

Make a simple backpack

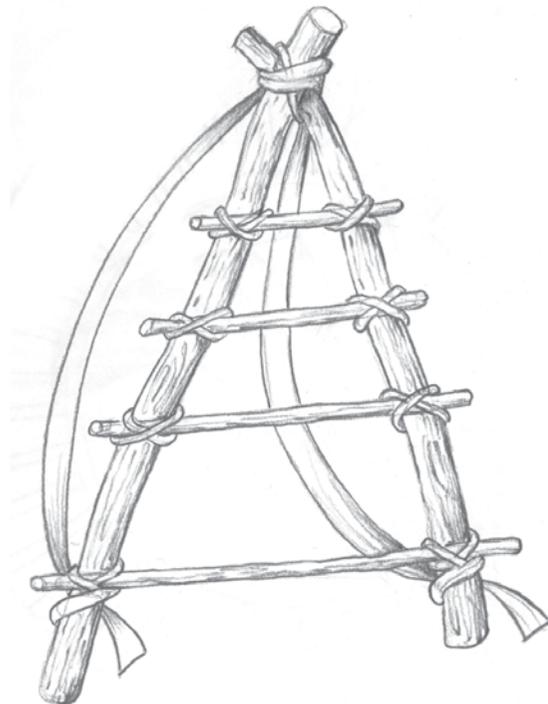
You will need:

- 2 branches approx 75cm long for cross main support
- 4-5 smaller branches to make ladder rungs to tie luggage to
- String
- 2 long straps for shoulder straps

Tie the two longer branches together at one end to make a 'V' shape. Tie the shorter pieces to this to hold the V apart and create rungs that your luggage can be tied to.

Fix each of your straps to the point of the 'V' and then one to each corner leaving enough slack to get it over your shoulders.

TIP: A pair of old leggings might make comfortable straps



Survival



Clues to finding South

Using mosses and lichens on trees

As a general rule lichens (usually yellow or orange in colour) tend to grow on the south sides of trees where it is sunny and dry whereas mosses tend to grow on the north side of the tree where it is darker and damper. It is always best to find more than one example if you are using this method. Can you find some moss and some lichen?

Using the sun

At midday the sun will be in the south so north will be opposite



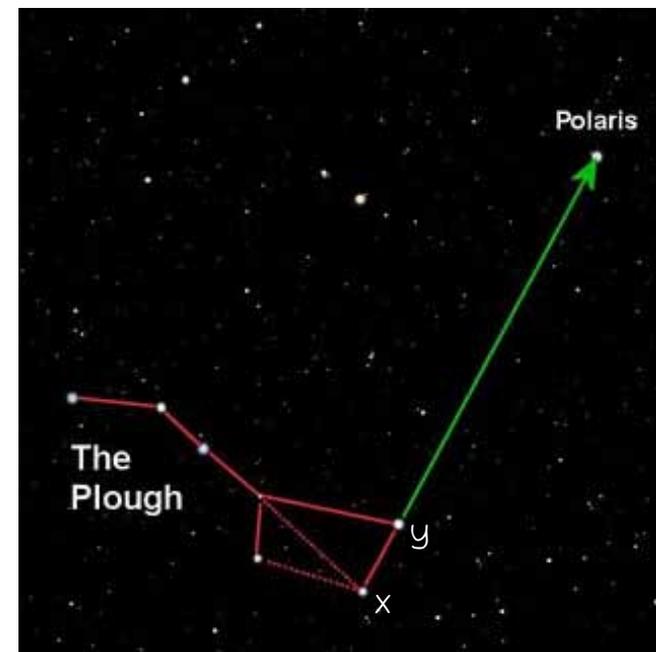
Clues to finding North

Using the stars

The North star (Polaris) will give you an indication of north. One way to find this is firstly to find The Plough (or Big Dipper). This is an easy constellation to recognise as it looks like a big pan with a handle. The Pole star is about 4 times further away than the distance between x and y.

Using the sun

At midday the sun will be in the south so north will be opposite



Clues to finding West

Using the moon

If the moon rises BEFORE the sun has set the illuminated side will be on the WEST

Using the sun

As the sun sets it will be in the west.



Clues to finding East

Using the moon

If the moon rises AFTER midnight the illuminated side will be on the EAST

Using the sun

When the sun rises it will be in the east.



General navigation tips

Using markers to retrace steps or footprints in the snow (as long as it doesn't snow again and refill them!)



Using the prevailing winds if you know them. In Britain they are generally from the South West but this may vary throughout the year. Look out for trees growing bent over in one direction.

Following a river or a stream can often lead to civilisation, and, unless they cut through a deep gorge, are usually easy to follow.

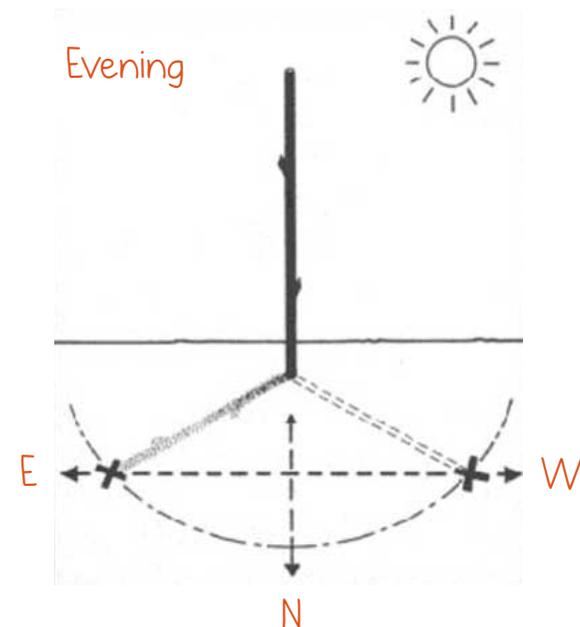
Maintaining a direction in a dense forest can be very difficult and a compass can be invaluable, but you could try laying down sticks or stones as you go and regularly look back to 'eye' the line and make sure that it is straight. Keeping an eye on the sun's position relative to you can also help as long as you take account of the amount of time you have been travelling.

For some downloadable resources that use maps go to:
<http://www.scoutingresources.org.uk/mapping/index.html>

Improvised compasses - using a shadow stick

Place a stick about a meter long in some flat ground. Mark the end of the shadow cast by the stick. Wait 15 minutes and then mark the end of the shadow again. Draw a line between these two marked points and that is an EAST/WEST line. WEST is the first marker. The NORTH/SOUTH line is at right angles to this.

If you want to be more accurate then mark the first shadow in the morning and draw an arc at exactly this distance from the central stick. At midday the shadow will shorten. Wait until the shadow lengthens again and mark the exact point at which it touches the arc again. Join these two marks to get your more accurate EAST/WEST line.



Improvised compasses - using your watch

If you have an old style watch with hands then you can use it to find directions. Make sure that it is set to local time (ignoring summer daylight saving and conventional time zones)

In the northern hemisphere, hold the watch horizontal, point the hour hand at the sun. If you now bisect the angle between the hour hand and the '12' this will give you the NORTH/SOUTH line.



Improvised compasses - using a suspended magnet

You will need:

Sewing needle

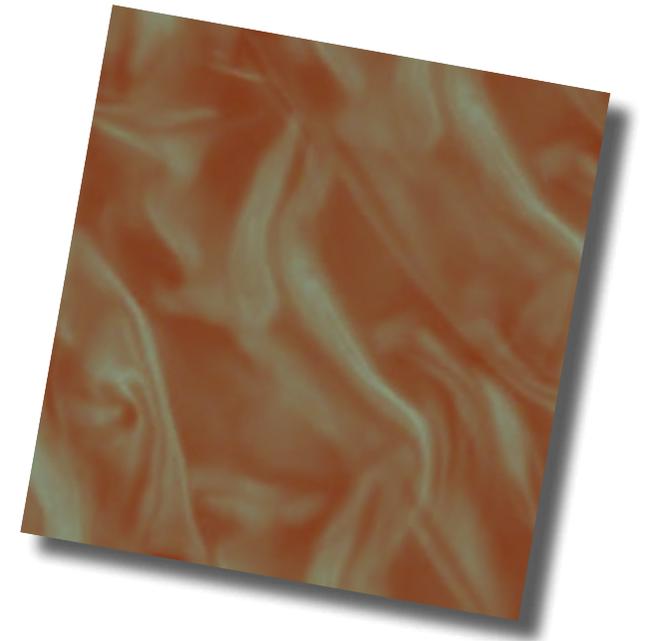
Length of cotton

Piece of silk fabric

sardine tin

Stroke the needle repeatedly in ONE DIRECTION against the silk to magnetise the needle. If you suspend it using the cotton it will point to north. (you will need to keep topping it up)

Alternatively you can place the needle on a piece of paper and float it on water in your tin.



Compass game

Mark out a large circle in the woods and mark out the points of a compass around the edge (north, south, east and west) Use your new found knowledge to get this right.

The players all begin touching the north edge of the circle. The leader stands in the middle and calls various commands. If the leader calls a position (e.g. South-east!) the players must rush to that area. The last person to execute the command is out. Play continues until only one player is left.

Notes: Try using some of the following extra commands!

Rabbit - Get on all fours and start bunny-hopping

Slug - Lay down flat on floor and start wriggling

Bird - Run around with arms (wings) outstretched making appropriate noises

Daisy chain - players must sit on the floor with legs outstretched (one behind the other in a line)

Tree - stand still with arms up in air and sway

Climb tree - Each player must find a partner and pick them up off the floor

Butterfly - Each player must find a partner and mimick whatever they do

Line up - Everyone must form a line in front of the leader

Freeze - Err, freeze where you are!

Faster - Err, do whatever you are doing faster

Check sun position - Everyone looks up and faces direction of sun

Build a snow house or igloo

However cold it gets outside, the temperature on the inside of a snow house will never drop lower than -10 degrees C. You can increase the temperature by 4 degrees by burning a candle inside.



Building an igloo takes time but as Eskimos have demonstrated for centuries, it is well worthwhile. Build the main shelter first then dig out an entrance tunnel big enough to crawl through.

Mark out a circle on the ground about 4m diameter and stamp it down to make the floor.

Cut and lay blocks of snow around the perimeter. (Either dig a tunnel later or leave a space for the entrance).

Place another layer of snow bricks on top but centre the new blocks over the previous vertical joint and halfway over the lower tier so that the igloo starts to taper and become a dome. Shape out the entrance as you go.

Seal the top with a flat block cut to shape. Make ventilation holes near the top and bottom. (not on the side of the prevailing wind or it will fill with snow!)

Fill any gaps with snow and smooth off the inside to remove any drip points.