bearing

If you think you have erred from your line of travel you can check your bearing by using a back bearing. To do this you turn around and point the compass back to your last

location. The white part of the needle should now point north. If it is slightly out then it is possible, by walking left or right until the needle lines up, to correct your line of travel.

Finding your position on a map



To find your position on a map we use a process called resection. This is performed by plotting at least two points on the map to determine your position.

First select a landmark that you can identify on the map and from the position you are standing.

Point the compass at the landmark and move the housing until the needle and north-south marking align. Read off the bearing on the dial. Now subtract 8 degrees from that bearing. (e.g. bearing of 88 degrees less 8 degrees total 80 degrees). You then place the compass on the map with the edge of the base plate on the symbol for identifiable feature. Without adjusting the compass move the

whole compass round this point until north-south lines are parallel with grid lines. If you have a pencil drawn a light line along the side of the base plate. Your position is somewhere along this line.

You now select another feature which can be seen and identified from your position and repeat the process. If possible choose a feature which is nearly 90 degrees from your position. By doing this your new line will precisely cross the line drawn from the other feature. If the two points selected are too close to each other then the lines will tend to merge and will result in a less accurate determination of your position. Where the two lines cross in your position.

Normally, two bearings are all that is required however, if you wish you can use three to confirm exactly where you stand.



Nasmiths Rule

Nasmiths rule is a method of determining our speed of travel over the countryside. It states that we walk at 3 miles per hour and that we must add on to this calculation half an hour for every 1000 ft climbed. This calculation can be converted into a metric measurement thus - we walk at 5 kilometers per hour and allow 30 minutes for every 300 meters climbed. For the purposes of calculating time traveled it is better to use a figure of 4 kms per hour.

These calculations can be simplified

Walking

15 mins per 1 kilometer
7.5 mins per half kilometer

Plus height climbed
1 minute for every 10 meters
climbed

These simplifications allow us to calculate with ease. Measure the distance with the rule on your compass 2 centimeters = 1

kilometer = 15 mins travel time. Count the number of contour lines you pass on your way up each contour line = 10 meters = 1 minute extra to your travel time. You do not add on time if you are descending a mountain or high ground. Be careful reading contour lines on the map. You may have to calculate the height gained in meters or feet depending on the map used. (If you are using the discovery series of maps it will be meters) Your start off position maybe at the 150 meter line and you may travel through to the 250 meter line you have therefore climbed 100 meters meaning you have to add on 10 minutes to your distance traveled time to give you your correct arrival time.

4 kilometers per hour is a suggested average for hiking across easy ground with a light pack. If you intend to carry heavy packs or if you are traveling through rough countryside then you will have to adjust this figure. The chart opposite will give you some guide, 2.5 kms per hour is the suggested figure for planning your route if you are participating in a Mountain Pursuit Challenge. In determining the correct speed of your Patrol it is a good exercise to measure out a set distance and time your Troop over this distance walking at an average pace, with packs, etc.

This simply rule enable us to navigate across rough ground with precision. We can also use this calculation to plan hikes and adventures into wild country without leaving our sitting rooms.



Route cards/ planners

Route cards are a device we use to plan our adventures across rough countryside. The route card/planner tells us essential information about our purposed route, number in the party, etc. The card also serves as a safety device as we should leave a copy of the route card with a responsible person who is not taking part in the hike or trip. If an emergency arises then this person can advise the rescue services of your route and aid your rescue. In preparing a route card we break up our journey into convenient sections or 'legs'. Each leg is then treated separately to calculate distances, bearings etc.



Filling out a route card

Each point of reference on the route card is identified with a grid reference. So you will be travelling from grid reference to grid reference rather than from the edge of the forest to the river. Grid references give us a precise position on the map whereas the edge of the forest is open to interpretation. The direction of travel between two points is determined by a compass bearing. These bearing are obtained from your map (don't forget to add on magnetic variation) The next steps are to determine what distances you will travel between points and the height gained and calculate the total time for each leg of your journey. You will also

need to add in such things as - stopping to admire the scenery, and rest time. A general rule is to allow 15 mins per hour. This 15 mins maybe spread over a number of legs. In arriving at your total time you should also add in time for lunch or meals as required. You should take note of the actual time that it takes to complete each section and put this figure down on your card. This information will be useful if you decide to do the route again at a later stage. It is also useful in determining your accuracy, which will improve with practice.

$$\begin{array}{l}
 \text{LEG 1} \\
 1 \text{ km @ } 4 \text{ km/H} = 15 \text{ mins} \\
 300 \text{ mts @ } 10 \text{ mts/100} = 30 \text{ mins} \\
 \text{TOTAL} \quad \underline{\quad 45 \text{ mins}}
 \end{array}$$

$$\begin{array}{l}
 \text{LEG 2} \\
 \bullet 5 \text{ km @ } 4 \text{ km/H} = 7 \text{ mins} \\
 50 \text{ mts @ } 10 \text{ mts/100} = 5 \text{ mins} \\
 \underline{\quad 12 \text{ mins}}
 \end{array}$$

Walking Speed

The speed that you can travel across open countryside is determined by the type of terrain you are crossing on a given leg of your journey. See chart below for guidance, however a correct estimate can only be determined by calculating your pace over a 100 meter distance. This is particularly necessary if crossing boggy ground or difficult terrain such as high heather or ferns. Weather can also be a factor in your calculations especially in driving rain, wind or snow conditions.

These items should be taken into account as you proceed along your journey and recalculations may need to be made as you complete each leg. Always have alternative routes or escape routes planned into your journey in case weather conditions change or there is a need to get to safety quickly.

Height Climbed

10 minutes for every 100 metres climbed
 1 minute for every 10 meters climbed
 30 minutes for every 1000 feet climbed
 3 minutes for every 100 feet climbed

Rest Time

Allow 15 minutes per hour rest time over the period of your journey.
 Allow time for lunch usually 30 minutes

Rough estimate of walking speeds

6km/h	5km/h	4km/h	3km/h	2km/h
Fast road walking	Good pace no pack	Good ground with pack	Rough ground heavy pack	Very Rough Ground Pack

Step 1. Measure the distance from the map along the length of the chosen leg as accurately as possible.

Step 2. Estimate the time necessary to travel this distance, from chart and from your own experience.

Step 3. Calculate the height gained over a given leg. (Do not add in time for descending unless the terrain is very steep or difficult).

Step 4. Add the two times together to give overall estimated time for completing the leg and enter this time on your route card

Route Card		Date of Activity	8 Jun 2001	No. in party	8	Mobile Ph.	
Location	Grid Reference →	Grid Reference	Action	Distance	Height	Time	Bearing
RIVER BRIDGE	N734 756	N736 763	FOLLOW FOREST TRACK	1 Km	100 mtrs	25 mins	243
GATE	N736 763	N736 772	FOLLOW BURNING	.5 Km	30 mtrs	10 mins	220

General description of activity	Departure time	Totals	8 Km	1000 mtrs	5 Hours
CIRCULAR ROUTE FROM BIG HILL CARPARK OVER ROUND HILL AND PEAK MOUNTAIN AND RETURN TO CARPARK VIA HEARY WAY TRAIL	10.00 AM	Rest time			2 Hours
	Expected return	Overall time			7 Hours
	5.00 PM				

Walking the trail

Walking is a natural skill and anyone who can walk can hike. But hiking often involves long distances and rough terrain, and therefore added stress. Here are a few suggestions on how to make you walk more enjoyable.

You should walk with your toes pointing forward, not to the sides. An inward or outward orientation of the foot causes an unnatural torque, or twist, on your ankles.

On level terrain, try to hold your torso (upper body) as vertical as possible. A fully erect posture distributes body weight efficiently and is especially important when carrying a pack.

When going uphill, your initial tendency is to lean too far forward. This causes strain, and you will tire more quickly. So lean forward only slightly. Don't over compensate for the uphill slope.

Going downhill is even more tricky. As you travel downhill, your knees act as brakes, absorbing the forces of gravity and momentum.



Steep downhill grades are hard on the knees and leaning backwards only makes things worse. It can also cause your feet to lurch right out from under you. If your knees begin to ache, bend slightly forward. This seems awkward, but with practice you will get the hang of it.

Another thing about coming downhill; If your boots are too small, or laced tightly, your toes will ram into the front of the boot. This is painful and can even cause the loss of a toenail if unchecked. So, when choosing new boots, stand on your toes. If the boots hurt then, they'll hurt going downhill too.



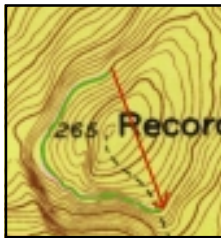
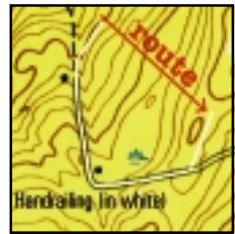
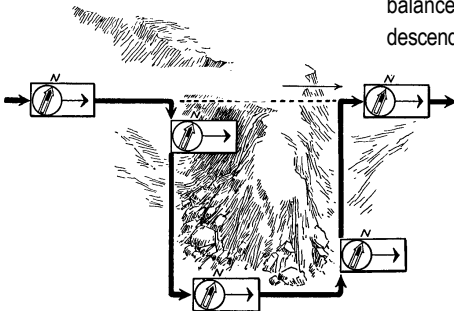


Never jump or leap while carrying your rucksack. With the extra weight on your legs as you land it can result in injury, as well as the hazards of falling off balance.

For steep uphill travel, take your time and travel at a steady pace. You should travel up the hill by a method of traversing from side to side in a zig zag fashion rather than a direct assault.

Care should be taken when hiking over rocky or uneven ground. Place your feet deliberately from step to step this will prevent stumbling.

Some hikers find a walking stick or staff is useful. When crossing rivers the stick can act as a third leg that helps you keep your balance. It can also assist you in descending steep slopes.



When traveling over rough terrain navigation can be difficult. Using natural 'handrails' such as tracks or rivers to make travel easier. Likewise you can also travel along a contour line rather than take the more direct 'over the top of the hill' method. You can also bypass an obstacle by detouring. Do not reset your compass. Travel around obstacle to selected point on other side and continue on route. If conditions are bad then travel around obstacle by adding and subtracting 90 degrees from your compass bearing

Leading a party / group



Setting the pace

The pace of the group should be that of the slowest member. A comfortable pace will allow everyone to talk freely. If there is a lot of huffing and puffing then the pace is too fast. On uphill sections your pace should be slow and calculated bringing the whole group up the hill together. It should not be necessary for the leader to be out front setting the pace, although this may be necessary if the group are walking too fast.

Keeping the group together

In traversing the countryside the leader needs to be able to keep the group together this can be done in a number of ways.

Setting a manageable pace (see above) and avoid crowding or stringing out the group

Every group should have a person who acts as the 'rear man'. His/her job is to 'bring up the rear' and advise the leader if the Patrol is

becoming strung out. The 'rear man' should be a senior and more experienced member of the Patrol. The 'rear man' is literally that they should be the last person in the Patrol they never let anyone fall behind them.

The Patrol should wait after obstacles to reform the Patrol before setting off.

The leader of the hike should take an active interest in their surroundings and should be able to point out interesting features and points of interest. You may also want to check map reading skills or show new members of the Patrol how to read a map. These are methods which can be used to bring the Patrol together, rest the Patrol and add more interest into the hike.

Encourage your Patrol members to lead different legs of the hike so that they can develop their skills.

If you have a problem with members pushing ahead too quickly it is a good idea to put them to the back of the Patrol to assist with the stragglers.

The leader of the hike should find a central position in the group so that it is possible to control and monitor the Patrol from the front and rear.

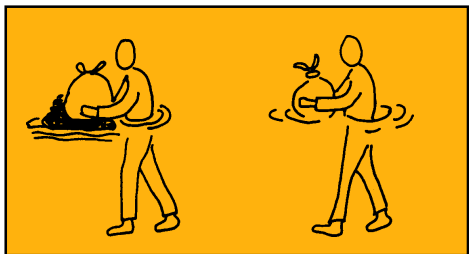
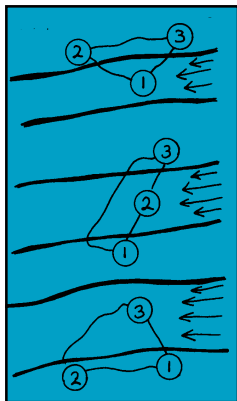
Crossing rivers, bogs and marshes

While on the trail you will cross many types of terrain. Rivers, bogs, and marshes have their own particular hazards. Care should be taken while crossing them. Avoid jumping from boulder to boulder while crossing rivers. Jump from tuff to tuff while crossing bogs. Stay clear of wet, boggy, peaty ground in the troughs of bogs. Skirt around this type of ground rather than following your bearing to the letter. Avoid crossing



stretches of bright green moss on marshes. As you cross you will notice that it moves, it is floating on water. If you are unfortunate to find yourself sinking into a bog 'swim' with a breast stroke to firm ground - don't try to jump. Spreading your body over the surface distributes your weight.

It is a good idea to cross these obstacles in single file. The person in front finding the safest route across.



River Crossing

River crossing at the best of times are hazardous, but in heavy rain mountain streams can turn into massive rivers, sometimes covering stepping stones and low bridges or fording places. River crossing in such conditions should be approached with caution - if in doubt turn back or seek a safer crossing point. If there is no other option but to cross the river then take note of the following points.

The river should be crossed at a point where the river is flowing slowly rather than at rapids just because it appears to have a number of stepping points available. It is often safest between bends. The bottom is often good and the water shallower. The water is also shallower when the river widens and the safest place to cross is usually a point on the river where a number of islands have been created as the river has swollen in size. Before attempting any crossing you should try to survey the river from a high point which will enable you to view other hazards which may not be visible from the river bank.

Prepare your group before you attempt to cross. Remove your trousers and heavy jackets to reduce drag and friction and keep them dry. Remove your socks also and wear your boots as you cross.

Rucksacks belts and straps should be left open or loosened so that the pack can be jettisoned if you fall while crossing. If your pack has to be jettisoned hold on to it. It will probably float so you can use it to right yourself.

A pole or stave should be used to provide a 'third leg'. It should be used in a pyramid fashion, using it in front of your body to probe the bottom of the river, put your weight on it only when you know it is secure. Cross the river facing the oncoming current this will prevent you from falling over.

Buoyancy aids can be created by using survival bags, billies, bottles. Or you may want to place all your dry clothing and rucksacks in a survival bag and transport it separately.

The crossing of all rivers in flood should be done with the aid of a rope. If a rope is unavailable then reconsider your situation.

Secure a rope on each side of the bank. Each member of the group should be secured to the rope, so that a link is formed with those on each bank of the river.

A leader should be the first to cross the river. Apart from the difficulties of fording the river the leader should also try and determine any underwater obstacles as he/she crosses so as to plot a safe route across.

A diagonal crossing method is recommended. You should travel upstream and across if possible.

The leader should check every member of the group before they cross and that every member is secured at all times as they cross. Once on the other side they should dry off and get into dry clothing.

Safety notes -

Particularly for those leading a hike or adventure in wild countryside

Before you set out on a trip obtain as much information about the area that you can.

Check all equipment before you start. This should include the checking of the contents of individual rucksacks by the Patrol Leader, you should be wearing boots and have proper raingear.

Improper or inappropriate gear will lead to problems, problems you can do without in open countryside if things get difficult.

Make sure that your route card is left with a responsible person who will after a agreed time contact the emergency services if you have not returned to base



or been contacted by you to explain a delay. Your parents should be made aware that delays can happen and that if the group is delayed it can be related to a lot of different factors such as difficult terrain, weather, missing the bus!! and that all delays are not due to an accident. However, this is not a excuse for bad planning.

See that you have a first aid kit , adequate for the trip planned, including some emergency rations ready to be brought on the trip.

Check the weather and know its effect in your selected area (micro climates - see later). Listen to the detailed weather forecast on radio or dial the weather forecast service. Check times of buses, trains etc.

Safety should be uppermost in your mind. Don't take unnecessary risks. If you think you will require extra equipment then ensure you have it with you. It is a good idea to have a walking rope with within the Patrol equipment as well as a survival bag and a sleeping bag. Exposure is a very real emergency you may have to deal with it and a survival bag and sleeping bag are invaluable in its treatment. A walking rope is useful if you have to cross rivers or even as an aid in descending loose scree or slippery grass or rocks. This extra safety equipment can be shared among the Patrol. You should have your own survival bag, individual survival kits and personal first aid kit.

Plan for an emergency and identify escape routes from any part of your proposed route. These escape route should be indicated on your route card so that the contact person is aware of your plans in case of difficulties

Take note of the health of your Patrol. Is any one sick or has a cold. Has anybody got an injury such as a blister on their foot or a sports injury such as a bruised knee etc. Does any member of your Patrol need special medical attention such as diabetics, or asthmatics etc. You should also be aware of the capabilities of your Patrol. There will be strong, medium and below average

walkers and this cannot be judged by assessing their build or apparent strength. No - one likes to admit to being below average or unfit but they must be persuaded to be truthful. In a stress situation the below average person is more likely to be the first casualties. Take time in your training period to develop walking skills and increase fitness of the Patrol in safety near home.

Lastly, before you depart you should brief your Patrol as to where you are going and what you intend to do during the activity. This briefing should be given to all the Patrol and the Scout Leader.

