

Name: _____ Class & Sec: _____ Roll No. _____ Date: 06.05.2020

Know Your Planet



Get Set!

Write the names of two planets

1. whose names start with the letter **M**. _____

2. which lie beyond Saturn. _____

Which of the eight planets would you like to visit and why? Discuss in class.

Our Earth is a unique planet. It is the only planet in our solar system that has water and air. Our Earth has land masses and water bodies. The large land masses are called **continents**. The large water bodies are called **oceans**. See Map 1.1 and learn their names.

SHAPE OF THE EARTH

In ancient times, people believed that the Earth was flat and had steep edges. Ferdinand Magellan, a Portuguese explorer, sailed around the world and proved that the Earth is round. Pictures taken from space have also proved that the Earth is like a **sphere**. It is round, but is slightly flattened at the top and at the bottom.



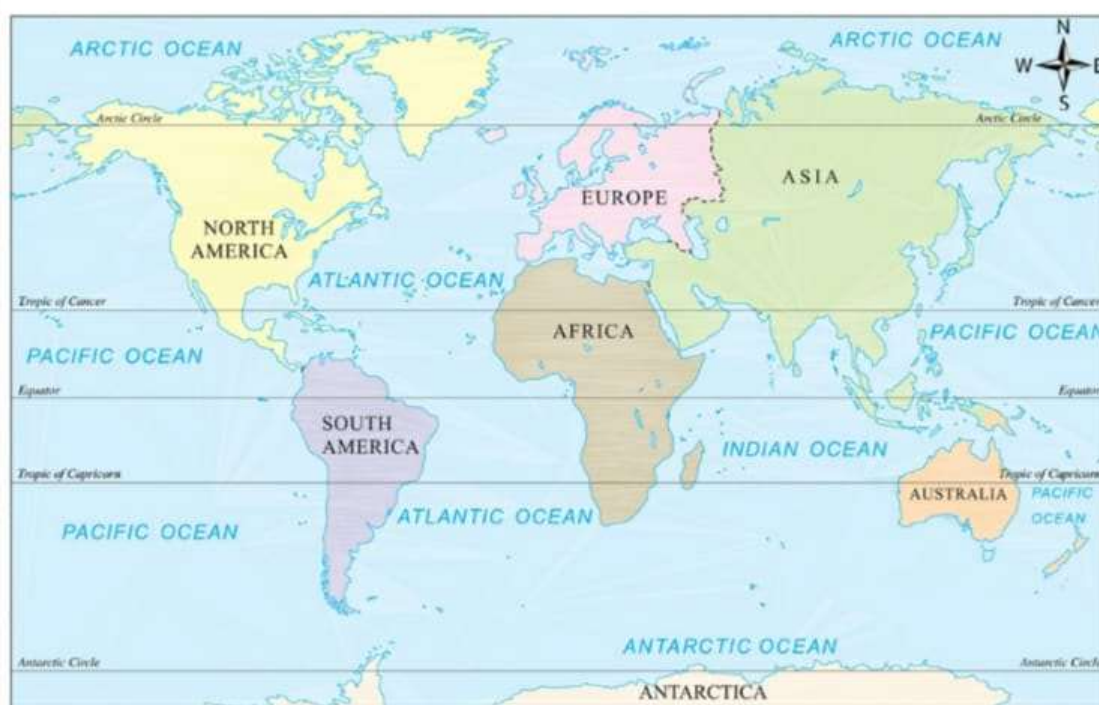
A globe

WHAT IS A GLOBE?

To study the Earth we need its model. A globe is a simple and accurate model of the Earth. It shows the distribution of land and water on the surface of the Earth. We can also see the correct shape, size and location of the continents and oceans on a globe.

But, we cannot always use a globe to study the Earth. This is because

- a large globe is difficult to carry around.
- a globe is small and all the details of a place cannot be shown on it.
- we cannot make a globe for a part of the Earth.
- only one half of the Earth can be seen at a time on a globe.



Map 1.1 There are seven continents and five oceans in the world.

MAPS

A map is a representation of the Earth's surface or a part of it on a flat surface. The word 'map' comes from the Latin word *mappo*, which means a napkin. Gerardus Mercator, a Flemish map-maker, was the first to publish a collection of maps in the form of a book. A book of maps is called an atlas.

We can draw maps on a flat surface to show continents, countries, cities and even a neighbourhood. You can draw a map of your school and show all the details on it. In this way a map is better than a globe.

However, the Earth is spherical

in shape and its surface is curved. A curved surface cannot be shown correctly on a flat surface such as paper. Try to cover a ball with a sheet of paper without creasing it. You will not be able to do it. So, it is not possible to make an accurate map of a curved surface. However, small areas



FactWise

One of the earliest surviving globes is the **Erdapfel** or Earth apple. It was made by Martin Behaim in 1492. Georg Glockendon painted the map on the Erdapfel.



can be represented fairly accurately on maps. This makes maps useful tools to study the Earth.

Types of maps

There are different types of maps.

Physical maps show the physical features of a place such as mountains, plateaus, plains and rivers. Countries, states and their capitals are shown on political maps. General information about climate and rainfall of a region is shown in climatic maps. Besides these, there are maps that tell us about the industries, population, transport, minerals, crops, soil, natural resources, forests and wildlife of a region.



Checkpoint

Circle the correct answers.

1. The large water bodies on the Earth are called lakes / oceans / continents.
2. The Earth is cylindrical / triangular / spherical in shape.
3. A globe is a diagram / map / model of the Earth.
4. The first person who published a collection of maps was Copernicus / Magellan / Mercator.

READING MAPS

Maps give us a lot of information about a country or a place. We must know how to read a map and understand the information it provides. Every map has some basic features. They are as follows.



The needle of the compass always points towards the north direction. Hence, we can easily find directions using a compass.

Directions

All maps follow a system of directions. The four major directions are – North, South, East and West. The top of the map is North. The bottom of the map is South. East is to the right and West is to the left. The directions on a map can also be shown by an arrow marked 'N', which points towards the north direction. The other directions are then easy to find.

We can also mark the four intermediate directions on a map.

- North-East lies between the North and the East.
- North-West is between the North and the West.
- South-East is between the South and the East.
- South-West lies between the South and the West.

Scale

It is not possible to show the actual size of the Earth on a map because it is too large. Let us suppose that the ground

distance between Delhi and Agra is 200 km. It is not possible to show these cities at 200 km from each other on the map. Therefore, this distance is represented by a smaller unit (say 5 cm) on the map. The ratio between the distance on the ground and the distance on the map is known as the scale of the map. In this case, we would write it as 5 cm : 200 km. Maps are always drawn to scale.



A map scale

Symbols

There is not enough space on a map to show mountains, rivers, lakes, bridges, dams, temples, churches and railway tracks. However, a map without this information would not be useful. Different symbols are therefore used on a map to give us this information. For example, the land boundary of a country is shown by thick dashes and dots in black. A city is marked by a small circle.

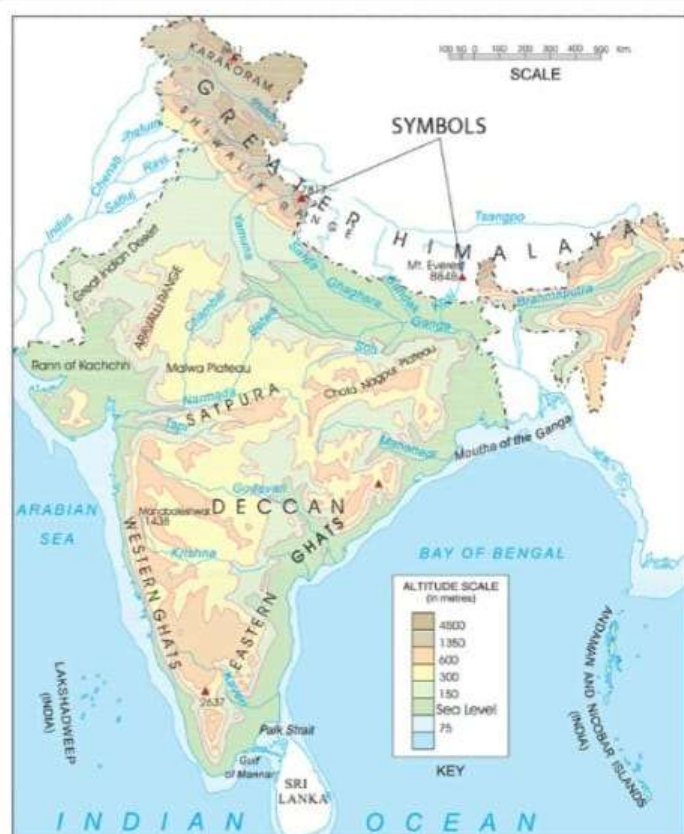
Colours

We use different colours to show various things on a map. Generally, maps follow a common colour scheme.

For example, on a physical map

- water bodies are shown in shades of blue. Light blue is used for shallow waters and a darker shade of blue for deep waters.
- plains or lowlands are shown in shades of green.
- highlands are shown in shades of brown.

A key is given on a map to help us understand the colour scheme and the symbols used. Look at Map 1.2. Its key shows the height of land above sea level or depth of water below sea level. It also shows what the colours represent on the map.



Map 1.2 The scale, symbols and colours used on a map

Words to know

sphere

intermediate directions

symbols

an object that is completely round, such as a ball

the directions in between the major directions

marks which have a particular meaning



Quick recap

- A globe is a model of the Earth. It shows the continents and oceans.
- A map represents the Earth on a flat surface. There are different types of maps.
- North, South, East and West are the four major directions.
- The scale of a map is the ratio between the map distance and the actual distance between two places.
- Symbols and colours are used to represent different features on a map.



Read and answer



A Tick (✓) the correct answers.

- The Earth is a unique planet because
 - it is the only planet in the solar system. _____
 - it has land masses and water bodies. _____
 - it is the coldest planet. _____
 - it is the hottest planet. _____
- The explorer who sailed around the world was

a. Vasco da Gama. _____	c. Christopher Columbus. _____
b. Gerardus Mercator. _____	d. Ferdinand Magellan. _____
- A political map shows

a. countries and capitals. _____	c. physical features. _____
b. rainfall and temperature. _____	d. population. _____
- The ratio between the distance on a map and the actual distance on the ground is called

a. direction. _____	c. scale. _____
b. sphere. _____	d. symbol. _____
- The symbol used to show a city on a map is a

a. dash. _____	c. triangle. _____
b. small circle. _____	d. rectangle. _____



The Earth as seen from space.

B Write T for True or F for False.

1. We can make a globe for a small part of the Earth. _____
2. Forests and industries cannot be shown on a map. _____
3. Symbols on a map show features that cannot be drawn. _____
4. Plains and mountains are shown in different colours. _____

C Answer these questions.

1. How was it proved that the Earth is spherical in shape?
2. How is a globe useful to us?
3. How do maps help us? Why is a map less accurate than a globe?
4. What are the features that help us to read a map?

D Think and answer.

The Earth looks mostly blue when seen from space. Why?

**Do and learn****E ACTIVITY** Write the names of two countries in the following continents.

- | | | |
|------------------|-------|-------|
| 1. Asia | _____ | _____ |
| 2. Africa | _____ | _____ |
| 3. Europe | _____ | _____ |
| 4. South America | _____ | _____ |

F The scale of a map is 1 cm : 250 km. The distance between these places on a map is given. Find the actual distance.

	ON THE MAP	ON THE GROUND
1. Jammu – Chennai	11 cm	_____
2. Mumbai – Bhopal	3 cm	_____
3. Bengaluru – Visakhapatnam	4 cm	_____

G MAP WORK On the map of India given on page 142, use appropriate colours to show the following.

- | | | |
|----------------|-----------------|-------------------|
| • Indian Ocean | • Bay of Bengal | • Northern Plains |
| • Arabian Sea | • Himalayas | • Thar Desert |

H LIFE SKILL Find directions using the Sun. Stand facing the Sun in the morning. The Sun rises in the east, so you will be facing the east direction. Now, find the other directions.

1. _____ is to my back.
2. _____ is to my right.
3. _____ is to my left.

Q1: Answer the following questions:

1. How was it proved that the earth is spherical in shape?

Ans: Ferdinand Magellan, a Portuguese Explorer, sailed around the world and proved that the earth is round pictures taken from space have also proved that the earth is like a sphere.

2. How is a Globe useful to us?

Ans: A Globe is useful to us in the following ways:

1. It shows the distribution of land and water on the surface of the earth.
2. We can also see the correct shape, size and location of the continents and oceans on a globe.

3. How do maps help us?

Ans: Maps help us to show continents, countries, cities and even a neighbourhood as maps are drawn on a flat surface.

4. Why is map less accurate than a globe?

Ans: Maps are less accurate than a globe because the earth is spherical in shape and its surface is curved . A curved surface cannot be shown correctly on a flat surface.

5. What are the features that help us to read a map?

Ans : the features that help us to read a map are directions, symbols, colours and scale.

ANSWERS

A. Tick the correct answer

1. B
2. D
3. A
4. C
5. B

B. True/false

1. False
2. False
3. True
4. True