

PATHFINDER



MAP READING

1. Direction

- a. Be able to orientate a map using a compass or natural features.
- b. Explain the relationship between True North and Magnetic North.
- c. Make a simple compass, including a rose marked with 16 points, and use it to find magnetic north.

REMEMBER you can only start your “Pathfinder” level once you have completed the “Membership” section and been invested. These are all practical exercises. Even “b.” can be demonstrated on paper with sketches and the calculations applied to the map and compass.

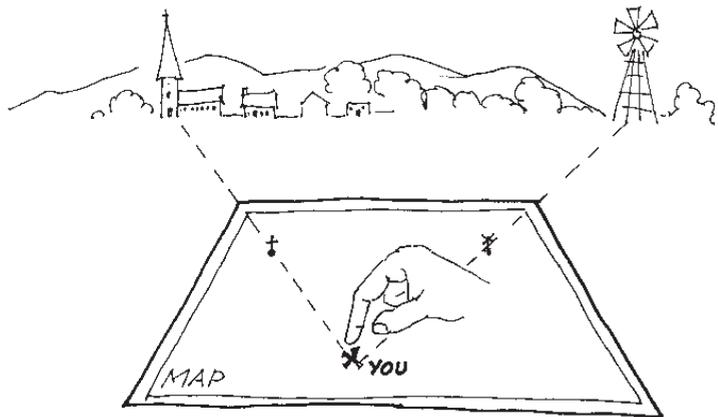
1a. Be able to orientate a map using a compass or natural features.

The reading of a map is an important life skill which you will use throughout your Scouting. You should carry it out using a 1:50,000 Topographical map if possible. Where a map of this type is not available a street or road map may be used and if no suitable map is available your Scouter can draw a map of the area showing all the prominent features.

You are required to demonstrate the setting of the map, using the prominent features in view and using a compass, with sufficient accuracy to be able to point the correct direction to other features that you cannot see from the point where the evaluation is taking place.

You should be able to set the map using the line designating Magnetic North on the map as well as calculating the variation and setting the map from the edge or True North line. Where no compass is available for this activity section “c” should be completed first and this compass used to set the map.

To carry out this activity, you need to make friends with maps. Ask your PL to show you how to set a map. This means simply arranging the map so that it fits with the countryside round you. (You can't move the countryside, so you move the map!)

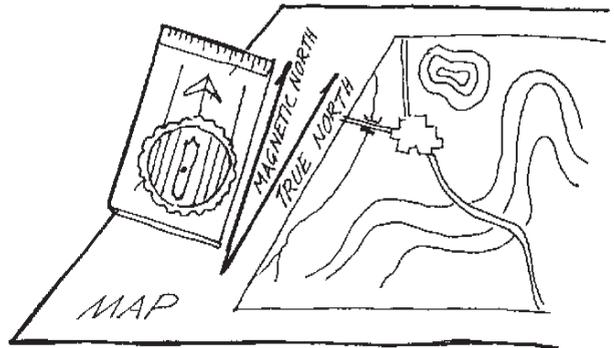


Take a map of the area you are in and put your finger on where you are now. That's you – standing on that spot on the map.

From where you are, you can see various landmarks such as a church, a bridge, or a mountain top.

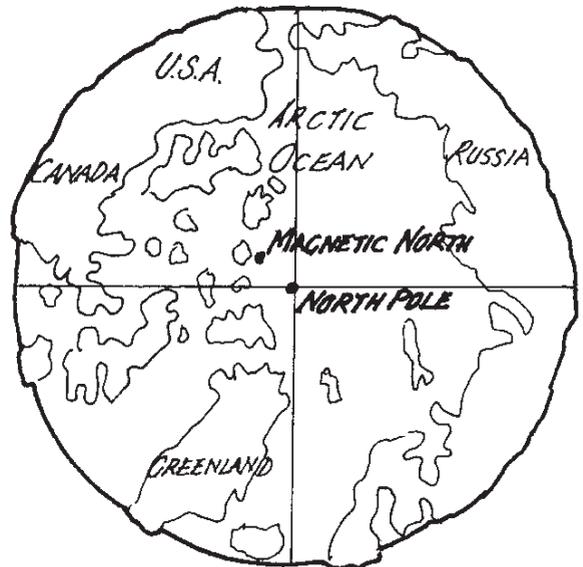
Find one of those landmarks on the map (let's say the church). Now, keeping your finger firmly on "where you are", turn the map so that the line from your finger to the church on the map is exactly the same direction as you pointing towards the church in real life. You have now "set" the map to line up with reality.

You can also set a map by using a compass, so that Magnetic North on the map agrees with your compass point. (A compass doesn't point to True North; it points to a magnetic north pole which is not in the same direction as True North. Your map should provide the actual deviation. (Again, see if your PL can explain.))



1b. Explain the relationship between True North and Magnetic North.

You need to draw the globe with the Magnetic and True poles shown roughly in the correct places. You should then demonstrate how to convert from one to the other. To help you to remember whether to add or subtract the magnetic variation they should learn the rhyme "Cubs make Scouts" which converts to "Compass to map subtract", in other words if you take a bearing with your compass and wish to plot it on a map with a protractor, you must subtract the magnetic variation from your reading and vice versa. You should also understand that the variation is slowly changing and where on a map the actual variation can be found. (Ask your PL to give you a few examples to work out and check to see if you have the right idea.)



True & Magnetic Poles

1c. Make a simple compass, including a rose marked with 16 points, and use it to find magnetic north.

Making this compass should be done in conjunction with section 1a. and 1b. and the compass should be used to set the map and to take bearings for conversion to True bearings which can be checked on the map.

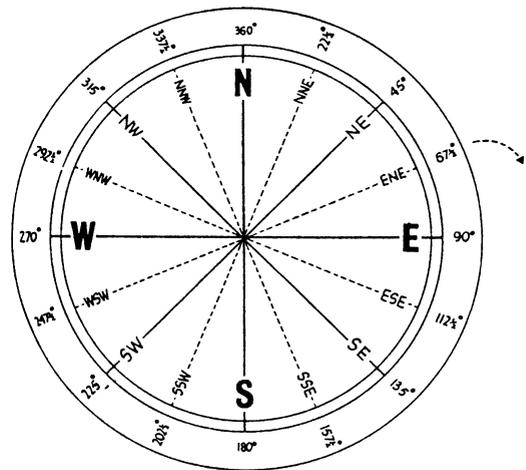
By this stage in your Scouting career, you should be able to use 16 points of the compass. If you learned the 4 cardinal points first, it's not hard to remember that because they are more 'important', they come first when naming a direction between two others.

To enjoy mapping it is essential that you know your compass well and are able to communicate the directions to others, so here are some tips to help you to name the bearings: Half way between north and west is "north-west" (not "west-north") because north is the more important. Again: half way between northwest and west is "west-north-west" (not "north-west-west") because west is more important than northwest.

For more accurate direction finding, we use the 360 degrees (as with a circle in geometry). This means that due east is 90 degrees (clockwise, from north); northeast is half of that, so 45 degrees. They are marked on the picture below.

16-point compass

This is a 16-point compass card and also shows the basic degree positions. In giving compass directions it is normal to use the degree system, as this is less likely to cause confusion. The compass needle does not point to the true North Pole – but rather to an area north of Canada. The exact point varies – but not very much – the variation cannot be ignored and is taken into account when working with a map or compass.



16-point Compass

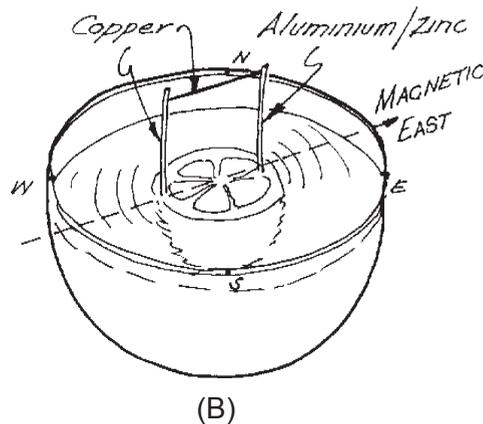
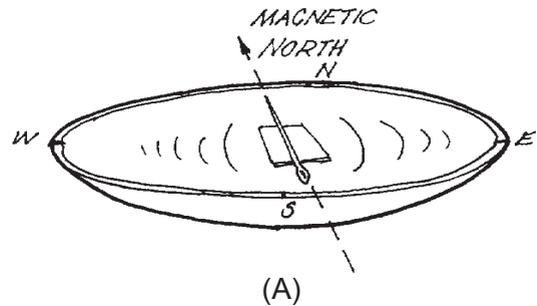
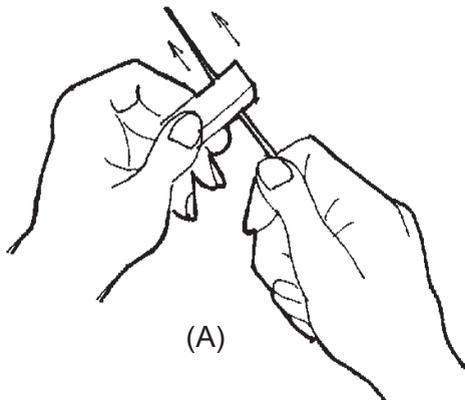
At times you will need to take a *bearing*, which means working out the compass direction of a landmark from where you are. You can note these simply, using terms like "church S.E." or you may measure more accurately with a compass and write down "church – 135 degrees". It's also useful to guess how far away the church is from you. The map, and its scale, can help you here.

A makeshift compass can be made in various ways. One is to magnetise a needle by stroking it with a magnet or tapping it for a long period while it is lying in a North South direction (A).

Another method is to cut a lemon in half and at the one edge push in a piece of copper wire. At the other edge place a small strip of zinc or a piece of aluminium wire. Join the two at the top with a thin piece of copper wire, which will become the indicator needle of the compass (B).

If you are using a magnetized needle, float it on a sliver of cork or a small piece of tissue in a saucer filled to the brim with water. The needle will rotate until it points to magnetic north. If you have used a lemon, float it in a deeper container of water, and it will come to rest with the aluminium facing the magnetic East side. Attach the compass rose with 16 points and it is ready for use. Make sure you wait for it to come to rest before taking the reading.

Make sure you allow the needle or lemon to settle before taking the readings.



Needle & Lemon Compasses



CAMPING

2. **Have camped away from the Scout meeting place at least five nights as a Scout.**
3. **Take part in pitching and striking a tent or making and dismantling a weatherproof shelter.**
 - a. **Make a bed on the ground inside the tent or shelter and sleep there for one night.**
 - b. **Use a kit list to check and pack any personal kit required.**
4. **While on a camp, maintain personal hygiene and explain the need for it.**
5. **Lay and light a fire and use it to cook a raw ingredient to serve as a meal for you. Explain the dangers of fires and the necessary precautions to prevent an accident.**

You should try to complete these activities at a Troop or Patrol camp held during the year. Your Patrol Leader may evaluate these activities if you carry them out while at camp.

2. **Have camped away from the Scout meeting place at least five nights as a Scout.**

These nights must have been spent with other Scouts from your Patrol in the open or under canvas away from your normal meeting place and not at home. You must have spent at least 24 hours in camp and helped with the normal camp chores. These camps could be held at a Scout training ground, a farm or any other safe location in the wild.

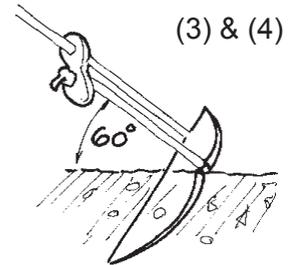
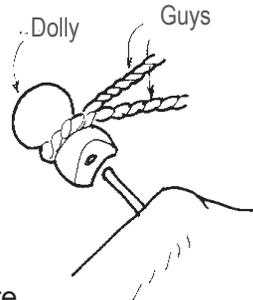
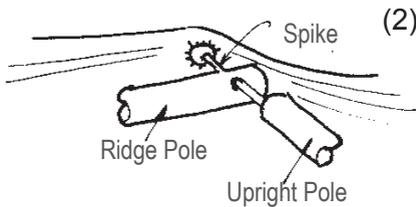
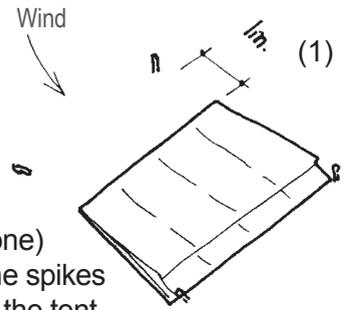
3. **Take part in pitching and striking a tent or making and dismantling a weatherproof shelter.**

If your Troop has access to a tent the pitching option should be used, as you will learn about shelter building later during the instruction from a candidate who is completing the Explorer section.

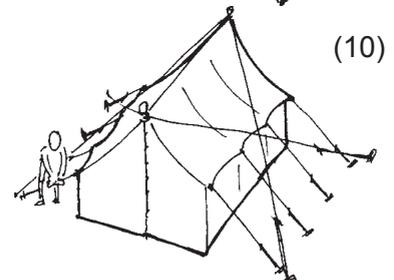
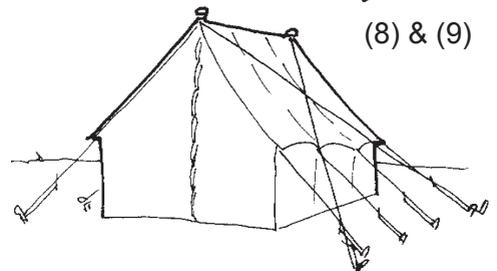
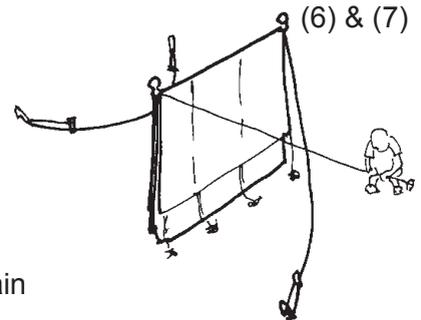
Your tent is your home. Pitch it correctly and it will separate you from any kind of weather. The correct method of pitching should be used so that the tent does not get damaged. For example if a cottage tent is being storm pitched the following order should be followed: First choose as flat a piece of ground as you can. If rain is at all likely, avoid a hollow or gully where wetness could gather. With your Patrol, remove stones, thorns, etc.



1. Remove the peg bag and then the tent and flysheet, if any, from the tent bag and spread it on the ground where it is to be pitched with one of the sloping walls (not the door) facing into the wind. Make sure that you're well away from the fire.
2. Fit the poles together then insert ridge pole (if there is one) and uprights and push them into the spread tent with the spikes through the ridgepoles and holes provided in the top of the tent.
3. Affix wooden dollies or main guys to the spikes.
4. Knock in two pegs at the base of the poles and another two pegs about one metre above the top of the poles.



5. Knock in another two pegs a metre from where the top of the poles would be if the tent were flipped over.
6. Loop the four main guys loosely over the pegs and as the tent is raised tighten the main guys and the tent will remain standing.
7. Straighten the poles by adjusting the guys.
8. Knock in the remaining pegs in line with the main guys and the tent seams.
9. Lace up the doors and attach the other guys to the pegs and adjust the tension.
10. If the main guys touch the tent or the sidewalls sag, move the pegs further away from the tent. Adjust the tension to square up the tent and check that all the guys are in line with the seams.
11. If the weather is bad and trenches are to be dug then they should be dug at the base of the wall and the soil pushed to the inside. A lead-away trench must also be dug. The mud flap should lie in the trench and the brailing pegs are then knocked in level with the outside edge of the trench. The soil



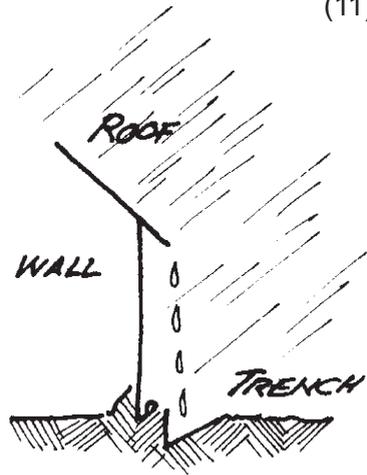
inside the tent should then be pushed up against the tent wall.

(11)

12. To strike the tent the operation should be reversed and then the trenches filled to prevent soil erosion.

Caring for your tent

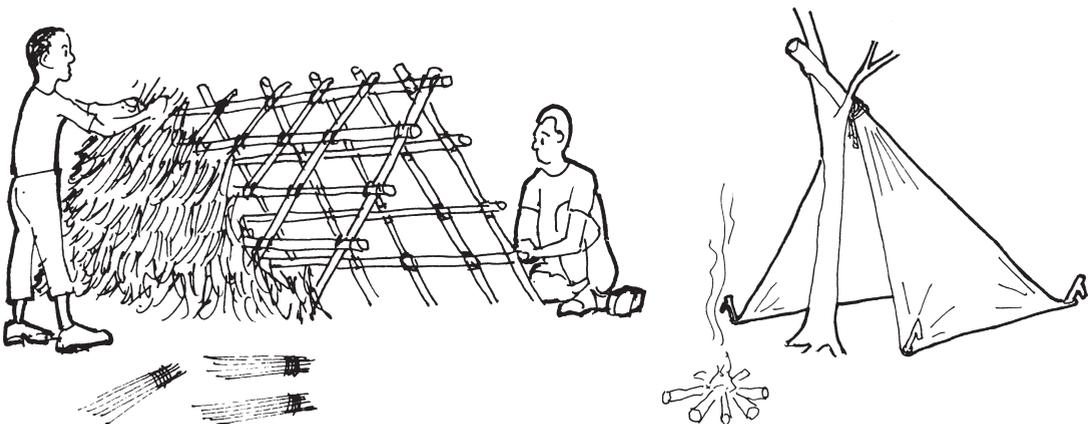
If it rains while you are camping, try your hardest to avoid touching the roof of the tent from the inside. If it's still wet when you strike camp, hang it up to dry as soon as you get home, otherwise the canvas (and its waterproofing) will rot. Non-canvas material may not rot, but could develop mould, and so it also must be thoroughly dried.



When striking the tent (packing it away), leave the main guys until last. Collect all pegs as you take them out.

Slide the runner right up the guy to the tent, fold the guyline in half and tie a knot (overhand or figure-of-eight) to prevent it getting tangled. Fold or roll the tent as neatly as you can, turning the ends in towards the middle. Separate bags for tent, poles, pegs and guylines are useful. Check that you have all the poles and pegs *before* you store them away. (Quite a good idea to have one member of the Patrol in charge of all pegs, particularly collecting them up when you strike the tent.)

For the shelter you must make a sturdy frame and cover it with branches and leaves or a sheet of plastic. The preferred shelter for one person is the type where a pole is lashed to a tree at an angle of about 30° and branches lashed to this pole forming an inverted V which is then covered with the waterproof outer shell. In high lightning areas a stump or a stave in the ground should be used in preference to a tree that might attract the lightning.



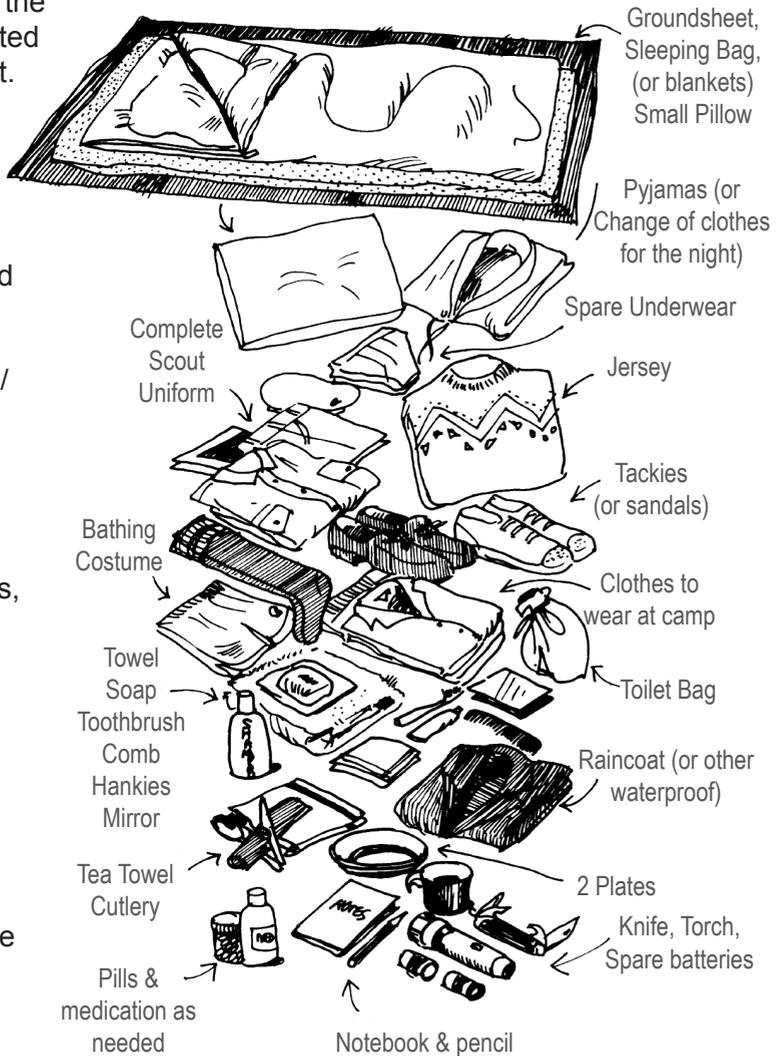
3a. Make a bed on the ground inside the tent or shelter and sleep there for one night.

You must understand the advantage of a “hip hole” (small hole dug in the ground where your hip bone can fit in when lying on your side) and demonstrate the making of a comfortable sleeping spot using leaves or pine needles. It is not required that you make a bed that keeps you clear of the ground but it must be comfortable and enable you to have a peaceful night. Weaving grass, straw, ferns and other soft plants together and laying them over a pile of pine needles or leaves and covering with a ground sheet make the most comfortable bed, but if the ground is soft you can shape it to your body before putting your groundsheet down.

3b. Use a kit list to check and pack any personal kit required.

You're off to camp! This is the sort of adventure you wanted when you became a Scout. Like all adventures, camping works better if you remember to 'Be Prepared'.

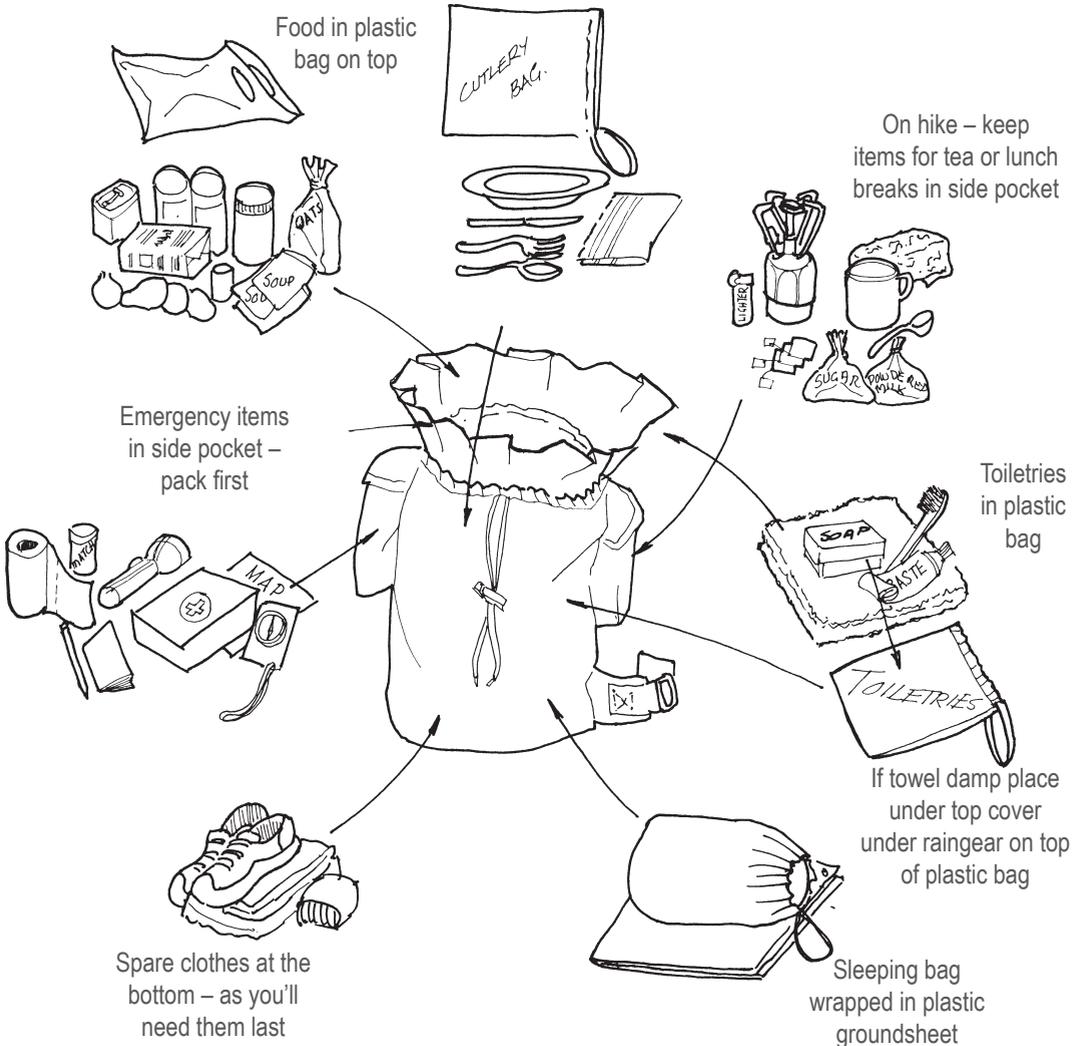
Where possible you should get a kit list from a Scout who has prepared it as part of the planning for his/her camp under section 3 of 1st Class or section 5 of Springbok level. The list should cover at least sleeping, eating and washing kits, spare clothes, socks, and underwear, jerseys, rain gear, dish cloth, a notebook & pen/pencil, torch (and spare batteries) and any pills or medicine you need. You must demonstrate the packing of the kit into a rucksack, kit bag or whatever container you are going to use for the camp. This is only a short camp so you won't need too



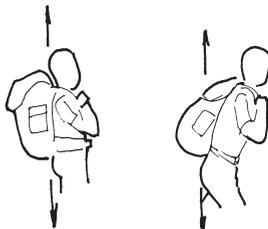
much. Take 'as little as you need', not 'as much as you want'! If you're backpacking you may have to carry it, so choose lighter stuff.

Make sure that everything is clearly marked with your name.

If you're going backpacking, you'll be more comfortable if you pack your rucksack sensibly. Always pack your own kit, and then you know what's where. Don't let Mum do it for you!



Make sure all items are clearly marked with your name



Line inside of kitbag with a plastic bag before packing it to make it waterproof and also, in an emergency, it will float

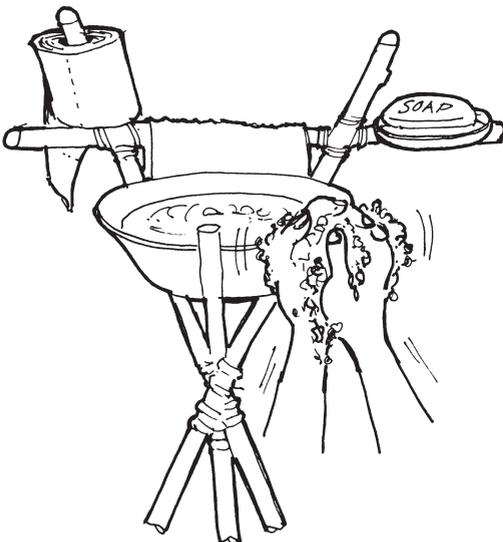
Packing a Rucksack

4. While on a camp, maintain personal hygiene and explain the need for it.

You should be maintaining personal hygiene in camp in the morning during the washing parades, before you handle food and after use of the latrines. Washing parades are for you to clean your body, teeth, hair, hands, feet and your private parts. Don't neglect this important function even at a weekend patrol camp. You should always see that there is soap, clean water and a towel outside the latrines.



You must explain to the PL the need for hygiene in camp and understand the concept of germs being present in dirt and causing various illnesses in camp, and all the problems associated with this such as running stomachs, disease or food poisoning. You could be handling equipment that is not sterile and then you transfer the germs to your mouth when you eat or to the food you are preparing, so always wash your hands before touching any food or drink and especially after using the latrines.



5. Lay and light a fire and use it to cook a raw ingredient to serve as a meal for you. Explain the dangers of fires and the necessary precautions to prevent an accident.

You should know that there are regulations that govern where a fire can be made and understand the dangers of breaking these rules. (Eg in the Forestry or Wilderness areas). You must be sure you are not breaking the regulation before lighting your fire.

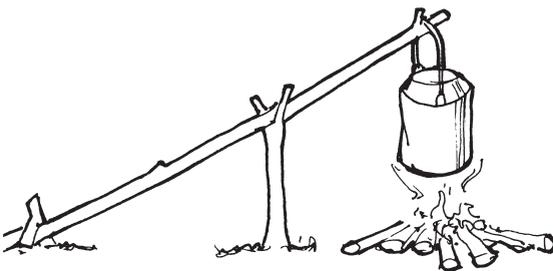
You should know the dangers of a fire spreading if not correctly prepared and controlled and the safety precautions to take, such as having a bucket of sand or water at the site and a green branch to beat out sparks that may be blown out of the fire.

The dangers of skylarking near a fire (i.e. messing about, horseplay etc.), an unstable billy (pot) and items lying around the fire must be understood and put into practice throughout this activity. You should also know the basic treatment of small burns such as plunging the burnt area into cold water to prevent blistering. The ground is 'home' to numerous small creatures – ants, worms, spiders and so on. They all play a part in our ecology. So, whenever possible, raise your fire off the ground. Use a sheet of metal standing firmly on stones, or an altar fireplace, or a conservation stove.

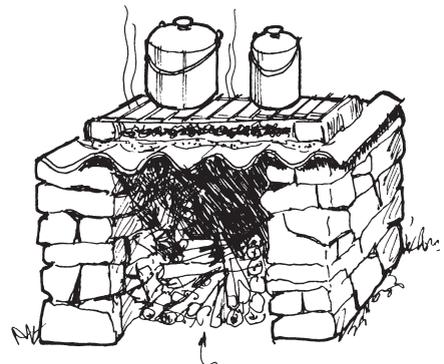


Altar Fireplace

Choose a spot clear of bushes and long grass, and not under overhanging branches, which might catch alight. If there's no chance of raising your fire, then make a hunter's fire with logs or stone, or a trench fire in a bare sandy patch. Use 5cm of mud or clay on top of an Altar Fireplace.



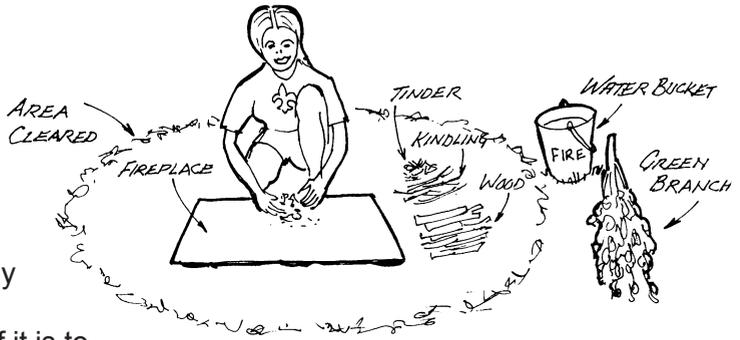
A hunter's Fire



A rock Altar Fireplace

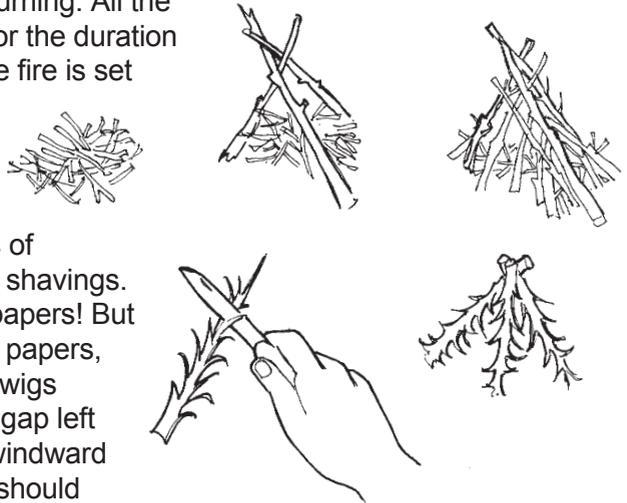
Choose a suitable place to make your fire. This should not be among trees or bush, nor close to long grass. The best spot is a bare patch, with shelter from any strong wind, which might blow burning embers about. If no bare spot is available, clear

away inflammable material from round your fireplace. Be careful that the soil is not of the kind that will burn; peaty soil and ant heap both tend to burn. If you intend making a trench fire, remove the turf carefully and wet it, so that it can be replaced when you go on. If it is to



be a log fireplace, use green logs so that they do not burn. The best type of fireplace is neither the trench nor the log. The trench fire tends to clog with ash, and the log fireplace is difficult to come by because you cannot go chopping down green trees. Use rocks, sinking them into the ground far enough to get a level top surface for your dioxies. For boiling a single billy no fireplace is required; suspend the billy on a "crane."

Fire lighting is best learned by experience! First collect suitable materials (a) quick burning material, to light the fire, (b) small twigs to establish the fire, and (c) heavier wood and small logs to keep the fire burning. All the materials to light and let the fire burn for the duration required should be gathered before the fire is set up. This should include tinder, kindling and thicker wood. A "pyramid", "teepee" or "lean-to" fire should be laid. Start with dry kindling— pine



cones, fuzz sticks carved by you, curls of dead leaves or grass, tiny twigs, wood shavings. (There are other things besides newspapers! But if someone's got a pocket full of sweet papers, use them.) Build up a small 'tepee' of twigs round the kindling, and light through a gap left on the side the wind is blowing from (windward side.) First kindling then thicker sticks should be added on the leeward side but don't be in too much of a hurry to add bigger sticks and split logs. In this country there is often very little choice of material, and the available wood differs in different parts of the country.

How to make a fuzz stick

Study the wood which grows round your area, remembering that the resinous wood of pine is one of the best for an easy to light, quick-burning, hot fire but its coals will not last.



Food Preparation

This activity should serve to provide one of the meals at the camp and not be an additional activity.

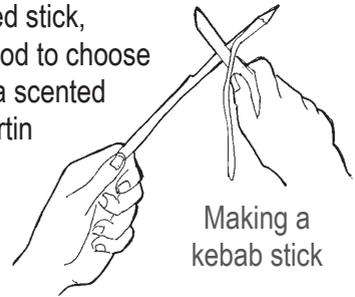
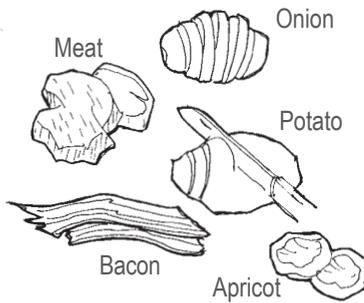
You should first wash your hands then get out the food to be cooked. (To decide on the type and size of the fire required, [e.g. flames for boiling, coals for frying, simmering and for a braai], and not waste the heat or fuel while getting ready.) You must choose an area away from trees and make it safe by clearing the ground for three metres around the fire site and building a simple fireplace using a few rocks. Where possible you should raise the fire on a sheet of metal or on rocks to prevent the destruction of the environment underneath.

Remember the meal should be cooked and served hot to your PL or the Scouter to taste before you eat it.

This is your first meal cooked entirely by yourself and should not be too complicated. It is suggested that you try cooking without utensils to save on the cleaning up. One-man cooking is so simple, and your menu can be extensive.

To make kebabs, whittle a skewer from a thin green, peeled stick, sharply pointed at one end. Wattle is probably the best wood to choose for kebabs or twists; avoid pine, which will give your food a scented flavour; and never use any part of the oleander or iron martin (*ystermartiens*), which are deadly poisonous.

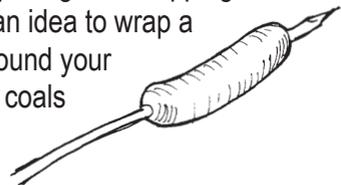
Cut up discs of meat, potato, and onion to thread alternately on to your skewer. For additional flavour, try adding bits of bacon or apricot or sprinkling spices.



Grill over hot coals, turning frequently.

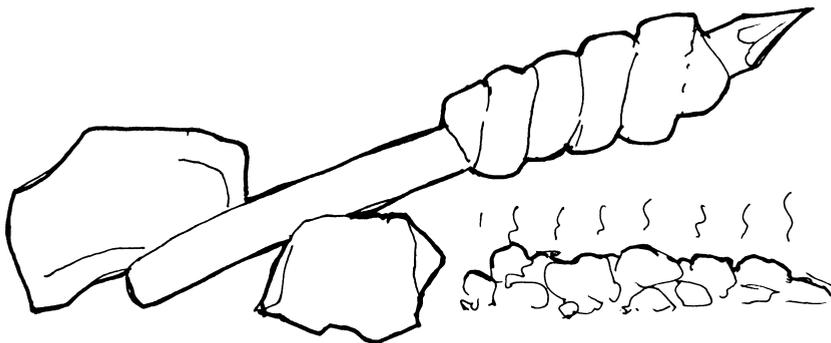
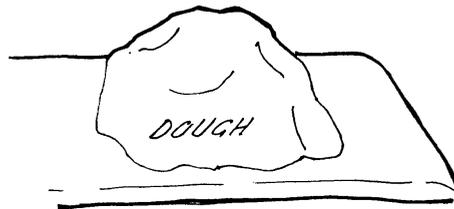
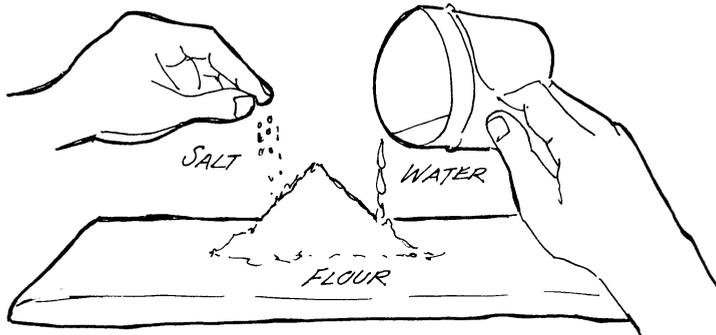


You can cook a sausage the same way, putting the skewer lengthwise through the sausage. Watch it carefully, in case it feels like splitting and dropping off! (Might be an idea to wrap a dishcloth round your hand if the coals are hot.)



Thicker wooden skewers can be used to cook twists – the simplest form of bread. Make dough out of self-raising flour and a pinch of salt, adding a little water at a time until it is moist but not too runny.

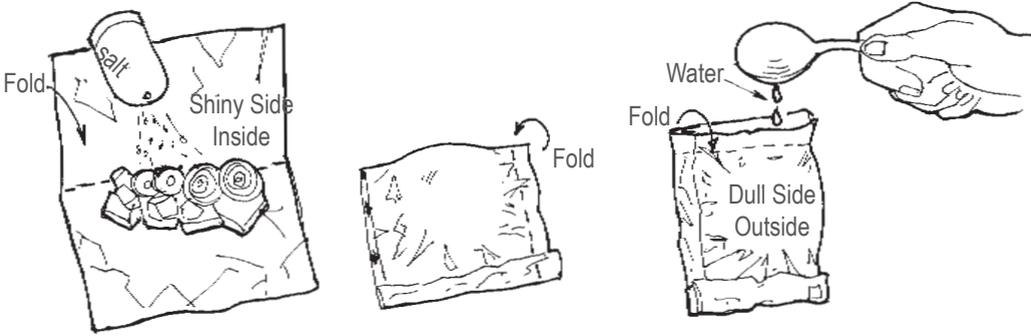
Heat the stick to help cook the middle of your twist. Put flour on your fingers, and twist a length of dough round the stick, pinching the ends to help it stay on. Cook over coals (not flames), turning it frequently. A dab of margarine/butter and jam, and you have a feast!



Steps for Making Twists

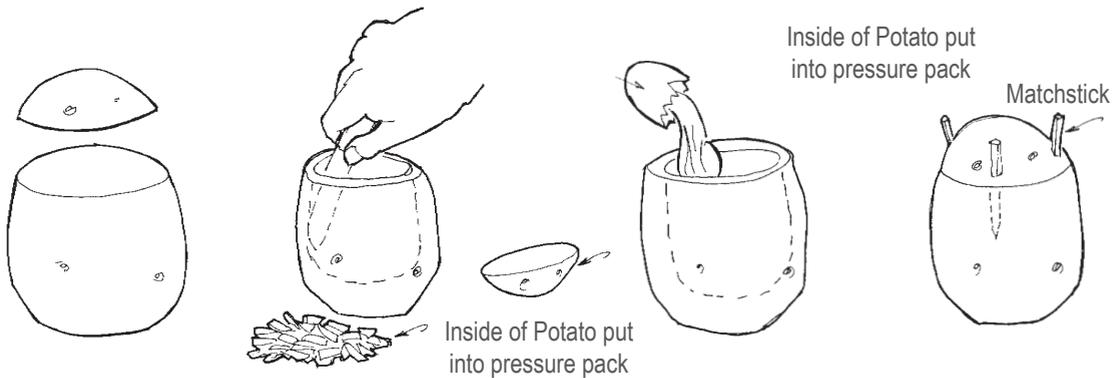


Aluminium foil can cook any number of things. Try the popular 'pressure pack'. Cut all ingredients (meat, veggies) into bits not larger than 1 cm square. Lay out the meat in a rectangle on a large piece of heavy-duty aluminium foil (with the shiny side up). Place the vegetables on top, with each type of vegetable in its own layer. Add a small quantity of water, salt, spices, and wrap up the pack tightly so that the steam will be retained to create a 'pressure cooker' effect (dull side of foil on outside). Place the pack directly on the coals, and it'll take 25 to 35 minutes to cook.



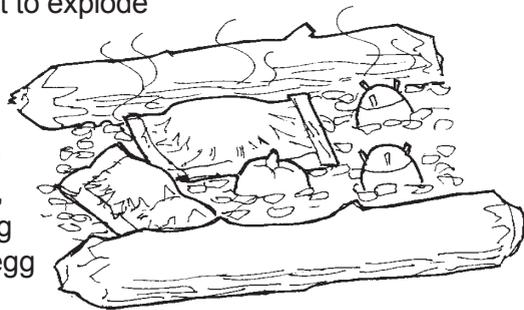
Fish, chicken and mealies can be cooked in foil, without being cut up into small pieces – but remember to add flavour in the form of butter, onions, tomatoes, etc.

Some foods can be cooked directly on the coals: potatoes, mealies, onions, squash. Before eating, you'll have to remove the burnt skin on the outside. Try hollowing out a potato or orange and cooking an egg inside. Or scoop out the innards of a butternut or gem squash, and use it for cooking mincemeat, or cheese and tomatoes.



Flat rocks will act as stoves too. Choose one that is flat and not too thick – and not from a river, or the moisture in it might cause it to explode when heated. You don't want your meal to disappear in a spectacular explosion!

Heat the rock in a good fire for about an hour, and then dust it clean of ash. Apply margarine or cooking oil and you have a hotplate for fish, bacon and eggs, even steak. (If you're cooking eggs, choose a saucer-shaped rock or your egg may slide off into the coals.)



You should serve a hot drink after the meal, so here are some tips on making tea and coffee. You will, of course, choose the drink you prefer, but **do** remember that these drinks taste best if made in billies which are kept specially for tea or coffee.

Tea. Always use freshly boiled water to make tea and use one teaspoonful of tea for every half-pint of tea required or 1 tea bag per person. If you are making it in a teapot, see that it is hot before the tea is infused. If you are making it in a billy it is best to use tea-bags. Tea should not be allowed to infuse for more than three minutes, and should be served immediately. It must not stand for more than five minutes after infusion as this draws out the tannin.

Coffee. Use a little less than half a tablespoonful of coffee for every quarter-pint of coffee required using the method of putting the coffee in a bag and boiling it for five minutes and then letting it stand at the side of the fire for a further five before serving. Coffee is best served with hot milk. Many people prefer to boil coffee three times, then keep warm, while the grounds settle, or strain and serve. The coffee experts recommend that you should not use **boiling** water for coffee, as it destroys some of the flavour. **Very hot but not boiling** is recommended.

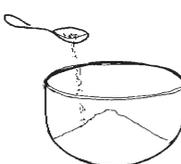




SELF RAISING FLOUR
500g

2 TEASPOONFULS
SALT

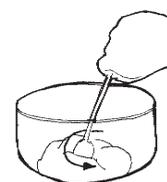
½ ltr.
WATER



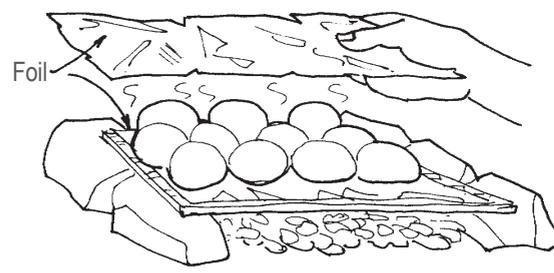
(1)
Mix Flour
and Salt



(2)
Gradually
Add Water



(3)
Mix to a Stiff
Mixture



Foil

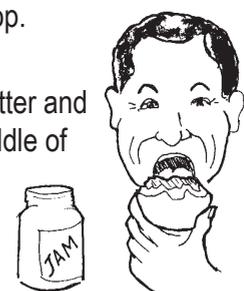
Desert Scones

Here and now, learn to cook “desert scones”, also known as Roosterkoek.

For your Patrol, all you need is: 500 g self-raising flour, 2 teaspoonfuls of salt, and about ½ litre of water. Mix the flour and salt, then add the water gradually until you have a stiff mixture. (The amount of water will vary according to the weather.) Separate the dough into small balls. Arrange them on aluminium foil, on a braai grid over hot embers, and put another sheet of foil over the top.

That is all!

Serve with butter and jam in the middle of the desert!



JAM

Clearing up

There should be no sign of your cooking or camping when you have gone. Make doubly sure your *fire is out*. Chucking some water on top is not enough: there will be heat deep underneath. Wind may fan smouldering embers into fresh flame. Roots of plants may be scorched. So dig deep, and water deep down. Replace any turf you have removed and water that well too.

Precautions in Extinguishing

Make sure that every single spark is out. It is useless to damp off the top layer and hope. This damp layer will dry out quickly with the heat and the hot embers below will burn through. Scrape the whole fire out and kill each spark. Do not scatter the fire wildly. Replace the turf, if it has been removed. If you have used logs as a fireplace, make sure they are not smouldering. Why are these precautions necessary? Because in South Africa, particularly during the dry season, fires spread very easily, and apart from the dangers of veld burning which causes erosion, fire destroys pasture and may easily spread to crops, trees and buildings.

Check the whole area for *rubbish*, including bits that may have blown away into bushes. Preferably put it all into strong plastic bags and take it home.

Hope you enjoyed your meal! Putting out the fire with water or sand, clearing up the fire site and cleaning the utensils are an important part of this activity. There should be no sign that a meal was cooked there once the Scout has finished the clean-up.

SCOUTCRAFT BADGES RECOMMENDED: Fires and Cooking Survival



PIONEERING

6. Demonstrate how to care for, store and hank rope.
7. Make the 6 basic knots (reef, clove hitch, sheet bend, sheepshank, round turn and two half hitches and bowline) and the fisherman's knot and know what they are used for. Make a simple whipping.
8. Demonstrate the safety, use, care and sharpening of a pocketknife, hand-axe or panga.

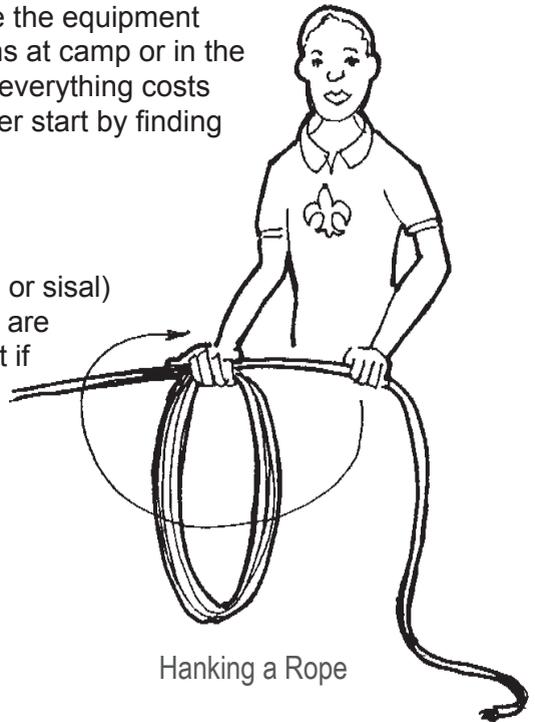
These activities are all practical demonstrations which you should carry out as part of an outdoor programme or while at camp, and should be evaluated by your Patrol Leader.

6. Demonstrate how to care for, store and hank rope.

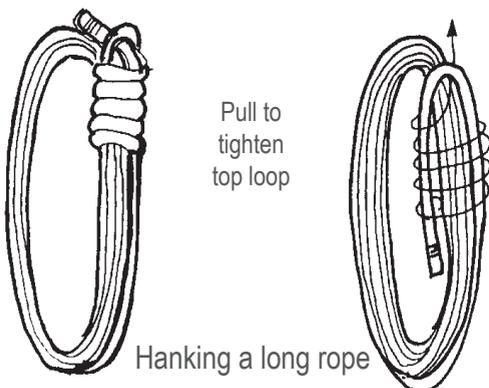
Ropes, axes, saws and poles or staves are the equipment needed for building all sorts of constructions at camp or in the wilds. This is usually called pioneering. As everything costs money (9th Scout Law) perhaps you'd better start by finding out how best to look after them.

Ropes

These can be made of natural fibres (hemp or sisal) or artificial fibres (like nylon). Artificial fibres are waterproof but very expensive and can melt if overheated; natural ropes will give good service provided they are not allowed to get rotten through damp. Never dump them on the ground or store them when wet. When you coil ropes, don't wind them round your arm – that causes kinks in the rope, which make it difficult to use.

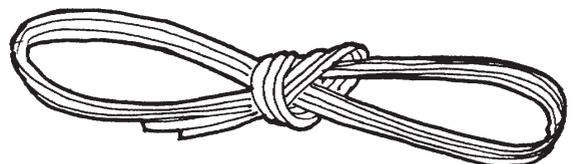


Hanking a Rope

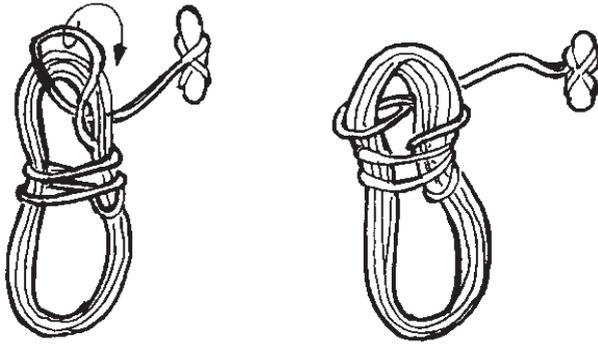


Pull to tighten top loop

Hanking a long rope

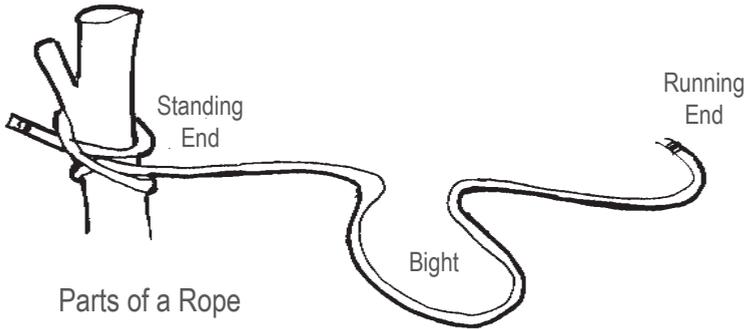


Hanking a short rope



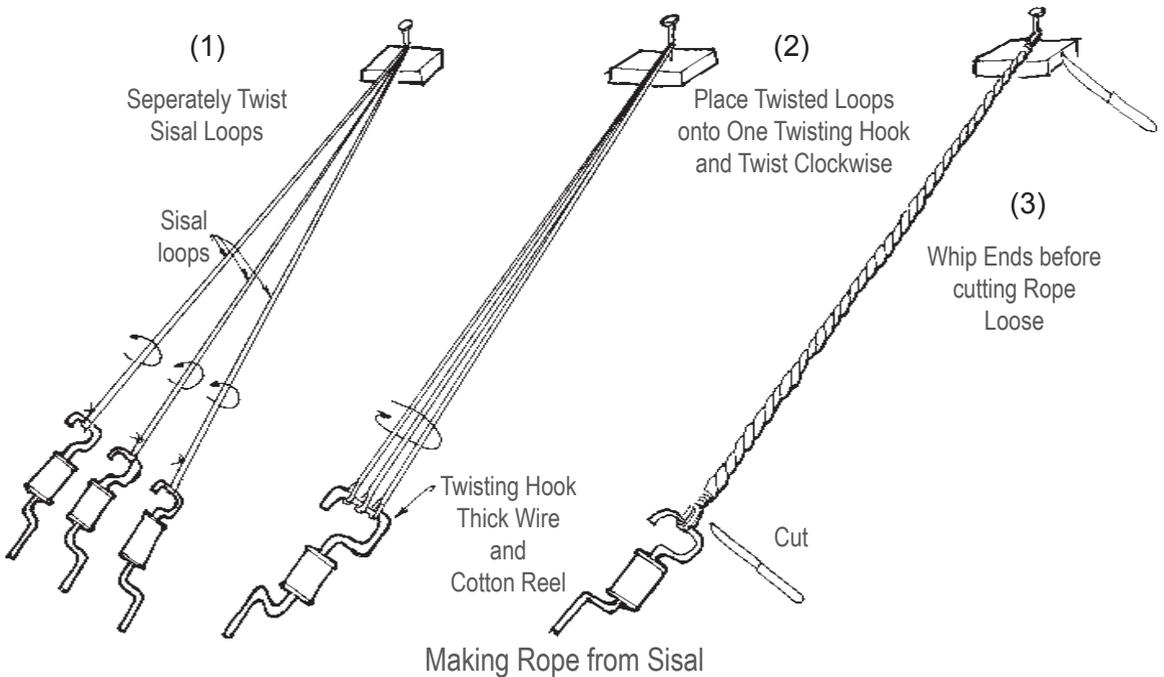
Coiling a Rope secured to a Cleat

Form easy loops, which you gather up in one hand. This is called 'hanking' a rope. Hang it up like that, or finish with a couple of turns around one end of the hank and up through the eyehole you have made to secure it.



Parts of a Rope

Should your Troop not have any ropes you can make your own rope from sisal and then use this rope to carry the demonstrations of hanking, whipping and knotting. Rope making could be a very useful skill.



Making Rope from Sisal



7. Make the 6 basic knots (reef, clove hitch, sheet bend, sheepshank, round turn and two half hitches and bowline) and the fisherman's knot and know what they are used for. Make a simple whipping.

Any fool can tie a knot! The test is: will it slip? Even more important: will it jam so tight that you can't undo it? You are required to be familiar with at least seven good knots, so take your time and practice these till you know them all.

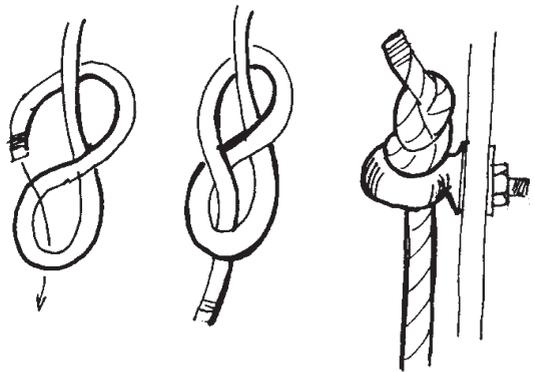
Here are some examples of where you could use these knots:

At a first aid base you would use the reef, a clove hitch should be used for attaching the main guys to a tent or starting a lashing and the bowline would be used in a rescue stunt.



Figure-of-Eight

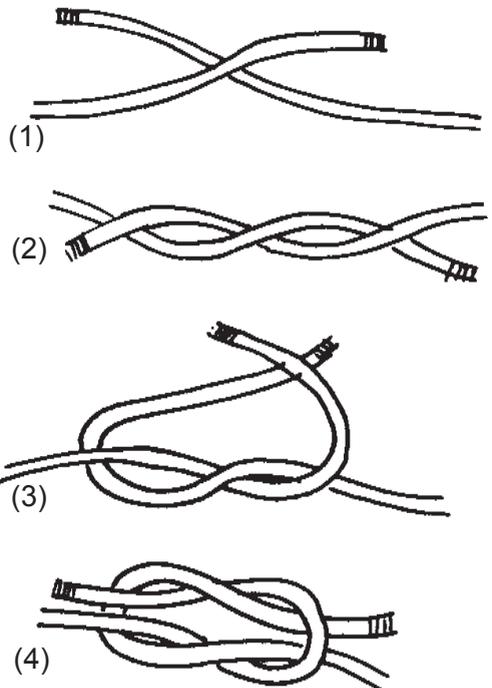
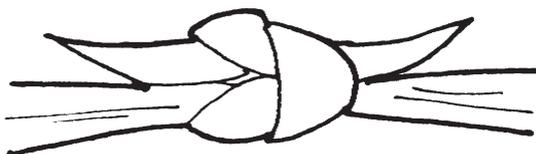
This is what's called a 'stopper knot' – it can stop the end of a rope from running through a pulley. It's useful as a temporary measure to protect the end of a frayed rope from unravelling. And you can tie up small hanks of rope with it (like guy lines on tents).

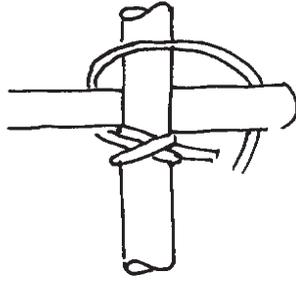
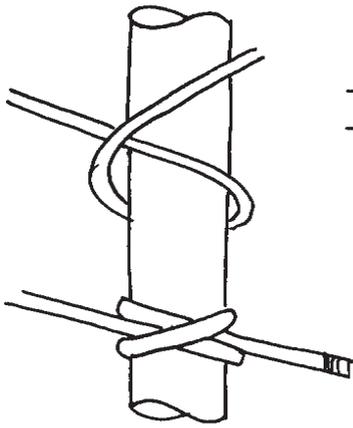


Reef Knot

This is a good general-purpose knot, for tying parcels, or for bandages (as it lies flat, which is more comfortable for the patient). On sailing boats, to 'reef' a sail is to shorten it, and a reef knot is used for this because it is easy to tie and loosen.

Check that the running ends lie alongside their own standing ends. If they don't, you've probably tied a 'granny'! (Or a mysterious thing called a 'thief knot'.)





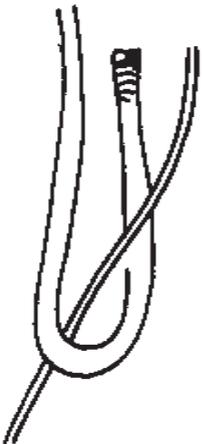
Clove hitch

This is a most useful hitch. You can (temporarily) fasten a rope to a spar or branch; you will need it for starting and finishing a square lashing. Notice that as a 'hitch', it is made up of two 'half hitches' - and sometimes it's easier to tie it like that.

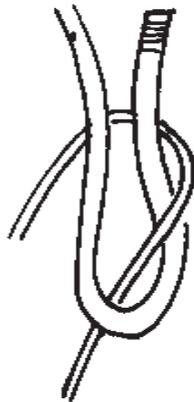
Just be careful that the rope you're using isn't jerked about (as it might with a boat or an animal on the end) or the clove hitch could come loose.

Sheetbend

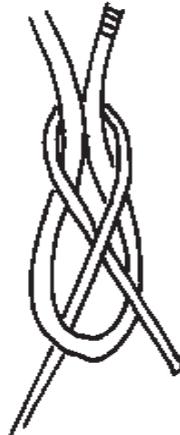
This is used to join two ropes of different thickness together or to 'bend' (which means 'attach') a rope to a loop. A 'sheet' is a rope used to control a sail, and a sheetbend was used to tie two sheets together or to tie the sheet to the sail. You'll use it when joining a flag to a halyard (the rope on a flag pole). The illustration shows two ropes of different thicknesses. If one is very much thinner, then make a *double sheetbend* by passing the thinner rope twice round the loop of the thicker rope, each time going 'under itself'.



(1)



(2)



(3)



(4)

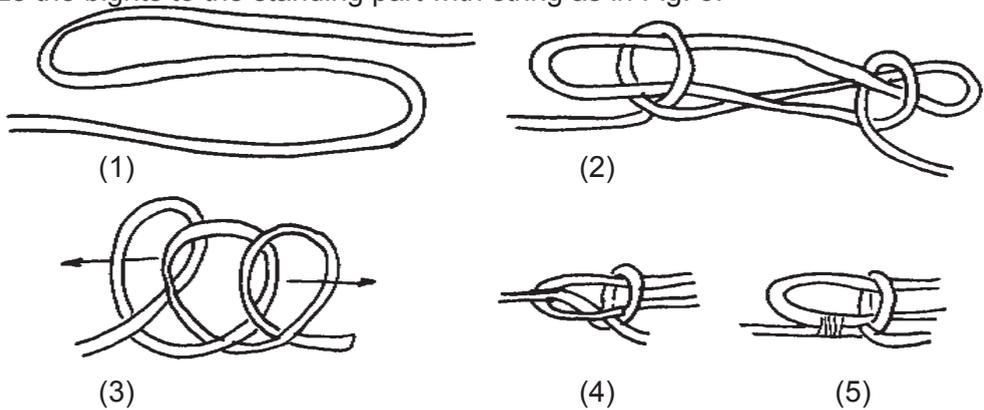


Sheep Shank

This is used to shorten a rope or to strengthen a weak part in a rope where there is a continuous strain.

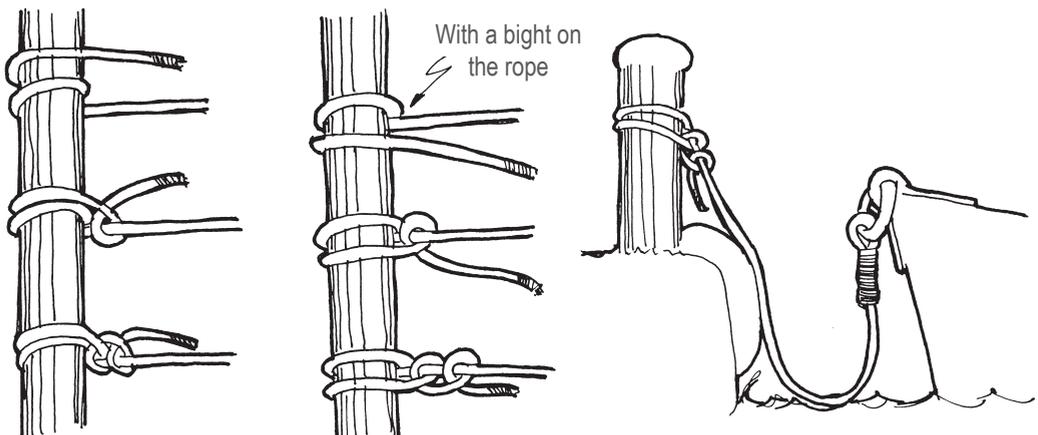
Method: Measure how much you want to take up and make a flat “S” shape. With each standing part take a half hitch round the corresponding bight as in Fig. 2. A much quicker method of doing this is shown in Fig. 3. Make three similar overlapping half-hitches. Pull out the sides of the centre one in the directions of the arrows.

To ensure that your sheepshank does not slip, secure it at both ends. If the ends are available slip them through the bights as in Fig. 4. If no ends are available, seize the bights to the standing part with string as in Fig. 5.



Round turn and two half hitches

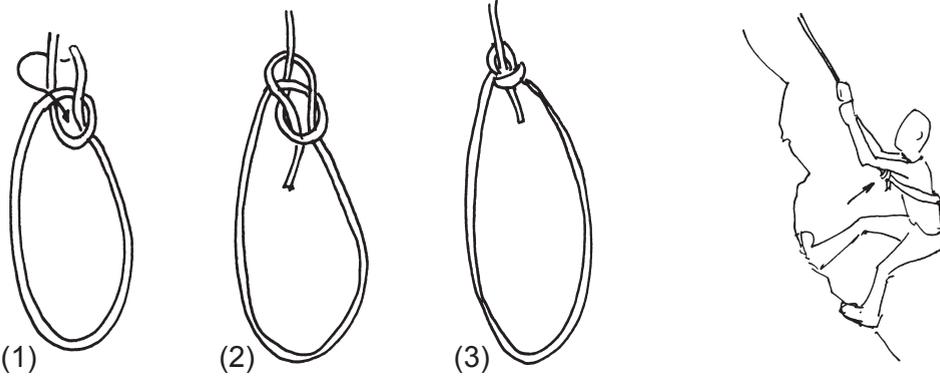
This is used to secure a rope under jerking strain to a spar or mast, or to a fence or branch. You can even tie it when the rope is under strain-with a horse or boat trying to get away! Look carefully, and you'll see that the two half hitches form a clove hitch.



Round Turn and 2 Half Hitches

Bowline

This knot was originally used by archers for tying one end of the 'bow line' to the bow. Nowadays it is used constantly as a loop, which will not slip. You might need it in mountaineering or rescue work; or to secure yourself to a lifeline aboard a boat in rough seas. (So make sure you **can tie it round yourself** as well as round other people.)

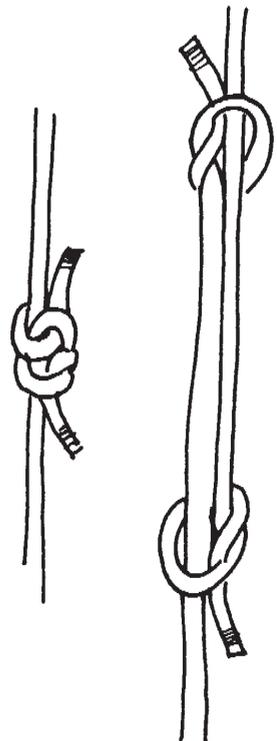


A bowline is not always secure on nylon rope. Leave enough of the free end over to take an additional half hitch round the standing part after completing the bowline when using any man made fibre rope.

Fisherman's knot

Curiously, this isn't a good knot for joining modern nylon fishing line! It is good for joining thicker ropes especially wet or slippery ropes. Make sure the two free ends point away from each other when the knot is pulled tight. It has been found that under jerking strain this knot lasts longer than any of the others you have learnt so far.

You should practice these knots as knotting improves the dexterity of your hands as well as being a useful skill, which could save someone's life one day.



How good are you?

Can you tie knots:

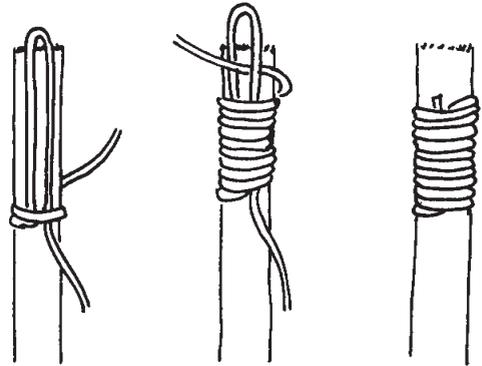
- in the dark?
- hanging upside down?
- on the run?
- under water?
- behind your back?
- with gloves on?

Can you recognise knots blindfolded?

Whipping

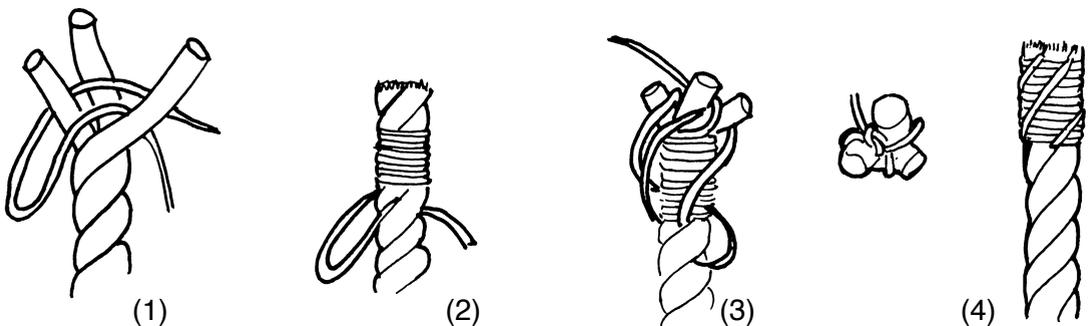
If ropes fray at the ends, they're hard to use and you're losing good rope. You can make a temporary repair with plastic adhesive tape, but a *whipping* will look better and last longer. Whichever method you use, it must be TIGHT. If you can pull it off, it's no use!

Simple (or American) whipping is used for ropes other than 3-strand ropes. Lay a loop of twine along the rope. Wind tightly round for 12 cm. Tuck the loose end in the loop and pull it back in under your whipping. Cut off the free ends. (Then dip the end of the rope and the whipping into molten candle wax to bind it all together or dip it in paint to colour code your ropes so that it is easy to get a rope of the right length.)



You are not required to know this sailmakers whipping yet, but we have included it as it is the best for three-stranded rope and easy to learn.

Sailmaker's whipping The best for 3-strand ropes. Open the strands a little and place a loop of twine round one strand. (See the illustrations.) Twist the rope back into shape again by twisting the strand clockwise and laying it back in an anticlockwise direction. Hold the loop down and wind the free end tightly round the rope, working up towards its end. Raise the loop and slip it over the end of the strand of rope it is around, then pull the short end of the twine to tighten this up. Tie the two ends of the twine with a reef knot in the middle of the lay of the rope. Trim the end of the rope and the twine, and wax or paint the whipping.



And there's a job you can be proud of!

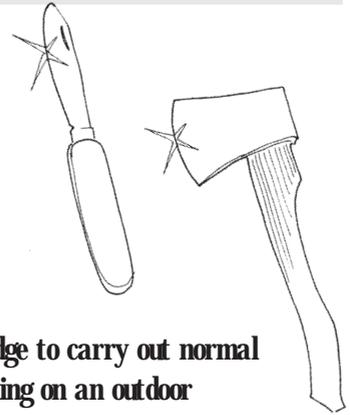
Every Scout should aim to have his own rope, and his own staff. It should be a straight sapling (wattle or gum is ideal) anything from one-and-a-half to two metres long, and at least 2 cm across at the narrow end. Strip the bark off and decorate it by branding with a heated wire or a magnifying glass.

8. Demonstrate the safety, use, care and sharpening of a pocketknife, hand-axe or panga.

You should know how to safely use, sharpen and care for the types of implements that are used by the Troop or at home.

You should practice with the tools, compare their effectiveness before and after maintenance and know when maintenance is required. You must understand all the safety rules and actually carry them out when using the tools. You must demonstrate the correct storage, care and maintenance of these tools.

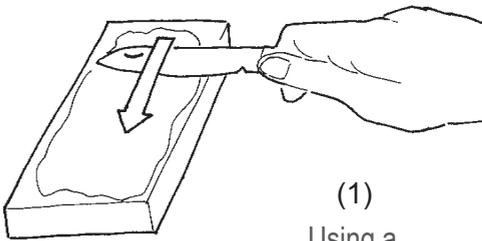
Your Patrol Leader could evaluate you when you use this knowledge to carry out normal tasks while using these tools in camp, during a stunt, while working on an outdoor programme or during a patrol activity.



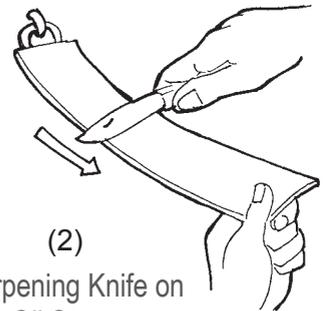
A blunt knife, axe or panga is dangerous as it does not cut into the wood properly and therefore cannot be controlled and also causes a lot more work.

Knives

Knives are used for whittling and light cutting. To sharpen knives use an oil stone and machine oil (1). Once you have finished sharpening a knife on the stone, strop it on a piece of leather (2), very fine grit, water paper or soft wood.



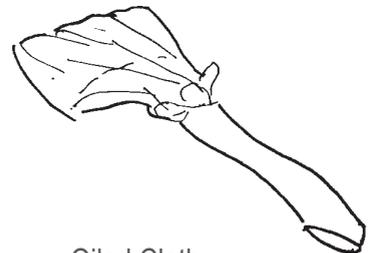
(1)
Using a
Leather Strop



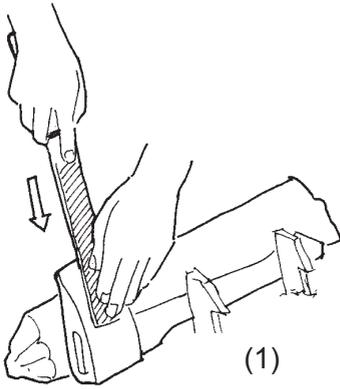
(2)
Sharpening Knife on
Oil Stone

Axes and saws

These are used to cut and trim pioneering poles (and, of course, to cut firewood). Both must be kept sharp – so don't put them down on hard surfaces like concrete, or cut into stone or wood with nails in it. Keep the metal parts lightly oiled, and wrap them in an oily rag for storage. Machine oil is best, but cooking oil is better than nothing!

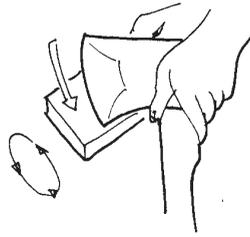


Oiled Cloth



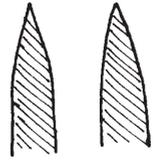
(1)

Sharpening Axe
with a File



(2)

Honing with a dry
Honing Stone



chopping splitting



wrong

(3)

Axe blade edges



Look after axes and saws after you use them: then they will serve you better next time.

A file, whetstone or oilstone will be needed for sharpening, (1), (2) and (3). Always sharpen towards the sharp edge of the blade.

No axe is safe to use unless it is sharp. That may sound crazy! Think about it.

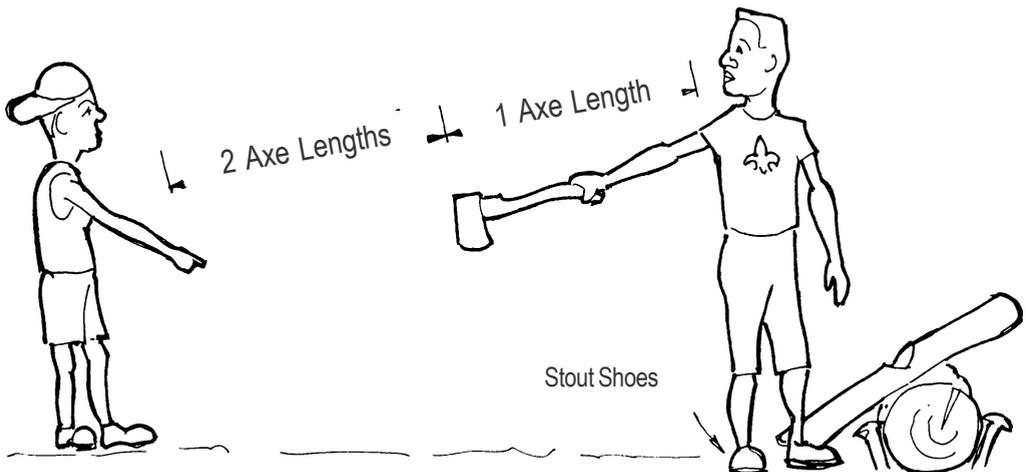
Axe Safety

Safety first! Are you safe? Are *other people* safe?

- You should be wearing firm stout shoes (never bare feet) and no scarf or lanyard to get tangled.
- Your friends should be two axe-lengths away, which means twice the swing of your arm with the axe on the end of it.



Carrying
An Axe



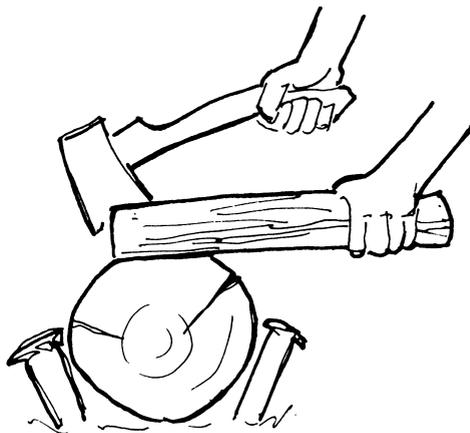
- Clear the ground where an axe is to be used. No overhanging branches, and nobody wandering through.
- Mask the axe or put it in its cover after use.
- Always chop with the wood resting on a firm chopping-block (a log or wooden block).



Axe Masked in Stump

There are two ways to use an axe:

To chop, strike across the grain with your hand axe at an angle of 45°, right above the chopping block. Never chop in mid-air. Chop alternately down from right and left, making a V cut.



Splitting

To split, lay the stick flat on the block so you strike straight downward *with* the grain. Hold the near end of the stick with your free hand, and when the axe blade has gone through, twist with your free hand to split the wood.

Prepare yourself a good woodpile. There's nothing more maddening than running out of wood when the food's half cooked. (Equally important – don't waste wood when you don't need to burn it.)

A saw is actually far quicker and easier, but an axe is so much more fun to use. Make sure that your Patrol uses axes sensibly. When you're sawing, you can stop halfway through a finger – that's not so easy with an axe.

FIRST AID

9. At a simulation staged by your Scouter demonstrate that you know what to do at the scene of an emergency, including how to report fires, accidents and crimes to the relevant emergency services.
10. Wounds and bleeding:
 - a. Demonstrate how to clean and dress a wound.
 - b. Explain the dangers of a dirty wound and the potential Hepatitis B & HIV risk caused by exposure to other people's blood. Explain the importance of the correct use and disposal of latex gloves.
 - c. Demonstrate how to maintain an open airway and control bleeding.
 - d. Demonstrate CPR on a model (a professional or one made by the Scouts).
11. With another Scout, stage a role-play that demonstrates the principle of the 'Buddy System'.

First Aid is continually being updated as better methods are found, and therefore you should refer to the latest literature from a recognised first aid association if possible, before training yourself in any section of first aid.

This book will therefore only refer to the main points of the treatment.

Note: With all accidents the casualty will suffer from shock and you must demonstrate a basic knowledge of the correct treatment for this condition.

9. At a simulation staged by your Scouter demonstrate that you know what to do at the scene of an emergency, including how to report fires, accidents and crimes to the relevant emergency services.

You are at the start of first aid training and will not be expected to carry out any advanced techniques. The important thing is that you know the correct approach to an incident and proceed with caution, wearing latex gloves and checking for hazards before rushing in.

You could be evaluated during a short Patrol incident hike which covers 3 or 4 incidents of a simple nature where you should play a role in carrying out the priority action approach and the treatment of the casualties including those in section 10 below.



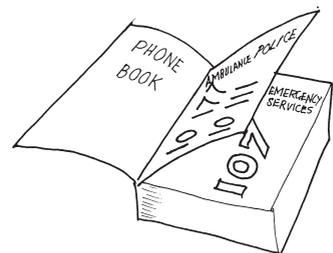
You must also demonstrate how and what to report to the relevant emergency services. Your Patrol Leader will let you play a leading part where you can and will assist you with the more complex first aid.

You must manage the emergency scene by carrying out the following steps:

1. Taking charge of the situation.
2. Calling to attract attention of bystanders.
3. Assessing hazards.
4. With the assistance of the bystanders making the area safe. You must put on latex gloves to make yourself safe.
5. Identify yourself as a first aider and offer help.
6. Quickly assess each casualty for any life- threatening conditions by checking A (airway), B (breathing) and C (circulation).
7. Get bystanders to assist with treatment.
8. Send a bystander to get medical help after telling them what to say.
9. Carry out a complete examination of each casualty and treat other injuries e.g. bleeding, shock, fractures, cuts and minor wounds.
10. Constantly speak to and reassure the injured person(s).
11. Treat for shock, keep them at normal room temperature and as comfortable as possible.
12. Hand the patient(s) over to medical help or by getting transport to the hospital.

You also need to know the general emergency numbers, where to find the other emergency numbers in your local phone book and what to say to the person who receives your call.

The general emergency number is 10177 and the new disaster number is 107 but you should also know your local police, fire brigade and hospital numbers. In case you have an emergency while camping in the country you need to know how to look up a number in a “Country Exchange” book by looking up the town’s name first and then the emergency service number. In a normal phone book the emergency service numbers are in the front with all the hospitals listed under “H”. Arrange with your PL to phone him with a mock emergency for practice, but do not give incorrect information to any emergency service.

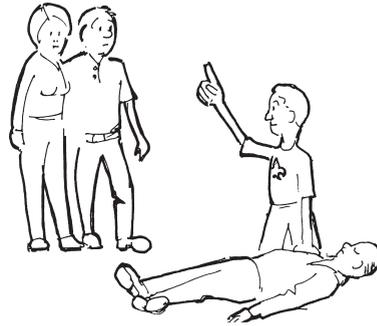


General Emergency
Phone Numbers

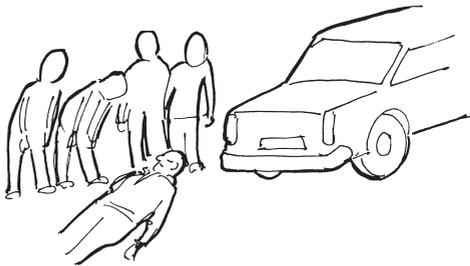
Managing the Emergency Scene



1. Take Charge of Situation



2. Call to Attract Bystanders



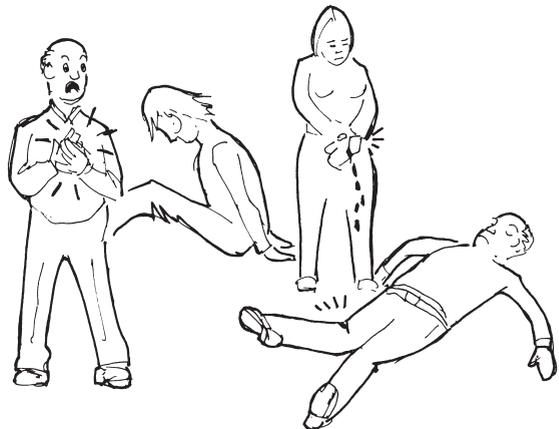
3. Assess Hazards



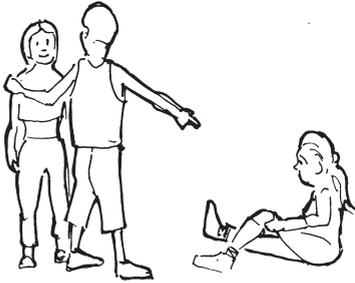
4. Use Bystanders to Make Area Safe.
Put on Latex gloves.



5. Identify yourself as a First Aider



6. Quickly Assess each Casualty:
A (airway), B (breathing) and C (circulation)



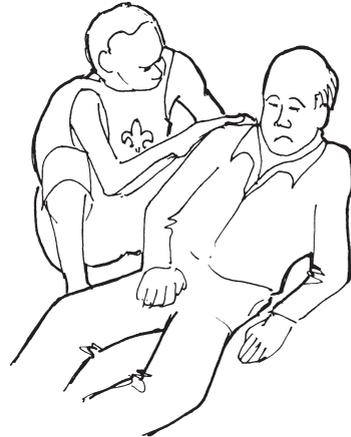
7. Get Bystanders to Assist



8. Get Bystander to get Medical Help



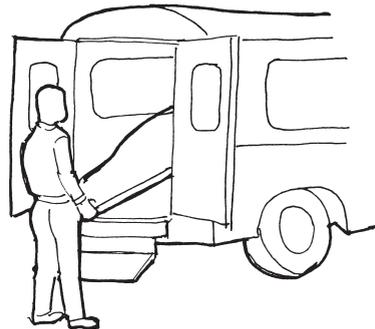
9. Carry out complete examination and Treat Injuries and Shock



10. Reassure Casualty



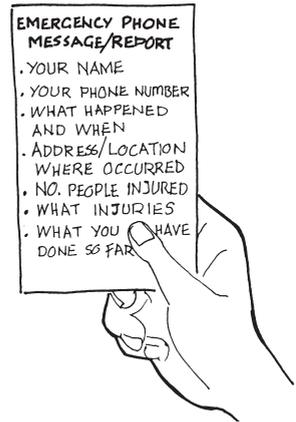
11. Treat for Shock



12. Release Patient to Medical Help

The key things to remember to say when you phone or write a note are:

1. Your name, the number you are phoning from and that you are a Scout.
2. What has happened and when. (Fire, car accident, electrical accident etc.)
3. Where the incident happened. Give the address and the nearest cross street to the incident.
4. How many people are involved.
5. What injuries you suspect are present.
6. What you have done so far.



10. Wounds and bleeding:

a. Demonstrate how to clean and dress a wound.

You should understand that infection from dirt in a cut or scratch can turn a simple wound into a very complicated case. Knowledge of the dangers to yourself from infected blood is very important.

Cuts & Scratches

All skin openings must be cleaned promptly. Otherwise germs can cause infection. Puncture wounds (from a thorn, pin, splinter) must be watched carefully, as it is hard to clean right to the bottom of the wound.

Let the injured person wash his own cut or graze with soap and water, as he knows better than anyone else where it hurts – and how much! While he is busy, you are washing your own hands as well.

Rinse the cut well under clean water. Wait until the skin is dry. For small cuts, apply an adhesive plaster (e.g. Elastoplast, Band aid) with a little antiseptic ointment. Larger wounds should be treated as described below and then covered only with a wound dressing or gauze pad held in place with plaster. Be careful not to touch the inside (gauze) of the dressing. (If you have no plasters, use a bandage or a clean white handkerchief.)



Wash your hands well



The following steps should be followed when cleaning a wound if serious bleeding is not present:

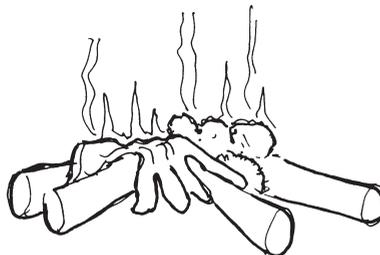
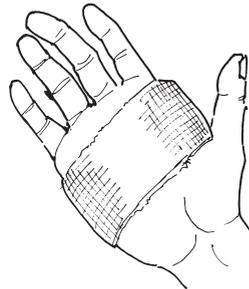
- a. Wash your hands well.
- b. Open first aid kit, put water and disinfectant into a bowl and open pack of cotton wool.
- c. Explain to the casualty what you are going to do.
- d. Put on the latex gloves leaving a small fold over at the cuff to make removal easier.
- e. Dip a piece of cotton wool into the bowl and wipe around the wound.
- f. Take a clean piece of cotton wool, dip and wipe one stroke from the middle of the wound to the edge.
- g. Repeat step (e) in all directions with a clean piece of cotton wool each time.
- h. Dry around the wound and apply a sterile dressing or plaster.
- i. Dispose of all materials used to clean the wound in a safe manner. (Burn if possible.)
- j. Remove the gloves by gripping at the cuff and pulling the glove off so that they end up inside out. Make sure that the skin does not come in contact with the blood during this process.
- k. Dispose of the gloves safely.



Put on Latex Gloves and explain to Casualty what you are doing



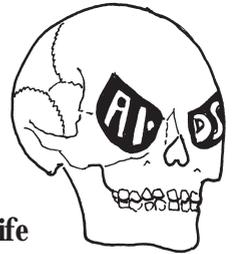
Wipe around Wound



10b. Explain the dangers of a dirty wound and the potential Hepatitis B & HIV risk caused by exposure to other people's blood. Explain the importance of the correct use and disposal of latex gloves.

You should be able to explain the dangers of dirt in the wound and how a break in the skin allows germs to enter the body and cause infection.

You must be fully aware that the casualty you are treating may be a carrier of HIV or Hepatitis B without showing any obvious signs of the disease. You can easily contract these diseases by coming in contact with a casualty's infected blood, and gloves must therefore be worn at all times when working with a bleeding patient. You must also fully understand the life threatening consequences of these diseases.



Preventing infection

You and the casualty are in very close contact with each other when first aid is given. This close contact means that an infection could pass from the casualty to you. You must always be aware of this risk of infection; it is a safety hazard. There is more risk of serious infection when blood and other bodily fluids are involved, as the viruses that cause AIDS (acquired immunodeficiency syndrome), hepatitis B and other illnesses may be present. If you don't know if someone is infected with an illness, you should use safety measures called the *universal precautions* to minimise the risk of transmission.



(1) Wash Hands

The universal precautions that apply to first aiders are: hand washing, wearing gloves, minimizing mouth-to-mouth contact during artificial respiration and the careful handling of sharp objects.

If a casualty has AIDS, it is highly unlikely you would get AIDS by giving AR or CPR without a mask. The risk is very low – it has never actually happened but when handling blood or body fluids it is much higher.



(2) Wear Gloves

Gloves prevent direct hand contact between the first aider and the casualty. Wear gloves when you might touch blood, bodily fluids, tissue or anything that has come in contact with one of these. Put on your gloves as you approach an emergency scene. Vinyl or latex gloves are equally effective, although latex irritates some people's skin. Keep your gloves in a place you can get to easily, where they are not exposed to very high or low temperatures. It's a good idea to keep a few pairs of gloves in your first aid kit.

Hand contact is one of the main ways infections are transferred from one person to another. Wash your hands with soap and running water immediately after any contact with a casualty. It is also a good idea to wash your hands often when you are around people who are sick with colds, flu, etc.

Using a face mask or shield designed to prevent transmission during AR can minimize the risk that an infection could be passed from one to another during artificial respiration. Many brands are available. Choose a disposable one-way valve. Keep it in a place where you can get it quickly. Follow the instructions that come with the mask.

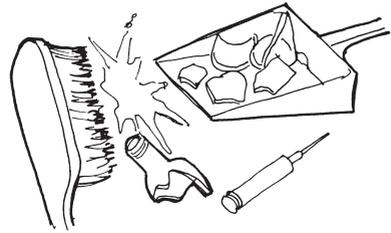
If a sharp object comes into contact with blood and then pricks or cuts you, you could be infected. Because you may have to use sharp objects like a knife or perhaps clean up broken glass that has been in contact with blood, wear gloves and handle objects with extreme care.

The universal precautions are protecting you and the casualty. Safety is the main concern while giving first aid.

If the casualty has an open wound he could also pick up infection from dirt left in the wound or germs in the air. This could lead to serious consequences such as septicemia. Always make sure the wound is properly cleaned, apply some antiseptic cream and cover with a dressing or plaster. All injuries must be inspected at least once a day for infection, and for clean dressings to be applied. When you are hiking, a foot problem may need a new dressing 3 or 4 times in a day.



(3) Minimise Mouth to Mouth contact during Artificial respiration

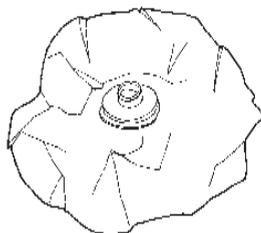


(4) Careful Handling of Sharp Objects

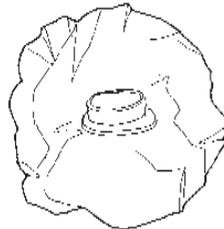
10c. Demonstrate how to maintain an open airway and give mouth to mouth resuscitation, and to control bleeding.

You should be able to demonstrate the opening of the casualty's airway using the head tilt chin-lift method and applying mouth-to-mouth resuscitation. While opening the airway can be practiced

Top
First Aider's Mouthpiece



Bottom
Patient's Mouthpiece



One-Way Valve for Mouth-To-Mouth Resuscitation



Mouth-To-Mouth using One-Way Valve

on other Scouts, the breathing should only be practiced or demonstrated on a model or dummy. You should also know the possible causes of asphyxia and how to deal with those specific cases, including the dangers to the first aider. Eg electric shock, a foreign object in the throat, the inhalation of smoke, drowning or strangulation. You must know the dangers of moving the head of a casualty who may have a neck injury.

The assessing of hazards before you rush to help cannot be stressed enough but you must appreciate the urgency of removing the 'cause from the casualty' or 'the casualty from the cause' in cases of asphyxia.

We have to breathe to stay alive. If any part of the air passage (nose, mouth, throat) is blocked then it may be impossible to breathe. The risk of suffocation is even greater if the patient is unconscious. Obstructions can be caused by: water, strangulation, sweets, electric shock, food, poisoning, fish bones or disease. Before doing anything else, ensure **an open airway**. If there is any obvious food or foreign objects in the mouth remove them with your fingers after putting on your gloves.

Try to wake the patient first, by gently patting his shoulder and asking, "Are you OK?" (Check that they have no neck injury – if they have, or if you suspect one, it is vital that you open the airway without moving the neck or head. Use the "jawthrust manoeuvre".)

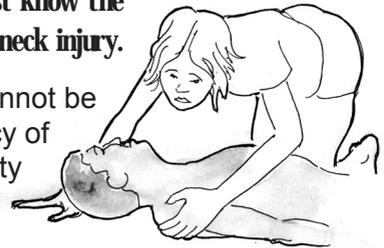
If no response

Treat as though the patient does have a neck or back injury (see above). Never take a chance. Open the airway. Lift your patient's chin up and tilt the head backwards. Look, listen and feel (on your cheek) for breathing.

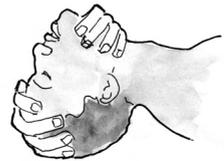
If not breathing

Turn the victim face up. Ensure an open airway by raising the neck and tilting the head back, so the throat area is stretched. If there is any foreign matter (food particles, blood) visible in the mouth, wipe it out with your fingers.

Place your mouth over the victim's mouth, pinch his nostrils closed, raise his neck and give two full blows. Let the victim exhale naturally. Watch the rise of the chest to see if your efforts are effective. Continue to give breathing inflations at normal breathing rate (one breath every 45 seconds) until your patient is breathing naturally.



Are you okay?



Open Airway



Check for Breathing



Open Airway Clear Foreign Matter



Give Mouth-to-Mouth or Nose-to-Mouth Resuscitation



Note: This procedure may not be practised on a fellow Scout, but should be demonstrated on a model.

Once he starts *breathing*
Place the patient in the
recovery position, right.



Place in Recovery Position and Monitor
until handed over to Medical Help

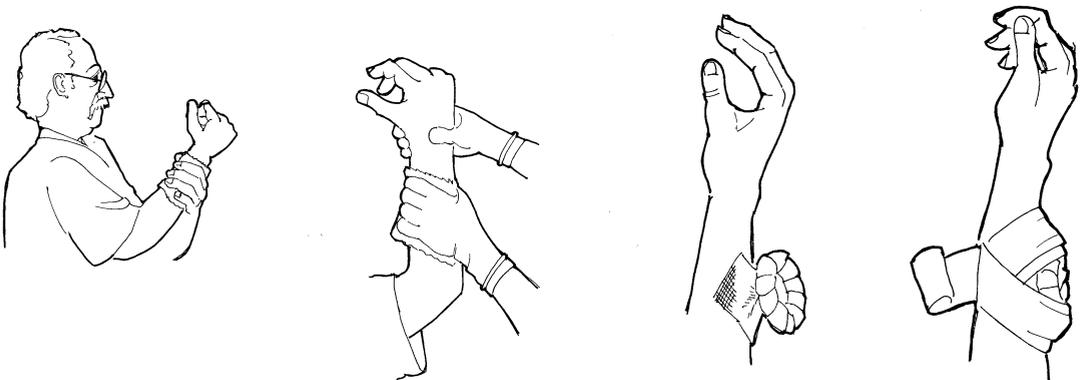
In summary these steps should be followed after any hazards have been cleared:

- a. Check for response by tapping the casualty's shoulder and shouting, "Are you OK?"
- b. Check for breathing. E.g. Chest movement, or mist on a mirror or cold shiny metal surface held next to the mouth and nose.
- c. Open the airway and clear any foreign matter from the mouth and then reassess breathing.
- d. Send one of the bystanders to get medical help.
- e. If casualty is not breathing insert the one-way valve, pinch their nostrils and give two slow full breaths. Check the carotid pulse. If you have not learnt CPR by this stage then you should get help from a more qualified person. If the pulse is detected you should continue with mouth-to-mouth resuscitation at a rate of one breath every 5 seconds for casualties above 8 years of age and 1 every 3 seconds for children and infants This allows time for the casualty to exhale (watch the chest fall).
- f. Continue until the casualty starts unaided breathing or is handed over to a more competent first aider or medical practitioner.
- g. When breathing starts remove the valve and put the casualty in the recovery position if other injuries permit.
- h. Monitor the casualty until he/she is removed to hospital or is handed over to a doctor.

10c. Controlling bleeding

You must know how to control bleeding by elevation (i.e. raising up), direct pressure and a pad and bandage. The dangers of the use of a tourniquet should be explained to the evaluator. Once again the dangers to the first aider when dealing with blood must be emphasized.

- a. Lay the casualty in a comfortable position with the bleeding area elevated (i.e. raised up) and get the casualty to apply direct pressure if conscious.
- b. Put on the latex gloves or if not available a plastic bag over each hand.
- c. Grip the bleeding area and apply direct pressure while preparing a dressing.
- d. Send a bystander for help or to telephone for medical assistance.
- e. Place a dressing or pad over the wound and bandage firmly using a ring pad if there is anything protruding from the wound.
- f. If blood comes through, apply another dressing on top and bandage over. Do not remove the first bandage.
- g. Check for circulation beyond the bandage by comparing the temperature of the two feet or hands and taking the pulse at the wrist or ankle. Press on the nail and the pink colour should return within three seconds. If any of these fail, loosen the bandage slightly and re-check.
- h. Keep the wound elevated and transport the casualty to hospital as soon as possible.



Direct Pressure On The Wound

10d. Demonstrate CPR on a model (professional or one made by the Scouts).

Note: CPR must only be practiced and demonstrated on a dummy and never on other people.

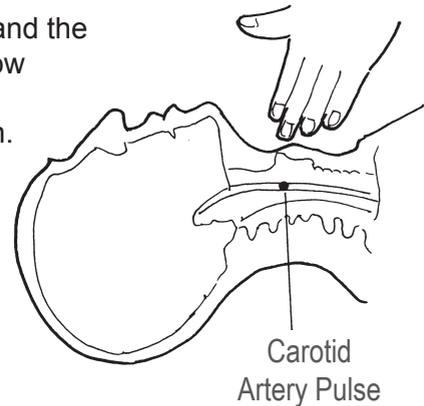
You must demonstrate Cardiopulmonary Resuscitation and understand when it is to be used and the variations by age of the casualty.

Cardio-pulmonary Resuscitation (CPR)

If mouth-to-mouth resuscitation is unsuccessful and the victim's heart has stopped beating, you must know how to perform CPR. Without the heart in action, oxygenated blood cannot reach the victim's brain.

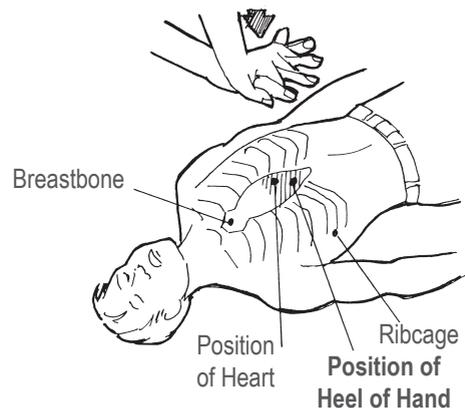
Never assume that a person is dead. Only a doctor can decide that. Your help may prevent death.

Before commencing CPR, establish that there is *no* heartbeat. Check the pulse in the hollow of the neck for at least 10 seconds. The pulse will only return when the heart is beating.

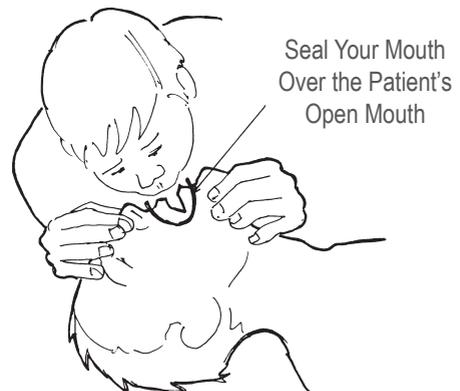


Applying CPR

Lay the patient on their back on a firm surface. Kneel beside the right side of your patient, facing the chest and in line with the heart. Measure three fingers up from the bottom of the breastbone. Place the heel of your hand next to the "third finger" for the correct position. Cover this with the heel of your other hand and lock your fingers together.



Keep your arms straight and move forward until your arms are vertical. Press down (on the lower half of the breastbone) about 4 to 5 cm for a normal adult. Complete 15 compressions – at the rate of 80 compressions per minute. (To keep the correct speed, count, "One and two and three and . . ." but learn this through practice.) Move back to the patient's head and re-open the airway. Seal the nose and give two breaths of mouth-to-mouth resuscitation.



Continue with 15 compressions followed by 2 full resuscitations, repeating the pulse check after the first minute and every three minutes after that. As soon as the heart beat returns, stop compressions immediately. **Continue mouth-to-mouth resuscitation until natural breathing is restored**, adjusting it to the patient's rate of breathing. When he is breathing naturally, stop your "rescue breathing" at once.

Place the patient in the recovery position (see under 10c.) and keep him under constant observation until medical help can take over from you.

To summarise

1. Assess the responsiveness of the casualty.
2. Assess the breathing.
3. Call out for help.
4. If casualty is not breathing place them on their back on a firm surface.
5. Open the airway by 'head tilt-chin lift' manoeuvre.
6. Re-assess the breathing.
7. If there is no breathing, ventilate the lungs for 1 to 1.5 seconds then pause and repeat one more breath.
8. Assess the pulse at the carotid artery.
9. Send for help from the emergency services.
10. If there is no pulse, begin chest compressions to a depth of 4cm to 5cm.
11. Give 15 compressions at a rate of 80 to 100 per minute. Ventilate lungs twice.
12. Repeat 15 compressions and 2 ventilations 4 more times.
13. Re-assess pulse.
14. If there is still no pulse give 2 ventilations.
15. Continue compressions and ventilations in ratio 15:2 and recheck the pulse every 2 to 3 minutes.
16. Continue until the casualty is handed over to medical help or recovers, in which case put them in the recovery position and monitor the breathing and pulse.

In the case of a child, the compression should be 2.5 cm to 3.5 cm.

Give 5 compressions at a rate of 80 to 100 per minute and give one light breath.

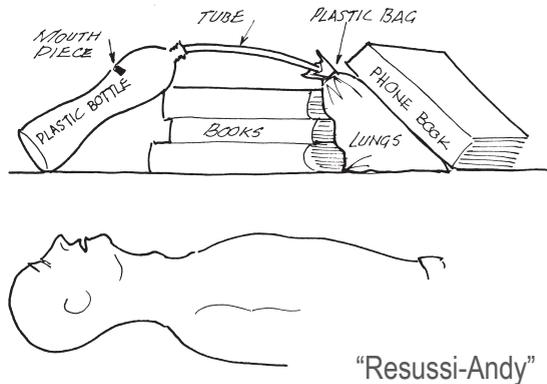
Perform 10 full cycles before re-assessing the pulse.



The first thing you should always remember is that you are providing First Aid. You are not a doctor. Your help and skill will keep your patient safe until someone with greater skill is available. You should aim to know about all the different treatments mentioned in this section.

“RESUSSI-ANDY”

This – believe it or not – is an artificial respiration training aid, made from a plastic bottle, tube and plastic bag. Books are used to weight the bag to imitate lung compression. Use it when you’re demonstrating artificial respiration & CPR and then keep it as a permanent piece of Patrol equipment.



11. With another Scout, stage a role-play that demonstrates the principle of the ‘Buddy System’.

You should demonstrate how the ‘Buddy System’ works under normal and emergency conditions. The reason for pairing two swimmers of equal competence should be illustrated in the role-play.

If good and weak swimmers are paired the good swimmer may draw the weak swimmer out of his/her safe depth and also if the strong swimmer gets into difficulties the weak swimmer will not be able to help. Two weak swimmers will stay in the shallows and be safer and easier to control.

The ‘Buddy System’ should also be used on hikes or where visibility is poor, to prevent anyone from getting lost. Remember the two buddies must be in sight of each other at all times.

Your Patrol Leader could evaluate the buddy role-play during a Patrol meeting or camp.

You must be competent in all the sections above, as poor First Aid is worse than no First Aid at all, and could endanger your own life as well as the casualty’s. Seek further training for sections that you did not handle correctly. This is a life skill, which can be used for the benefit of your family or the community.

You could join a recognised First Aid organization such as the St. John Ambulance Brigade Cadets where you could further your First Aid and also carry out service with the Brigade.

OBSERVATION

12. Play Kim's Game and, after one minute, remember correctly 18 out of 24 assorted articles.

13. Follow a nature trail of at least 20 woodcraft signs.

12. Play Kim's Game and, after one minute, remember correctly 18 out of 24 assorted articles.

Kim is the boy hero of a book by Rudyard Kipling. He lived in India and was trained as a Secret Service agent.

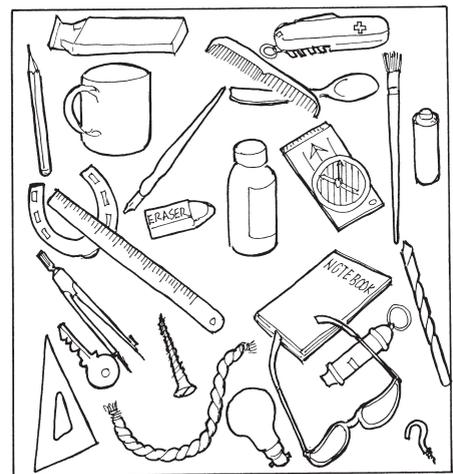
Disguise, first aid and good memory were all skills he had to learn, but the most important of all was observation. This started as a game – Kim's Game – and Kim was defeated again and again, while his teacher emphasized, "It is done by doing it many times until it is done perfectly, for it is worth doing"

It is worth doing – and you too may need to do it many times until it is perfect.

Kim's Game consists of remembering a collection of different things, and there are many ways of playing the game.

For Example:

- 24 Items on a tray for you to study, covered with a cloth while you try to say (or write down) the list.
- 24 Items on a tray for you to study; then while your back is turned. One is moved or removed – which one?
- 24 Items being packed into a rucksack, while you try to remember them.
- 24 Items inside a sack for you to identify by feeling them. Blindfold, you try to identify: tastes, smells or sounds.
- A blindfold trail with items tied on to the string, which you have to identify and remember as you go along.
- 24 Items thrown one at a time in the air, while you try to remember them.
- Slowly taking 24 items out of one box and putting them into another.
- Instead of all different items, a collection of similar ones like marbles or pebbles or stickers (Kim learned with a tray of jewels).



Items

For this activity you are required to look at 24 assorted articles on a tray for 1 minute after which, it is covered again. You are then given 5 minutes to list the articles. You are required to remember 18 of the 24 items.

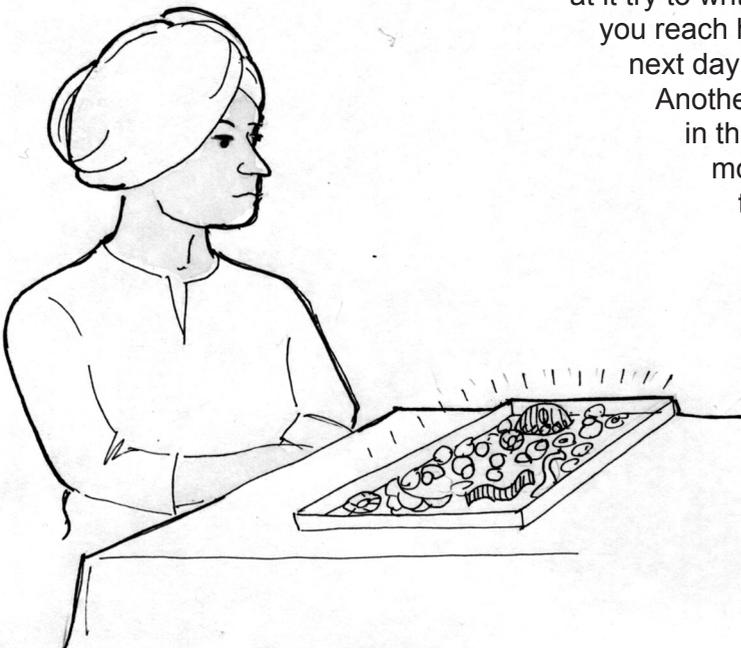
How to remember

1. First of all, observe! Look really carefully at each object – don't just let your eye run over the top. Say under your breath the name, or details of each one. Look for the unusual – a scratch, a broken bit, uncommon material or size. Feel the item for its weight or smoothness.
2. Now make groups in your mind. Some items might all be connected with doing up a parcel: string, pen, stamp, scissors, and sticky tape. Some items might all be made of plastic: ballpoint, toy whistle, golf tee, and bottle top. Some items might be the same colour. So you say to yourself, "Five parcel things —four plastic things -four yellow things, including that whistle." If you can, give each group an order, like the order you would use them when making the parcel, or their order of size.
3. You may find it easier to photograph them in your mind. Look carefully at one part of the tray, then shut your eyes and go over each item you have seen, visualising it in its place. Where there are blanks in your memory, open your eyes to check.

Try Kim's Game with each other. Each time you practice, you'll get better. Kim did! Start with no more than 12 objects, and work your way up to 24 or more if you can. Try looking in a shop window for a minute then look away and see how many items

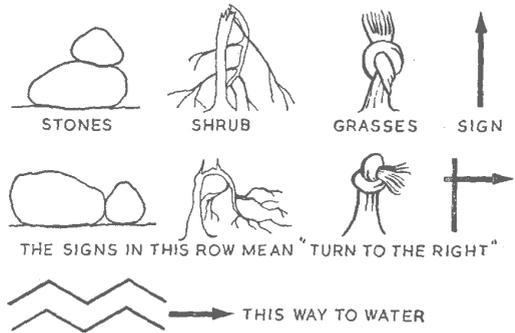
you can remember, or when you get better at it try to write them down when you reach home, and return the next day to check your results.

Another way is to look at things in the home such as your mother's spice rack and then see how much you can remember. Try looking at a picture or map for a minute and then see how much of it you can reproduce in the next five minutes. Once the time is up check the accuracy of your drawing against the original.



13. Follow a nature trail of at least 20 woodcraft signs.

Here are some Scout signs that could be made on a wall or ground, in the bush, close to the right-hand side of the road etc. These should never be made where they will damage or disfigure property. The signs in the first row mean carry on straight ahead, the signs in the second row mean turn right.



Below are other signs you need to know:

-  Road to be followed.
-  Letter hidden three paces from here in the direction of the arrow.
-  This path not to be followed.
-  "I have gone home."
-  (Signed) Patrol Leader of the Ravens 15th Lenasia Troop.

At night sticks with a wisp of grass round them or stones should be laid on the road in similar forms so that they can be felt with the hand.

Following the trail:

- i. Remember signs should be 5m apart in bush & 20m in the open.
- ii. Note the spot where a sign is found; you may have to go back to it.
- iii. Go straight in the direction indicated by the sign, without plunging off wildly to right or left.
- iv. If you do not come across another sign within about 20 paces, go back to the last sign noted and try again.
- v. Look upwards for sign as well as downwards.
- vi. If you are still at a loss, try a parallel line to one side or other of your original track; the chap who laid the trail may have gone a little off straight.
- vii. If you still cannot find the next sign, try casting a widening circle around the last sign.
- viii. Remember, and report on the signs you find.

SCOUTCRAFT BADGE RECOMMENDED: Observation

BACKWOODSMAN

14. Environmental Awareness:

- a. Explore a local natural area and keep a record of plants and animals observed at different times of one day over five 20-minute visits between sunrise and sunset.
- b. Interpret what is happening in this area and how Scouts could care for it, and write up or explain your conclusions.

14a. Explore a local natural area and keep a record of plants and animals observed at different times of one day over five 20-minute visits between sunrise and sunset.

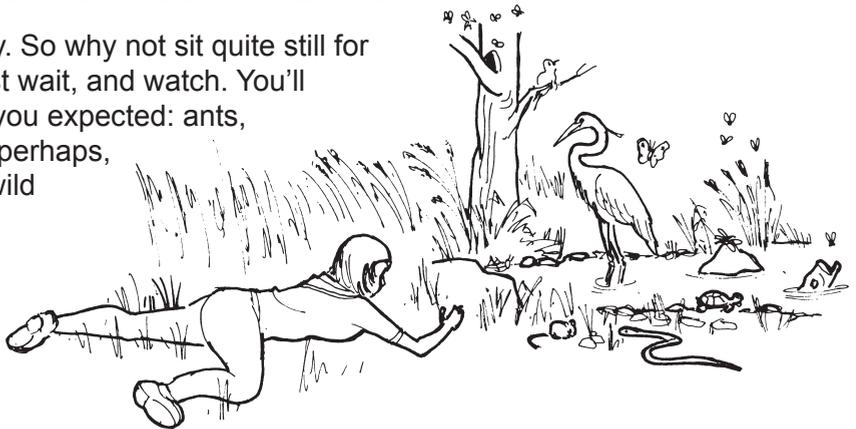
This activity should be carried out at a nature reserve, a beach, a lake, or other area which is relatively undisturbed by humans. It could be carried out as a project while you are at camp by choosing an area outside the campsite, which has not been disturbed by the campers. All the candidates requiring this activity could observe together and in the evening report to their own Patrols.

South Africa has much open space, and even in the middle of the biggest cities you can find wild places where you can watch nature at work. As you find out how to look closely at nature, you will realise that everything has its place, and everything depends on everything else for survival. This is called ecology. Man is one of the parts of nature, and he relies on the rest of nature for his own survival, so understanding nature is doubly important. You should choose somewhere to explore in order to find out as much about the nature there as you can. It might be a piece of open countryside with the whole balance of wildlife for you to observe.

Go *exploring!* Climb through the bushes, peer into rock holes, feel the tree trunks, examine the rock pools. Watch what you touch, though! There may be scorpions under rocks, snakes in holes in the ground or on rock ledges. Keep your eyes as wide open as you can – and make notes all the time.

Some wildlife is shy. So why not sit quite still for a few minutes? Just wait, and watch. You'll see more life than you expected: ants, beetles, butterflies perhaps, birds, even larger wild animals.

If there is a keeper or attendant, ask permission first and ask questions afterwards.

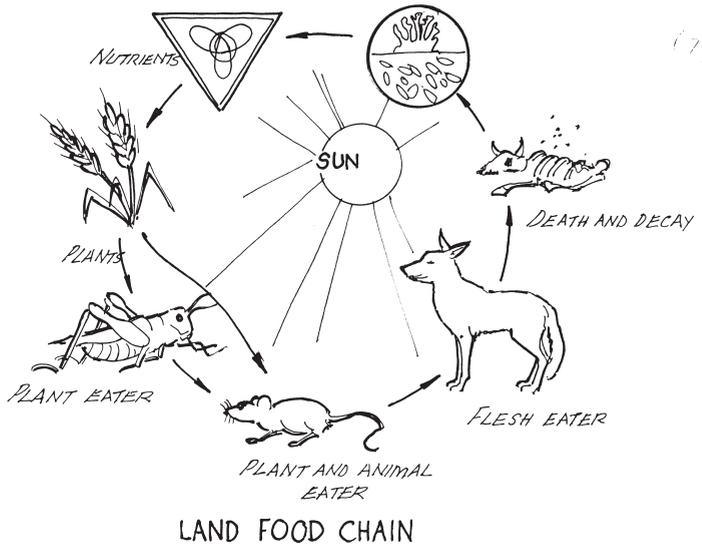


14b. Interpret what is happening in this area and how Scouts could care for it, and write up or explain your conclusions.

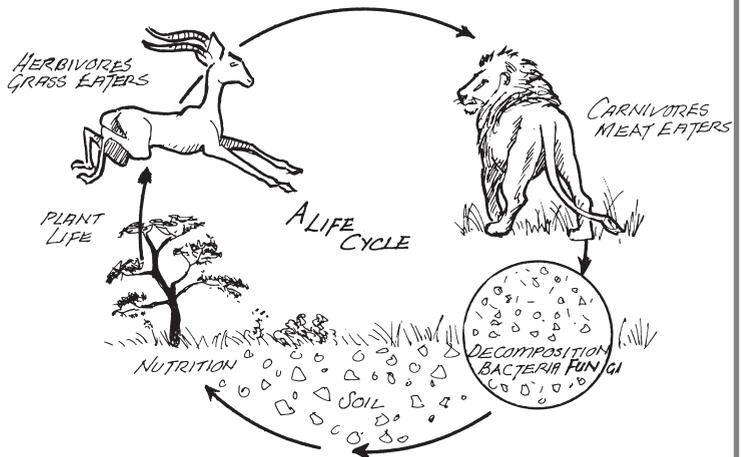
You should make notes during each 20-minute session and then decide why certain actions happened at the time they did and how these actions could be assisted by the intervention of Scouts. You can give an oral or written report to your Patrol and your Patrol Leader will evaluate the effort you put in and your results. Remember that you are expected to do your best. If you wish to do some research before delivering your report, your Patrol Leader will give you the opportunity to do so.

Ecosystem

Different organisms rely on each other for survival. Plants can make their own food through a method called photosynthesis. Some organisms eat plants (herbivores) while others eat animals (carnivores): some eat both (omnivores) and others cause dead plant and animal matter to decay.

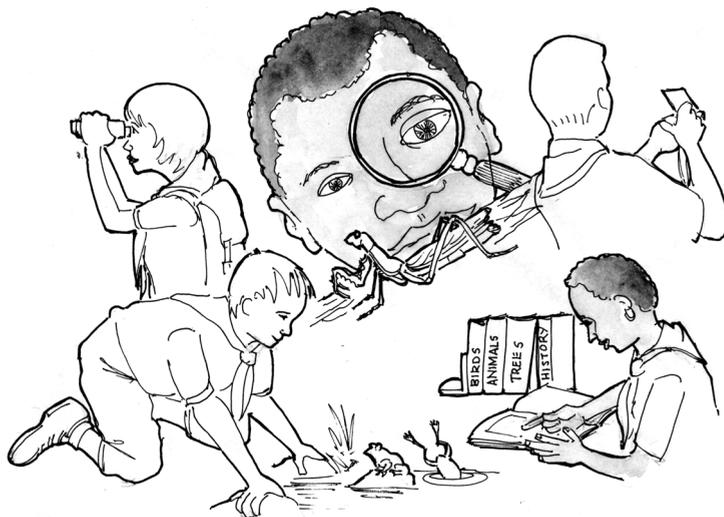


Look for the relationship between plants and animals during your own observation. Try to identify them as well. Examples of these relationships include grass needing sun, soil, water and air to grow; sheep eating grass: fish eating water bugs etc. You will see that the organisms fit together into food chains, where one eats another and is eaten by yet another.



Here are some examples:
Grass – Locust – Shrew – Owl – Bush – Impala – Lion – Grass – Cow – Human.

By observing nature in this way, you will understand how easily the balance of nature is upset when one of the parts is damaged or disturbed. A veld fire; for instance, destroys all the grass. This affects the animals, which eat grass, which in turn affects the animals, which eat them.



HIKING

- 15. Prepare for and take part in a cross-country hike of not less than 10 km and explain your choice of equipment, if any. Give a short oral report on the hike a week later to your Patrol. Half of the distance may be done on water.**

You are required to plan and undertake a day journey with other Scouts of which part must be on foot, and part may be in a watercraft. During this journey show courtesy and obedience to the road code, wilderness manners, or rule of the sea. A week later you must give a report on the journey to your Patrol.

This adventure should be the last one you tackle for your Pathfinder Badge before the Personal Growth Agreement (PGA) discussion which rounds it all off.

You're going to be part of a group of Scouts (preferably your Patrol) going out for a day, on an expedition lasting about five hours, over about 10 km.

Equipment

Clothing must include sensible footwear. Comfortable shoes or boots for hiking – not tackies! Always carry a jersey and a torch, even in summer. You never know when you might be delayed until after dark. In rainy weather, carry some form of waterproof outer covering. Wear a hat in any weather.

Though it's always good to see Scouts in Scout uniform, you may decide that special clothing is needed (for water transport or mountaineering). Never mix the two: wear full Scout uniform or none. It is recommended that you all wear a dark-green, peaked cap, as supplied by the Scout Shops, whenever you are camping or hiking.

Food and drink should be shared out and carried by all. That way, no one can go hungry. If you are thinking of cooking anything, or boiling water, a solid fuel or gas stove may serve you best. Farmers don't welcome open fires on their property, and fires are forbidden in conservation areas except in the fireplaces provided. Consider having these: hot soup, made from a packet; fresh fruit; biscuits; nuts and raisins; cheese; biltong. Each person needs a full water bottle (at least 1 litre).

You can survive for longer without food than you can without water. As this is supposed to be a day journey, it's unlikely that you will face any great water shortage. Still, it's wise to know what to do.

- Start the hike with at least 1 litre of water. (More may be needed in hot weather.)
- PROBABLY: First aid kit; permit; torch; towel; map & compass; notebook & pencil (for jotting down what you saw and did & making rough sketches. It doesn't matter if you can't draw well); mug; knife; whistle (to blow in case of emergency); string (in case something breaks and needs to be tied up); toilet paper; raincoat; lunch.
- PERHAPS: Camera or Binoculars? Plastic bags to collect leaves and specimens. Plastic bag (to take all your rubbish home).

Wilderness Manners Read the Outdoor Code below, and think through its wise rules. As Scouts, we have a special responsibility to look after nature. This is why we have an Outdoor Code, which we obey whenever we are in the outdoors. Actually, the code is no more than common sense and decency. By sticking to it, we are doing no more than our duty. You are going as a guest into someone else's land – land that belongs to other human beings, and may be lived in by creatures of the wild as well. They may like peace and quiet more than you do!

Outdoor Code

I will treat the Outdoors – our veld, rivers and mountains – as a **heritage** to be cherished and protected; and to be **enriched** for our own greater enjoyment and for future generations.

- I will learn to understand Nature and her ways.
- I will learn how to practise conservation of soil, water, forests, grasslands and wildlife and urge others to do the same.
- I will treat public and private land with respect, remembering that the use of the outdoors is a privilege.
- I will prevent fires, build my own fire in a safe place, and be sure it is out before I depart.
- I will keep my litter and garbage out of South African waters, fields, woods, veld and roadways.
- Whenever I take from Nature for my own use, I will try to return a share of her bounty.



Use gates instead of climbing over fences. Walk round crops, not through them. Don't take short cuts across zigzag mountain tracks – you are starting a new path and increasing erosion. On a road, walk in single file on the right-hand side – and at night the first and last person should carry a torch.

PERSONAL AND INTERPERSONAL DEVELOPMENT

- 16. Conduct the Troop flag ceremony and in your own words, give the opening or closing prayer.**
- 17. Over a one-week period record ways that you have used the Promise and Law in your daily life and discuss your examples with your Troop Scouter.**
- 18. Attend a campfire and participate in a Patrol skit.**
- 19. Display an understanding of the relationship between your local community and the wider community by being able to describe, with the use of sketch maps if you wish:**
 - a. The position of local school/s, police station/s, medical centre/s and community centre/s;**
 - b. The location of your community within your province and South Africa;**
 - c. The position of South Africa on the African continent, including identifying our neighbouring countries.**
- 20. Complete a Personal Growth Agreement with your Troop Scouter as the final requirement for this level. (This PGA should include a discussion on gender equality and the versatility of roles).**

- 16. Conduct the Troop flag ceremony and in your own words, give the opening or closing prayer.**

Flag ceremony

At a Troop meeting you are required to prepare, hoist, break, fly and lower a flag with due respect for the flag and what it stands for.

The whole idea of a flag goes back to the days before people could read – but they could recognise a picture. So your flag, or shield, or badge, showed who you were or what country or people you belonged to. From the very beginning it was a sign to be shown with pride.

Most Troop meetings start with a flag ceremony, using the Troop flag or the national flag or a combination of these. All flags should be treated with respect. We stand at the alert when the flag is hoisted and broken, and we all salute. When the flag is lowered, we stand at the alert but do not salute.

Parts of the Flag & Preparing the Flag

Make sure the flag does not touch the ground. Place it on a table and fold it in half lengthways (making sure the toggle is at the top).

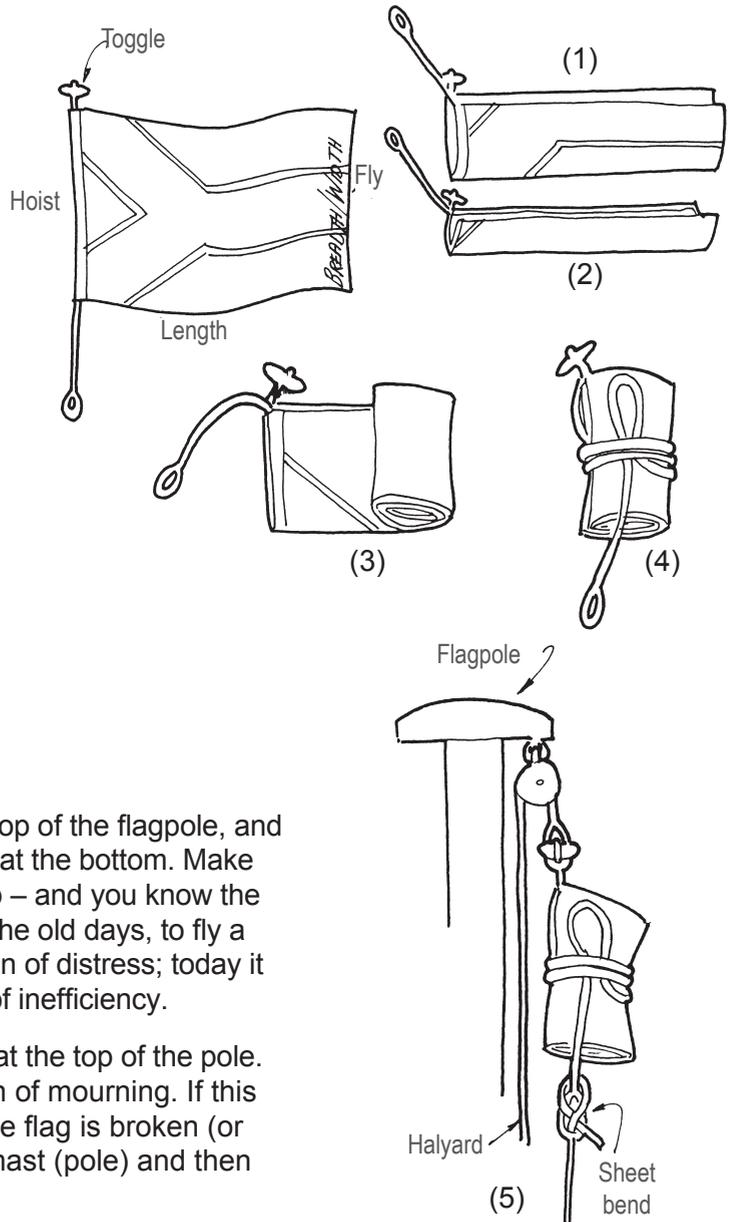
Flags are attached to a short length of rope with a wooden toggle at the top and a loop at the bottom. On the flagpole is a rope called a 'halyard', which runs through a pulley at the top of the pole.

Fold in half lengthwise again, then in half sideways (always working towards the toggle). Now roll it up and make two turns around the bundle with the flag rope. Secure it by tucking a loop of the rope under the turns.

Attach the rolled flag to the halyard by slipping the toggle through the loop of the halyard and tie the other end of the halyard to the loop of the flag rope with a sheet bend.

Hoist the rolled flag to the top of the flagpole, and secure the line to the cleat at the bottom. Make sure the toggle is at the top – and you know the flag is the right way up. In the old days, to fly a flag upside down was a sign of distress; today it is more likely to be a sign of inefficiency.

Make sure the flag is right at the top of the pole. A flag at *half-mast* is a sign of mourning. If this is indeed the case, then the flag is broken (or hoisted) at the top of the mast (pole) and then lowered one flag width.



Flags

The only flags that may be flown by Scouts are:

- The national flag.
- A Troop flag.
- The World Scout flag.
- Patrol flags.
- Flags may be of average size (standards) or smaller (Triangular pennants). Small triangular flags flown on watercraft with a swallow tail shape are called burgees.
- It is important that these flags should be flown on separate poles, or on separate yardarms. The national flag must never be flown lower than any other flag.

The national flag should always be used by a contingent of Scouts going overseas (perhaps to an International Jamboree), at national camps, or Area events at which the Head of State or the Chief Scout is present.

National flags are symbols of their country's honour. There is a story of the time that the Crusaders captured Acre (in Palestine) from the Saracens. King Richard the Lionheart of England and King Philip Augustus of France duly raised their English and French flags on the captured battlements. But Richard was angry when he saw the flag of the Duke of Austria there as well, so he ordered it removed. The Duke considered this an insult to his country, and when Richard travelled through Austria on his return from the Crusade, the Duke imprisoned him and demanded a ransom.

Flagbreak

Be smart. At the start of your Troop meeting, or each day at camp, your Scout Leader will bring the Troop to the alert, and the Duty PL will march up and halt one pace away from the flagpole. He then takes one-step forward, 'breaks' the flag by pulling the halyard, fastens the loose rope on its cleat, takes one step back and salutes. You, and the rest of the Troop, salute at the same time. (No command need be given.) The PL then does a right-about turn and marches back to his Patrol. This is what you are required to do for this activity.

You are required to give the opening or closing prayer at a Troop meeting using your own words.

The word 'religion' means, simply, what you believe in. We all believe in something. You have promised, on your honour, *to do your duty to God*. (The word 'God' is used here, though different faiths have their own words.) You may not be sure yet, in your own mind, what that 'duty' consists of – but your honour demands that you do your best to find out.

There are many religious beliefs in this world, and religious devotions vary from Troop to Troop. A moment of prayer should be part of every Troop and Patrol meeting. Whether it happens at the beginning or end of the programme, or both, is for the Court of Honour to decide.

Prayer can include our thanks for all that we have been given, our hopes for the future, our care for other people, our apologies for our own weakness, our sheer joy for all that life has to offer. The words we use should be natural, genuine, brief –and suitable for the people, the place and that particular moment.

You may be asked to take part in a Scout's Own – which is the meeting for worship Scouts have, especially at camp. There may be readings, prayers, or special singing. You may be asked to say a prayer at a Troop or Patrol meeting, or to say Grace at a meal. There are some good books of prayers to get ideas from, but it means even more to make up your own prayer in your own words. If you do this, write the words down. It will help your memory and can also help to build up a Troop or Patrol prayer book.



Saying Grace

SCOUTCRAFT BADGE RECOMMENDED: Religion & Life

17. Over a one-week period record ways that you have used the Promise and Law in your daily life and discuss your examples with your Troop Scouter.

It is recommended that you carry out this activity soon after investiture. This should help you to understand the Laws and Promise and how to put them into practice. During the week you should make notes of what you did, and discuss these examples with your Troop Scouter.

You have promised to do your best to keep the 10 Scout Laws, and now you need to show your Scouter that you are living up to your promise. Discuss this with your

parents and ask them to help you to keep the Promise and Law. Read again the section on the Promise and Law under “Membership” to remind yourself of what you promised to do. Sit down each day and list all the things you did that were part of the Scout way of life (In line with the Promise and Law) and the times when you broke your Promise and what you did to make sure you did not repeat those actions. When you feel you have completed a week in which you have done your best to live up to those Laws then ask your Troop Scouter to look at your notes and discuss each day with you.

18. Attend a campfire and participate in a Patrol skit.

A ‘skit’ is a short piece acted out by a few people. It is usually light-hearted or comic. You are required to perform a skit with other Scouts as entertainment at a campfire, you are not required to lead it.

Ever dreamed of being a star? Now’s your chance! But don’t worry -you’re not on your own.

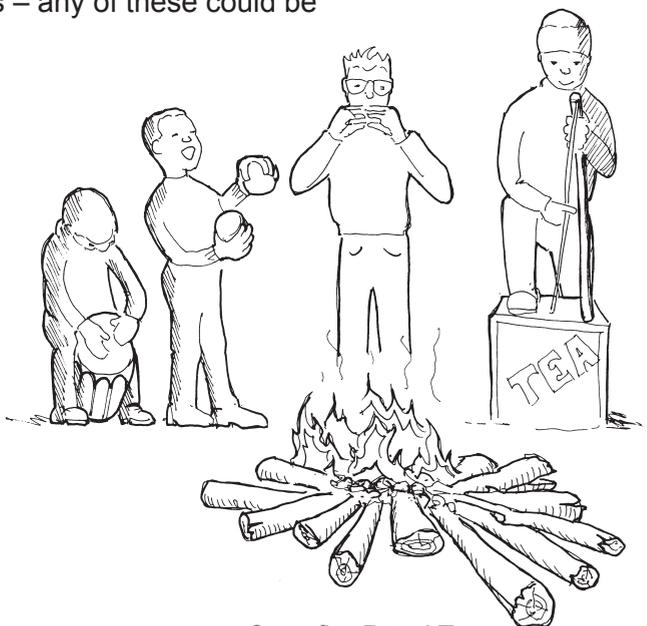
Every now and then your Troop will decide to have a campfire where each patrol puts on some sort of a ‘show’. (Quite possibly urged on by a hopeful producer who’s working on his First Class requirements – as you will be too, before long.) You will want to be part of the show, so with your mates, you’re busy working out what to do.

Music – singing – a short play – puppets – dancing – a campfire stunt – conjuring – acted jokes – imitating a TV show or advertisement – a group of you bringing a poem to life, with sound effects – any of these could be a skit.

See who can do what. Who can play an instrument – guitar? recorder? drums? harmonica? Why not make your own musical instruments? How about a tea chest bass, or a strumming washboard?

Who can sing? Who’s good at imitating other people? Who’s got a clear speaking voice? Who doesn’t mind looking crazy?

All Scout performances should naturally be in good taste. You wouldn’t want to



Campfire-Patrol Team

upset anyone by being offensive. Check that there is nothing about any person's race, country or religion that might offend. No bad language either.

Try not to copy that *old* campfire stunt which everyone has heard a hundred times! Dive into joke books, or use the excellent "Veld Lore scrapbook No. 1" on Campfires, which is full of ideas. A touch of costume or make-up can add that 'pro' look to your act. And please accept the truth, which all entertainers know: the more you *rehearse* it, the better it will be.

19. Display an understanding of the relationship between your local community and the wider community by being able to describe, with the use of sketch maps if you wish:

- a. The position of local school/s, police station/s, medical centre/s and community centre/s;**
- b. The location of your community within your Province and South Africa;**
- c. The position of South Africa on the African continent, including identifying our neighbouring countries.**

If you are unsure of how to carry out this activity discuss it with your Patrol Leader or Scouter.

Start by getting a map of the area and an atlas or draw a sketch map of your town or village and put in all the items listed below and then discuss why they are there and how they benefit the community with your parents or teacher. Also discuss with them why trade with our neighbouring countries is important.

Once you have your maps and know the details arrange with your Patrol Leader to demonstrate your knowledge.

- a. You can use a blank street map or a hand-drawn sketch map to show the positions of the various places in your community. You should know what happens at each place and how they benefit the community.
- b. You could also explain the location of your community within your province and South Africa with the use of a sketch map or an atlas.
- c. You should use an atlas for this section, but if one is not available you should draw a rough map showing South Africa and its neighbours. You should have a basic understanding of the value of co-operation and trade with our neighbours.



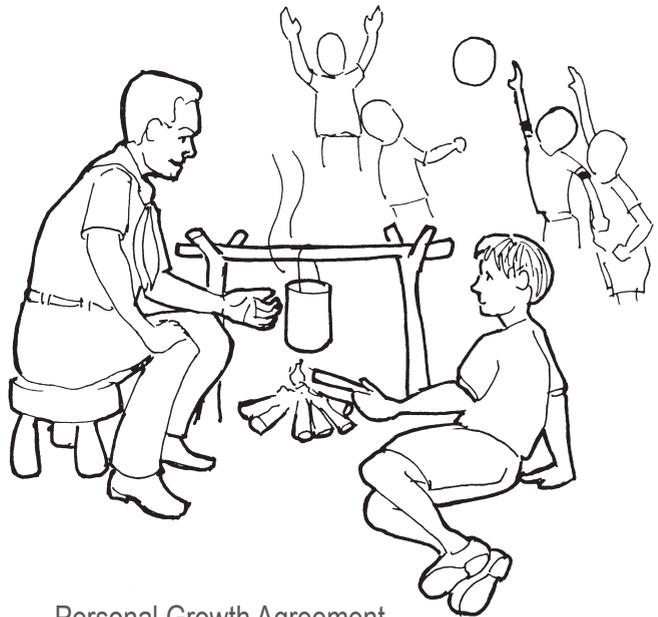
20. Complete a Personal Growth Agreement with your Troop Scouter as the final requirement for this level. (This PGA should include a discussion on gender equality and the versatility of roles.)

Your Personal Growth Agreement with your Troop Scouter must be carried out as the last activity before starting the next level.

What is a personal growth agreement?

At the end of each level of your Scouting – Pathfinder, Adventurer, First Class and so on – you will have a discussion with your Troop Scouter which is called a Personal Growth Agreement. This is a very important part of each badge. You will sit down together to review the progress you have made so far, and to make plans for the future.

Apart from talking about Scouting, you will also discuss such things as your family, church, school, sport and hobbies and what you understand by “gender equality and the versatility of roles”, because scouting concerns the whole way you live. You are lucky to have an opportunity like this when your Scouter spends time just chatting with you, listening to your problems, and giving you help where he/she can. You will get more value out of each PGA discussion if you prepare yourself. Ask yourself questions like:



Personal Growth Agreement

What does my Scout promise mean to me? Am I finding out how to fit my life more to the Law? What do I like best about Scouting? What would I like to do lots more of? Which bits am I not enjoying, and why not?

Now I've finished this badge, how about the next one? Have I read through the various requirements? Are there things I want to ask my Scouter about? What about timing? What's my target for the Adventurer Badge? Are there any Scoutcraft Badges that fit with my favourite sport or hobbies? I must remember to ask my Troop Scouter if there are any courses I can attend, and how I go about tackling the badge. Have I got any worries, about this whole Scouting thing, which I want to talk over with someone?

The main purpose of the first Personal Growth Agreement is for your Troop Scouter to get to know you better. No doubt he will be interested to learn about your family and your school. He will help you plan the next stage of your Scouting. That makes good practice in planning your life. Set yourself a sensible, steady pace through the advancement levels of Scouting. Don't rush at any badges in too great a hurry!

WORK IN THE HOME
(PLACE A ✓ IN
THE APPROPRIATE BOX)

names of family members							
work area							
washes dishes							
cleans house							
washes clothes							
takes out garbage							
cuts lawn							
shops for groceries							
shops for clothes, etc.							
babysits							
contributes money							
makes repairs							
answers phone							
makes beds							
others							





Congratulations on becoming a Pathfinder Scout!

But this is only the beginning of the great adventure that lies ahead of you. Remember to have plenty of fun and action working on your Adventurer badge.

As a Pathfinder Scout, you will be taking part in even more exciting activities.

Make the most of them!

