

# Maps and Diagrams

## POINTS TO REMEMBER

- The various ways of representing the earth are globes, maps, pictures, sketches, plans and diagrams.
- A globe is the most accurate three-dimensional, spherical representation of the earth. However, not many details of the earth can be shown on a globe.
- Selected features are shown on a map using different signs, symbols and colours.
- A sketch is a rough drawing showing the relative locations of a few chosen features in an area. They are not drawn to scale.
- Plans are drawn to scale and are very similar to maps. While a map shows a large area, a plan is normally drawn for a small area or a building.
- A scale is the ratio of the distance between two places on a map to the actual distance between the same two places on the ground.
- Map scales are given in three different ways: verbal or statement scale, graphical or linear scale and representative fraction.
- Colourful signs and symbols used in a map to show natural and man-made features are called conventional signs and symbols.

## IMPORTANT TERMS

**Atlas** : A collection of different types of maps in the form of a book.

**Cardinal directions** : the four principal directions—north, south, east and west.

**Conventional signs and symbols** : Internationally recognized signs and symbols used to show natural and man-made features on maps.

**Fold** : A bending of the earth's crust due to large scale earth movements.

**Globe** : An object representing the spherical shape of the earth with a map of the world on its surface, usually on a stand so that it can be rotated.

**Map** : A drawing of the whole earth or a part of it on a flat surface.

**Plan** : A drawing that shows the horizontal section of a small area or building accurately.

**Scale** : The ratio of the distance between two places on a map to the actual distance between the same two places on the ground.

**Sketch** : A rough drawing showing the relative locations of a few chosen features in an area  
**Trough** : The dip of a fold.

## THINK AND ANSWER

Do you think it will be easy to understand a map which does not use conventional signs and symbols ? Give reasons for your answer.

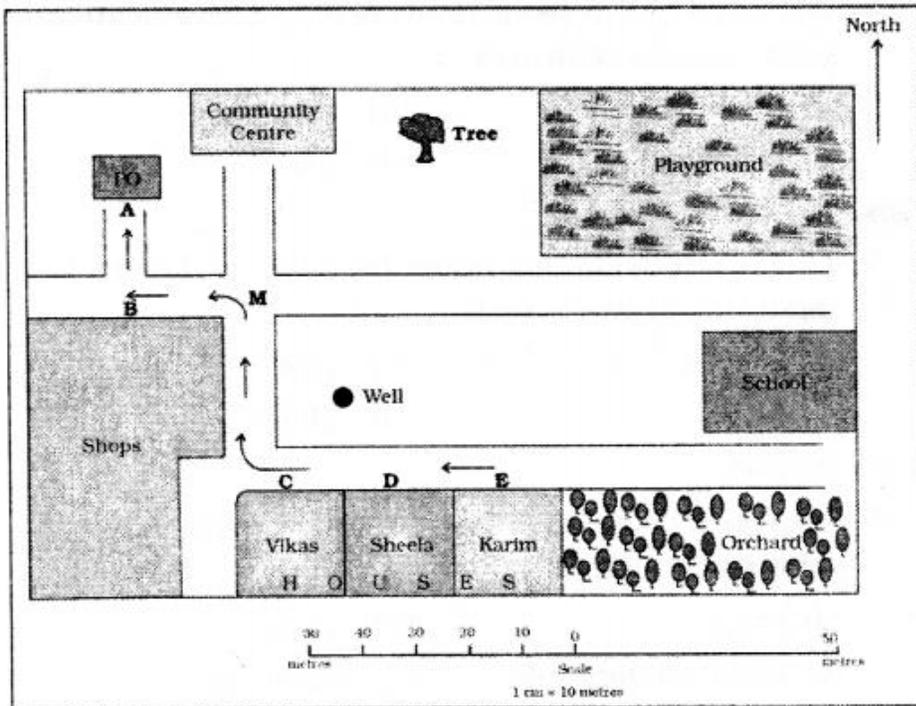
**Answer:**

No, It will be very difficult to understand a map which does not use conventional signs and symbols. Maps make use of different signs, symbols and colours to provide distinct information. And it ensures that the information is presented in a clear and concise manner with minimal scope of misinterpretation.

## VALUES AND LIFE SKILLS

Maps and sketches are great tools. They help us to navigate our way to our destination. Prepare a sketch of the route you take from your house to your school for the new school bus driver. Do not forget to mark the important places in the route.

**Answer:**



### Exercises

#### A. Choose the correct answer

1. Which of these is shown by a thematic map ?

1. mountains
2. rivers
3. **climate**
4. state capitals

2. These maps are useful to surveyors and civil engineers engaged in building roads, bridges, canals, and other structures.

1. physical
2. political

3. **topographic**
4. thematic

3. This is a true model of the earth.

1. sketch
2. map
3. globe
4. **plan**

4. This is a rough drawing showing the relative locations of a few features of an area.

1. globe
2. map
3. **sketch**
4. plan

5. This is a drawing that shows the horizontal section of a small area drawn to scale.

1. sketch
2. **plan**
3. map
4. globe

6. These are taken from space and show that the earth is spherical in shape.

1. graphs
2. plans
3. **aerial photographs**
4. sketches

**B. Explain the differences between each of the following pairs.**

1. **An aerial photograph and a plan**
2. **A globe and an atlas**
3. **A sketch and a map**

**Answer:**

1. **An aerial photograph and a plan** — A plan is a drawing that shows the horizontal section of a small area or a building. It is drawn to scale. It is useful because it tells us where exactly things are on the ground. Aerial photographs is a tool for representing the earth or a part of it is aerial photography. Photographs of the earth are taken from a camera mounted on an

aircraft, an unmanned drone or an artificial satellite. In fact, such photographs have been used widely in the preparation of accurate maps.

2. **A globe and an atlas** — Map : a drawing of the whole earth or a part of it on a flat surface.
3. **Asketch and a map** — Arough drawing showing the relative locations of a few chosen features in an area.

A map — A drawing of the who le earth or a part of it on a flat surface.

### C. Answer the following questions in brief.

#### Question 1.

Define an atlas.

#### Answer:

A collection of different types of maps bound together in the form of a book is called an atlas.

#### Question 2.

What do you understand by topographic maps ?

#### Answer:

Topographic maps which give detailed information about local features of small areas on the surface of the earth.

#### Question 3.

Which map would be most useful to army personnel when constructing a bridge during a war ?

#### Answer:

In addition to these maps, there are topographic maps (topos = place; graphy = to describe) as these give detailed information about local and forms, streams, rivers, canals and other features of areas. These maps are based on an accurate survey of land.

#### Question 4.

How will you show the location of your house to a friend who is visiting you for the first time ?

#### Answer:

We can show the location of our house to a friend who is visiting us for the first time with the help of a sketch.

#### Question 5.

Differentiate between a plan and a sketch.

#### Answer:

**Plan :**

1. A plan is a drawing that shows the horizontal section of a small area or building.
2. It is drawn to the scale.
3. It tells us exactly things are on the ground.
4. It is accurate representation of an area.

#### **Sketch :**

1. A sketch is a rough drawing showing the relative locations of a few chosen features of an area.
2. It is not drawn to the scale.
3. It does not show the true shape or size of the features.
4. It is rough representation of an area.

#### **D. Answer the following questions in one or two paragraphs**

##### **Question 1.**

What is a map ? What are the different types of maps ?

##### **Answer:**

A map is a drawing of the whole earth or a part of it on a flat surface.

**Maps can be divided into following categories based on the scale used to draw them are :**

- **Small scale maps** — They show a large land area in a small space Eg. 1 cm on small scale map could represent 200 kms on ground. The features of the area are not clearly visible.
- **Large – scale maps** — They show smaller area of land in bigger space Eg. 1 cm = 1 km on land. They give detailed information of the area.

##### **Question 2.**

Describe a political and a physical map.

##### **Answer:**

Political maps: show the boundaries of countries, states, etc. and also the location of capital cities and important towns.

Physical maps: show mountains, valleys, plains, rivers, and other surface features.

These maps generally use different colours to represent land of different heights.

##### **Question 3.**

Take the help of your atlas to make a list of thematic maps. Describe any two maps from your list.

##### **Answer:**

Thematic maps shows the distribution of forests, crops, minerals and industries.

**The types of Thematic maps are :**

1. Ranged maps.
2. Point density maps
3. Proportional symbol maps
4. Maps with pie or bar charts.
5. Grided maps.

**The other two maps are :**

1. Political maps shows the boundaries of administrative units such as countries, states and districts. Different types of boundaries are shown with different symbols. They also show the locations of cities, towns and villages.
2. Physical maps show the landforms and water bodies on the Earth's surface, such as mountains, plateaus, plains, rivers, lakes and seas. The different features are shown with different colours.

**Question 4.**

What are the advantages and disadvantages of using a globe ?

**Answer:**

**Advantages :**

- It is the most accurate three dimensional representation of the earth.
- It shows the distribution of continents and oceans accurately.
- Lines of latitude and longitude are marked on a globe.

**Disadvantages :**

- Only a part of the earth can be seen on a globe, at one glance.
- All details cannot be marked on a globe.
- A globe is difficult to carry around.

**E.** Draw a plan of your house showing clearly the position of each room in relation to the others. On the plan, mark clearly the positions of doors, windows and furniture.

**Answer:**



**F. Picture study.**



**Question 1.**

Do you know how this type of picture is taken ?

**Answer:**

An aerial photograph of Australia.

**Question 2.**

What is it used for ?

**Answer:**

These maps are used widely in the preparation of accurate maps.