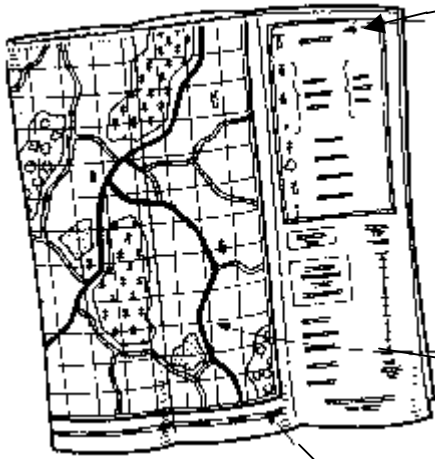


Using maps and compasses

One of the first things to do if you are lost or stranded in unfamiliar country is to take a good look around you for signs of civilization, such as buildings, which you could head for. If there are none, you could use a map to find out where you are and where to go. There is some advice about using a map below. If you have no map, you can recover your sense of direction by using a compass, or, if you don't have one, by using the sun or the stars as shown below.

Using a map

If you have a map of the area, you can find out exactly where you are and what sort of terrain, for example, hilly or marshy ground, lies round about. If you are going on an expedition you need to learn how to read a map in detail. However for survival purposes follow these basic guidelines.



*There should also be a scale marked on the map. You need to check this so that you can measure the distance between one point and the next. The scale is usually indicated either by a scale bar (showing miles or kilometres as they are measured on the map), or by figures expressed as a ratio, for example 1:20,000. If the scale is shown in this form, and the unit of measurement used is centimetres, this means 1cm on the map represents 20,000 cm (or 2km) in the actual landscape. on an expedition you need to learn how to read a map in detail. However, for survival purposes, follow these basic guidelines:

Using a compass

A compass consists of a magnetized needle which aligns itself with the earth's magnetic field and so always points towards north. A compass cannot tell you where you are, but it can show you which direction is which. This can be useful in several ways. For example, if you know that there is a road to the north, but you cannot see it, you can still reach it if you travel in the direction indicated by the compass needle.

To use a compass more precisely, you need to know how to take a bearing. This is the angle between a landmark and north, taken from where you are standing.

To take a bearing:

1. Hold the compass level and flat. Keep it away from any metal objects, such as cameras. These may distort the magnetic field around the compass and so spoil the reading.
2. Allow time for the needle to settle. The coloured end will swing towards north

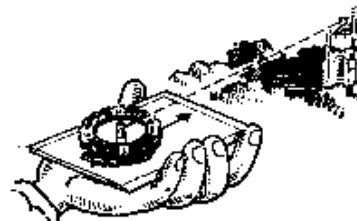
* Most maps have a key or legend, which shows the various symbols used to represent features such as buildings on the map. To find where you are on the map:

1. Look at the countryside around you to see if you can spot any landmarks, such as roads, rivers, or forests.
2. Using the key, see if you can find these on the map.
3. Turn the map round until the places on the map line up with the real features you can see. You should be able to work out exactly where you are.

* There may also be grid lines drawn vertically and horizontally on the map. A diagram on one edge of the map should tell you which direction is north.

By looking along the grid lines that go in this direction you will know where north is (and so be able to place south, east and west too). You can then tell roughly in which direction any landmarks you can see around you lie.

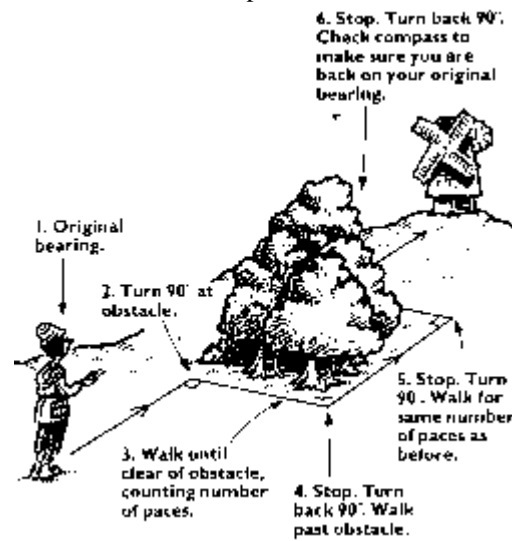
If you can't see any landmarks, you can still use the grid to line up your map, or "orientate" it. Use a compass (see below), the sun or the stars (see later) to find north. Then align the grid line that runs north with this direction and you have orientated the map.



3. Adjust the dial of the compass so that the 'N' mark on the dial lines up with the coloured tip of the needle.
4. Look at a landmark. Imagine a straight line running from the centre of the compass to the landmark.
5. On the compass, look at the point where your imaginary line crosses the dial. The number of degrees shown on the dial at this point is your bearing.

Making a detour

If you have to make a detour as you travel, and lose sight of the landmark, use your compass to help you get back on course by following the method shown in this picture. The black line shows the route to follow.



- To orientate your map, lay it flat and hold the compass steady just above it. Turn the map so that the grid lines that run north on the map are pointing in the direction indicated by the compass needle.
- To get to a place you can see on the map but which is out of sight in the landscape, put the compass on the spot on the map which corresponds to where you are standing. Take the compass bearing from here to the place you want to reach. Follow this bearing and you will be moving towards that place.