

SECTION A: THE COMPASS



1 Introduction to the Compass

A compass is an instrument, which indicates directions. It contains a magnetised needle that aligns itself on a North-South axis. Since one end points towards magnetic North, this fixed reference point enables us to pinpoint our location relative to where North is.

The main point is that by looking towards North, we can identify where the other cardinal points are: South is behind us (180°), while East is to our right (90°) and West (270°) is on our left.

This section will:

- Identify the parts of a compass
- List ways in which we can care for a compass and ensure that it continues to be of service for as long a time as possible
- Explain how one tells direction using a compass





2. Parts of a compass

While there are many varieties of compasses available, the type referred to here in this handout is the Base Plate Compass.

This compass has three main parts. These are:

a) The compass needle

This is the magnetised needle. The red end of the needle points north.

b) The compass vial or housing

This is the transparent plastic casing that encloses and protects the magnetic needle. Marked inside the housing are lines called North-South orienteering lines with an arrow in the centre called the North orienteering arrow. The housing also has degree markings and it can be rotated.

c) The base plate

This rectangular piece is attached to the first 2 parts. The markings on the side enable it to be used as a ruler, when measuring map distances. The red arrow at the top is known as the "direction of travel" arrow. The point where the arrow meets a black line, which reads "Read Bearing Here", is known as the bearing indicator.

3. Compass Care

When keeping compasses, lay them flat on their base plates, making sure that you do not bunch them up together. This ensures that they do not get demagnetised through close proximity with each other.

When using a compass, ensure that it is looped around your neck. This will prevent you from misplacing it or dropping it.



4. Telling Direction with a Compass



step 1

4.1 Setting Bearing

A bearing is the name given to each of the numbers around the edge of the housing from 0 to 360 degrees. For example, 120° can be called 'a bearing of 120° '. Setting a bearing on your compass means lining your compass up with magnetic north so that you can then find out the direction of any bearing from 0 - 360.

Assuming you want to set a bearing of 40° , there are 3 simple steps:

Step 1: Turn the housing so that 40° is at the top of the compass, in line with the bearing line, as shown in the diagram below.

Step 2: Hold the base plate flat in the palm of your hand with the tail of the base plate square to your body so that the needle swings freely to magnetic north. Be sure that you are not too close to metal (steel fences, doors or even zips) as it can affect the needle of the compass.

Step 3: Now turn yourself around, still holding the compass in your hand until the red orienting arrow (on the bottom of the housing) is directly underneath, and covered by, the red end of the needle. We can call this 'putting the two reds together'. You have now set a bearing of 40° . If you now look along the direction of travel arrow and then look up, everything that you see on this line is on a bearing of 40° . Ensure that the base plate tail is square to your body.



step 2



step 3



4.2 Finding Bearing

This is essentially the reverse process of setting bearing. Earlier, you determined the direction using the compass, having been given a bearing. Now, you will use the compass to determine your bearing.

This is done in 4 simple steps:

Step 1: Pick a landmark.

Step 2: With the compass sitting flat in your palm, align the 'direction of travel' arrow with the chosen landmark.

Step 3: While the 'direction of travel' arrow is in alignment with the chosen landmark, rotate the housing till the compass needle is aligned with it. The 2 reds are once again put together.

Step 4: The number at the top is the bearing.



Name the parts of a compass

WORKSHEET A : THE COMPASS

