

MAPPING SKILLS

Students learn all they need to know to read simple maps and create their own.

Students finish the unit by creating their own island map.



Mapping Skills



The world is a large place. Even the town or city you live in can be quite big. How can you know where you live in the world in relation to other places? If you want to travel somewhere how do you know where to go?

The answer is - you need a MAP.

What is a map?

A map is a simplified depiction of space. It is a visual representation of an area of land or sea and it shows the physical features of an area, such as cities, roads, mountains, rivers and many more things.

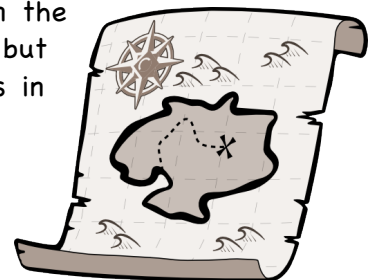
Maps show the relationship between objects within an area. For example a map of your town can show you the distance between your school and home and the roads to travel on to get from home to school.

Maps are used as navigational aids, to help people get from one place to another.

There are many types of maps, such as street maps, weather maps and political maps, which all tell us lots of information.

All maps have a few things in common. It is important you learn the elements of a map in order for you to be able to create maps, but more importantly and practically, for you to be able to use maps in your everyday life.

All maps have a few features that can be easily remembered with an acronym - **B.O.L.T.S.S.**



Let us take a look at what each of these letters stand for:

B stands for Border

All maps must have a border around the outside of the map. This shows the edges of the map, indicating the limits of the particular map. When creating your own maps make sure your border is a ruled clear bold box around your map.

O stands for orientation

Orientation means direction. Sometimes a map might just show a north arrow, indicating the direction of north. Sometimes the map may show a full compass.

L stands for legend

This is a list on your map, or sometimes to the side or bottom of your map that shows all the symbols that are used in a map and what they each represent.

T stands for Title Every map must have a heading that tells us what the map is about. For example: World Political Map, or City Centre of Melbourne, or Map of Wallingwood Elementary School.

S stands for scale A map cannot really be big enough to show us the exact size of things or distance between places. Can you imagine a life-sized map of your town? Instead maps are made smaller than real life. They need a scale that shows us how much smaller the map is to real life.

The second **S** stands for Source Here you need to include where you got the information from to create the map.



TASK

Have a look at the map below.

On the map mark and name all the elements of BOLTSS that you can see. They are all there!



Some of these mapping elements are easy to understand, but some need a little further explanation. Let us look at some of these elements in more detail.

Orientation

Orientation refers to the compass direction of a map. A compass contains a magnetised needle that always points north. Because of this we can use compass points to know the direction of the places in our map.

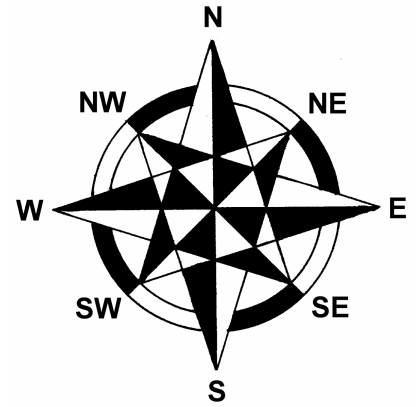
All compasses have 4 main points, (which are called cardinal points)

- North
- South
- East
- West

North and South are opposite each other, so if you are facing North, then South is behind you. East and West are also opposite each other.

There are also four inter-cardinal points:

- North East
- North West
- South East
- South West



Compass points are used to describe the direction of travel, for example *"I drove south to reach the beach"*, or the position of one place in relation to another, for example *"The city is north west of the mountain range."*

Legend


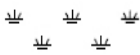


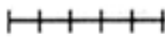



Maps contain a lot of information and it is difficult to write the names of everything onto the map. It would look too messy. Maps therefore use symbols to represent different elements on the map. Symbols need to be clear and easily recognisable.

The symbols are then listed in a table called a Legend to explain what they each mean.



TASK

Here are a few commonly used mapping symbols. Can you match the name below with the correct symbol?

Title:

Road

Swamp

Railway

Airport

Lake

Track

River

Picnic ground

Bridge

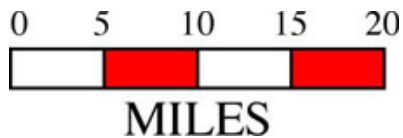
Scale

The scale on a map tells us how much the real size of the area on a map has been 'scaled' down.

There are a couple ways scale can be shown on a map, so you need to be familiar with each of them.

1. *Linear scale* – this is a numbered line that shows how much of an actual area is represented by a smaller area. For example 1 centimetre can represent 1 kilometre on a map, or 1 inch may represent 1 mile.

Here are some examples of what linear scales may look like:



2. *Ratio scale* – This way shows the scale as numbers. For example if 1 cm on a map equals 1 kilometre in reality it would be written as 1:10000. If 1 inch represented one mile it would look like this: 1:63330



TASK

Try and have a go working out the distance between places. Look at the map below. You can see the scale is shown in both kilometres (the top lines) and miles (the bottom lines)

Work out approximately the distance between the following:

1. Frankston and Dandenong:

2. Geelong and Melton:

3. Lilydale and Werribee:

A HINT:

An easy way to do this is to use a ruler or a piece of string to find the distance between your two points and then check that against the scale.





TASK

Now you know the basics of what makes up a map. Before you move on to creating your own map with your new skills check your understanding. Answer the questions below. Try not to look back on the notes about maps and see what you remember.

1. List what each of the letters in BOLTSS stand for:

B

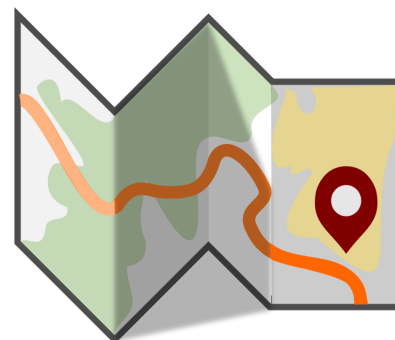
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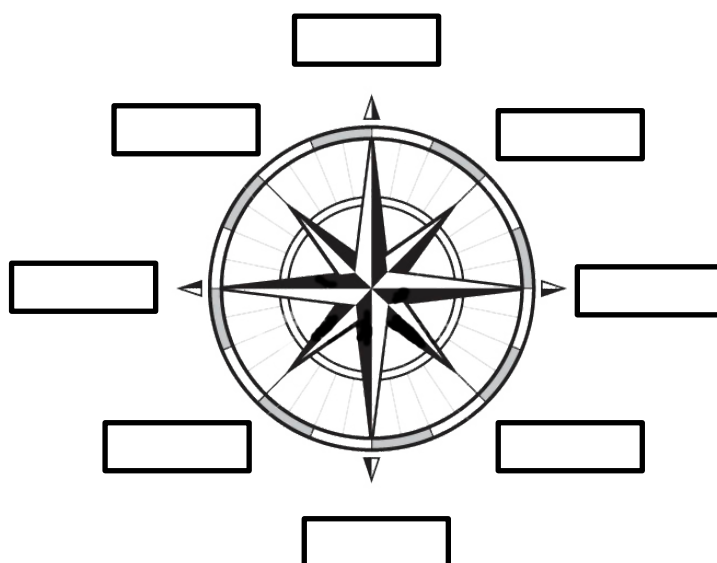
T

S

S



2. Fill in this compass with the correct compass points labelled:



3. What does it mean when you say a map must list its source?

4. What are 2 requirements of a good map symbol?

5. Indicate one way you can show the scale of 1 centimetre equals 5 kilometres on a map.



SURVIVAL ON A DESERTED ISLAND SOMEWHERE IN THE PACIFIC

You have been shipwrecked and have spent 12 months alone on a deserted island. You have decided to make a map and keep records of this experience.

Follow the steps below to create your island:

1. Your teacher will provide you with a large piece of paper.
2. Draw your island on your paper. Any shape you wish. Be creative!
3. Name your island.
4. You must show the following features on your island:
 - Two beaches
 - Coconut palms
 - A rainforest
 - A sheltered cove
 - Mangrove swamps
 - Add in 6 other features of your own. (see the requirement of the diary entry below that outlines some things you may need to include)

You must include each of these items with appropriate symbols, which then must be included and named in your legend.

5. Name the surrounding bodies of water.
6. Ensure you have all components of B.O.L.T.S.S.
Border, Orientation, Legend, Title, Scale and Source.
7. Colour your island; make it visually attractive and interesting.
8. You are to write a diary entry that supports your map and includes the following:
 - Where you were initially shipwrecked on the island



- Where you built your shelter
- Where you found food on the island
- Places you travelled to on the island
- Something interesting you discovered on the island.

In your diary entry about these elements your description must refer to the locations using **directions** and **distances**, using the **scale** you have created for your island. For example:

"One day while exploring the island I found a cave with ancient paintings on the cave walls. This cave was located in the south east of the island, 400 metres south of the rainforest."

Your map and diary will be marked according to the following criteria:

Criteria	Very High	High	Medium	Low	Very Low	Not shown
Map is neat, creative and visually appealing						
Map has all the required features						
Map has all the elements of B.O.L.T.S.S.						
Written work has correct spelling, grammar, sentence structure						
Written work covers all the required descriptions						
Descriptions refer to direction and distance						

Total:

Teacher Comments:

