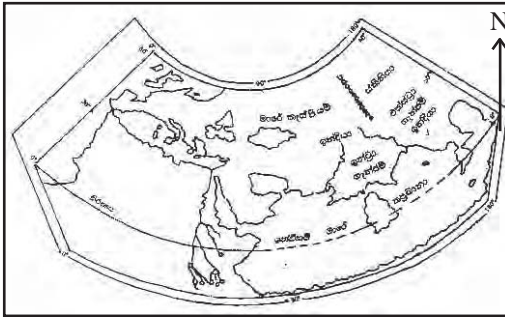


Thematic Maps

06

Reading Thematic Maps

A map is a graphic representation of a part of the Earth surface on a plain piece of paper according to a scale. All the varied information on the surface of the Earth cannot be shown on a model globe. Hence we have to use different maps on various occasions. Separate maps have been constructed on different themes, depending on the need. Some examples are shown below.



Ptolemy's map



A Relief map



A map for Tourists



A map of political Divisions of South America

Map 6.1: Some Thematic maps

Geographers mostly use maps to show relief, climatic characteristics and varied human activities. But many people use maps for various purposes. Hence, today the map has become a tool or instrument used in day to day life of the people.

Many maps are prepared on different themes.

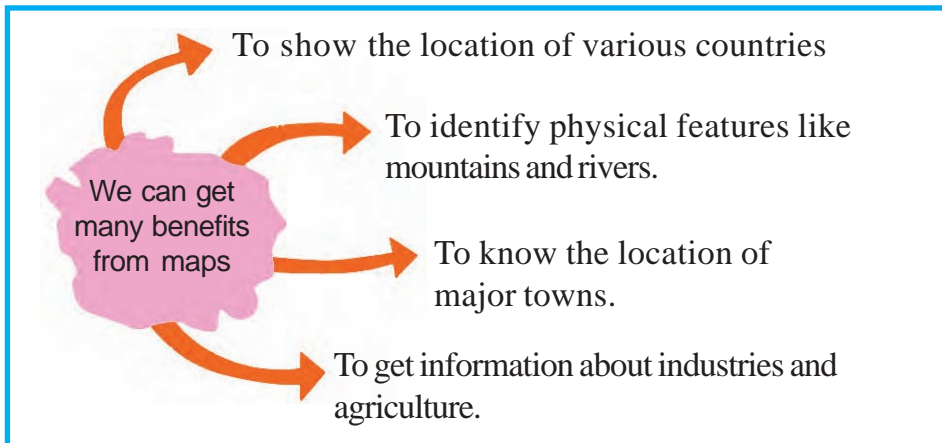


Fig. 6.1

Different types of people use maps, (e.g, students, teachers, tourists, army officers.) That shows different groups of people in the community make use of the maps.

Maps are useful instruments that could be used by many people.



Activities

1. Take an atlas. Note down the titles of five maps you are interested in and write one use of each map.
2. Indicate one way in which maps are used by the following persons.
 - A) Students
 - B) Teachers
 - C) Tourists
 - D) Drivers
 - E) Officers of the Army

In order to make use of a map one should be able to read it. To read a book you must have the knowledge of letters. Similarly in order to read a map you must have a knowledge about how the maps are prepared. Maps are prepared in many ways. A knowledge about reading a map is useful to improve your knowledge and to spend your free time in an enjoyable way.

There are some common features in all the maps.

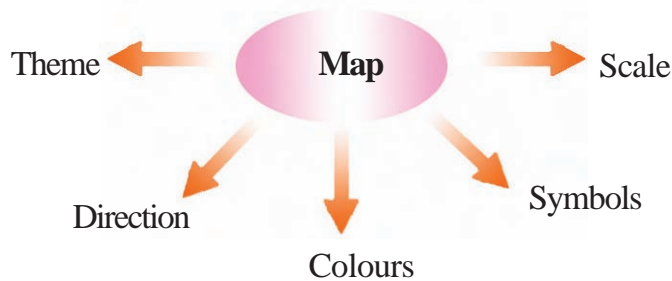


Fig. 6.2 Common features of a map.

Direction

Direction is an essential feature in a map. Direction is shown in any map by an arrow symbol (Fig. 6.2).

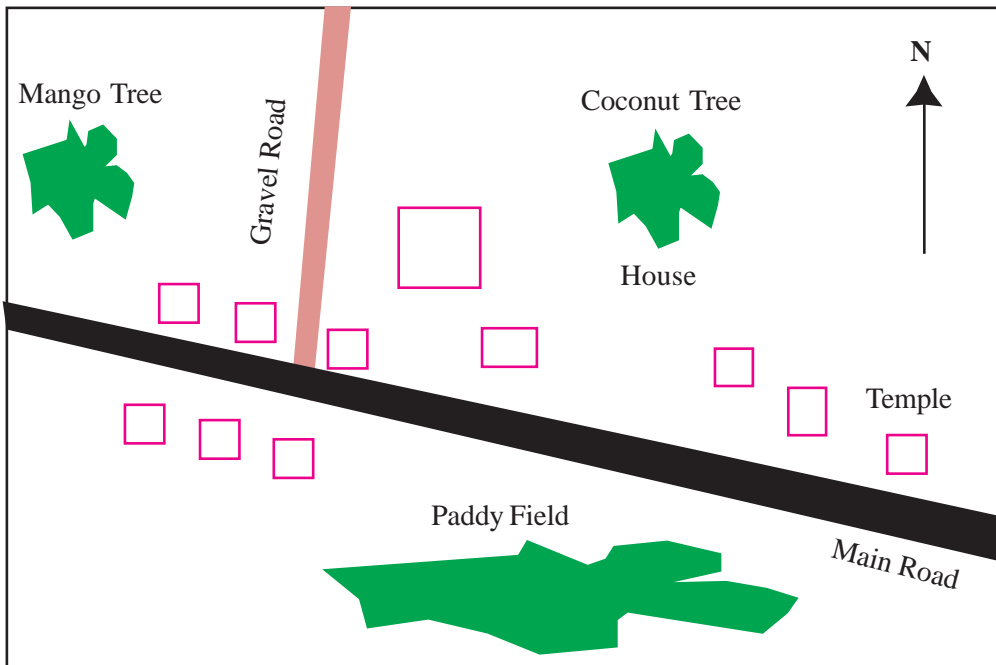
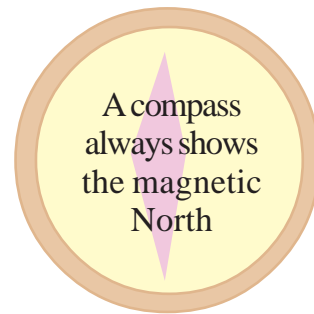


Fig. 6.3. How direction is shown.

You may be knowing that there are four major directions and four sub directions.

Four major Directions	Sub directions
North	Northwest
South	Southwest
East	Southeast
West	Northeast



Three types of North is shown in 1:50,000 metric maps.

Give your attention to the figure showing North by arrows.

- Grid North of the map is given by an arrow (G.N).
- True North is-given by a star (T.N).
- Magnetic North of the Earth is shown by a part of an arrow (M.N).

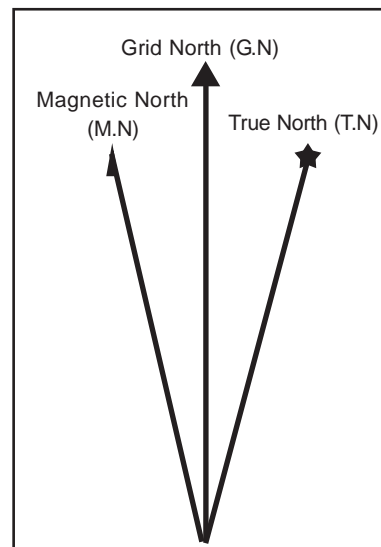
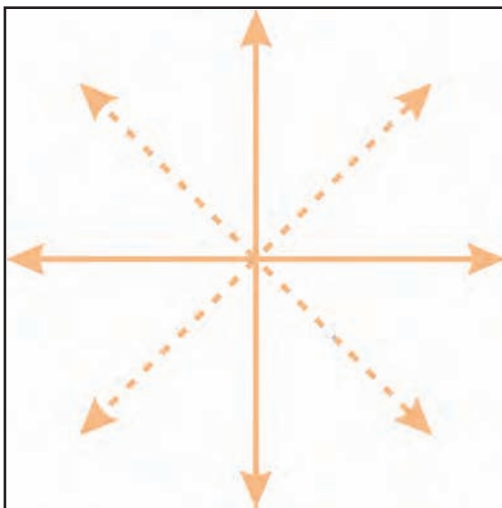


Fig.6.4 - Different types of North



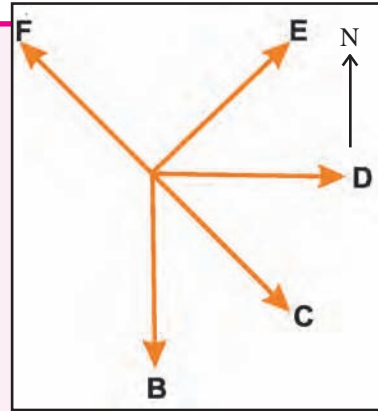
Activity

Name the directions shown by arrows.



Activities

1. Beginning with A in this diagram fill in the blanks indicating directions.
 - i. B is in the _____ of A.
 - ii. C is in the _____ of A.
 - iii. D is in the _____ of A.
 - iv. E is in the _____ of A.
 - v. F is in the _____ of A.



Activities

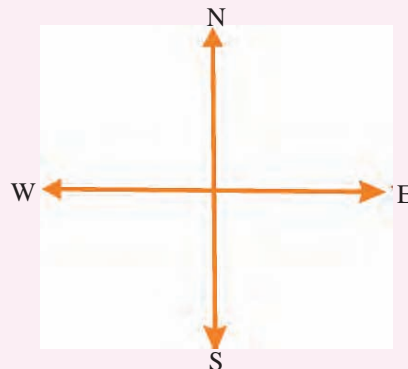
1. Examine your knowledge about directions in a map by doing this exercise.

Fill in the blanks.

Example: 1. Temple is in the East from the Dispensary.

2. Market is in the from the school.
3. School is in the from Dispensary.
4. Railway station is in the from the school.
5. Church is in the from Dispensary.
6. Mosque is in the from the school.
7. Kovil is in the from the school.
8. Post office is in the from the school
9. Dispensary is in the from the school.
10. Temple is in the from the school.

Kovil	Post office	Mosque
Church	School	Railway Station
Market	Dispensary	Temple





Activities

Draw a sketch diagram of your home garden. Mark the North direction in it. Write the directions of other objects in the garden from your house. Take it to the class and discuss with the others.

Direction is useful to find the location of a particular place.

Scale

Everything on the surface of the Earth cannot be included in a map because a map is drawn on a small piece of paper. We have to reduce most of the things according to a scale which is the ratio of the distances on a map in relation to the actual distance. A map may be small or large according to the information we need to include.

The ratio used by the Survey Department of Sri Lanka for topographic metric maps is 1:50,000. But there are maps of other scales too.

We can reduce or enlarge a map by using a scale that suits our needs.

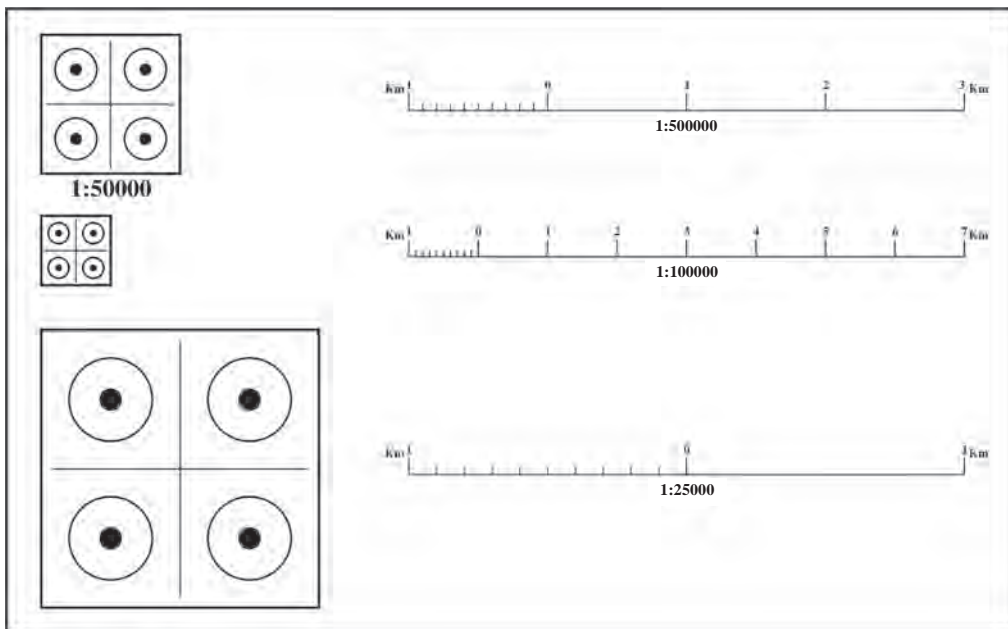


Fig. 6.5 Showing linear scales.



Activities

1. Draw a picture of a room with 20m in length and 10m in width.
2. Measure the length and breadth of your classroom in metres. Draw the sketch of the class room space on 1 cm = 5m scale.
3. Measure the length and breadth of your house. Draw the sketch of the floor area according to the scale given above.
4. Using the scales given in fig.6.5 reduce the plans you have drawn to half the size and enlarge them two times.

Now you have already learned how the different scales are used to draw maps or sketches. Let us see how scales are used for reading maps. You can find the distance between two places according to the scale given in the map. Imagine the length is given in the scale as one centimetre is equal to two kilometres. If the distance between two places is 5cm on the map actual distance between the two places is ten kilometres.

All the maps are drawn on a scale to show the actual distances.

The distance between two places could be calculated by using the linear scale.

Colours and Symbols

Teacher informed the students that she is going to teach colours and symbols in a map as the next lesson. And she has instructed the students to find information on colours and symbols used in maps when they come back. After coming home Amal ran to his sister who is offering Geography as a subject for Advanced Level to find information.

Amal:

Excuse me sister, we are learning how to read maps these days. Now we can find the direction and use the scale to find distances. Teacher said that the next lesson is on colours and symbols of maps. Can you please explain a little about colours and symbols of a map ?

Sister:

Right, I can help you. Please bring your atlas and turn to any map that you are interested in. Then tell me what are the colours you see in it.

Amal

I have turned to the physical map of Sri Lanka. I can see light green, dark green, dark brown and light brown, and the sea is shaded in dark blue and light blue

Sister

See how rivers and lagoons are marked. Those are also in blue, aren't they?

Amal

Yes! Sister. So how can we get to know the things in different colours?

Sister

Please, look carefully at the map again. There is a key to the map on a side. Colours, letters and symbols are explained in the key. Can you see the height of mountains and depth of the sea shown there?

Amal

Yes, the height is given in metres. Light green shows the land between 0- 100 m. Dark brown is for land between 2000-3000 m.

Sister

See what features are in blue.

Amal

Sister, rivers and seas are in blue colour.

Sister

Oh good. Now you know the lowlands are shaded in green, highlands are shaded in brown and all the water bodies are shaded in blue. Isn't that so?

Amal

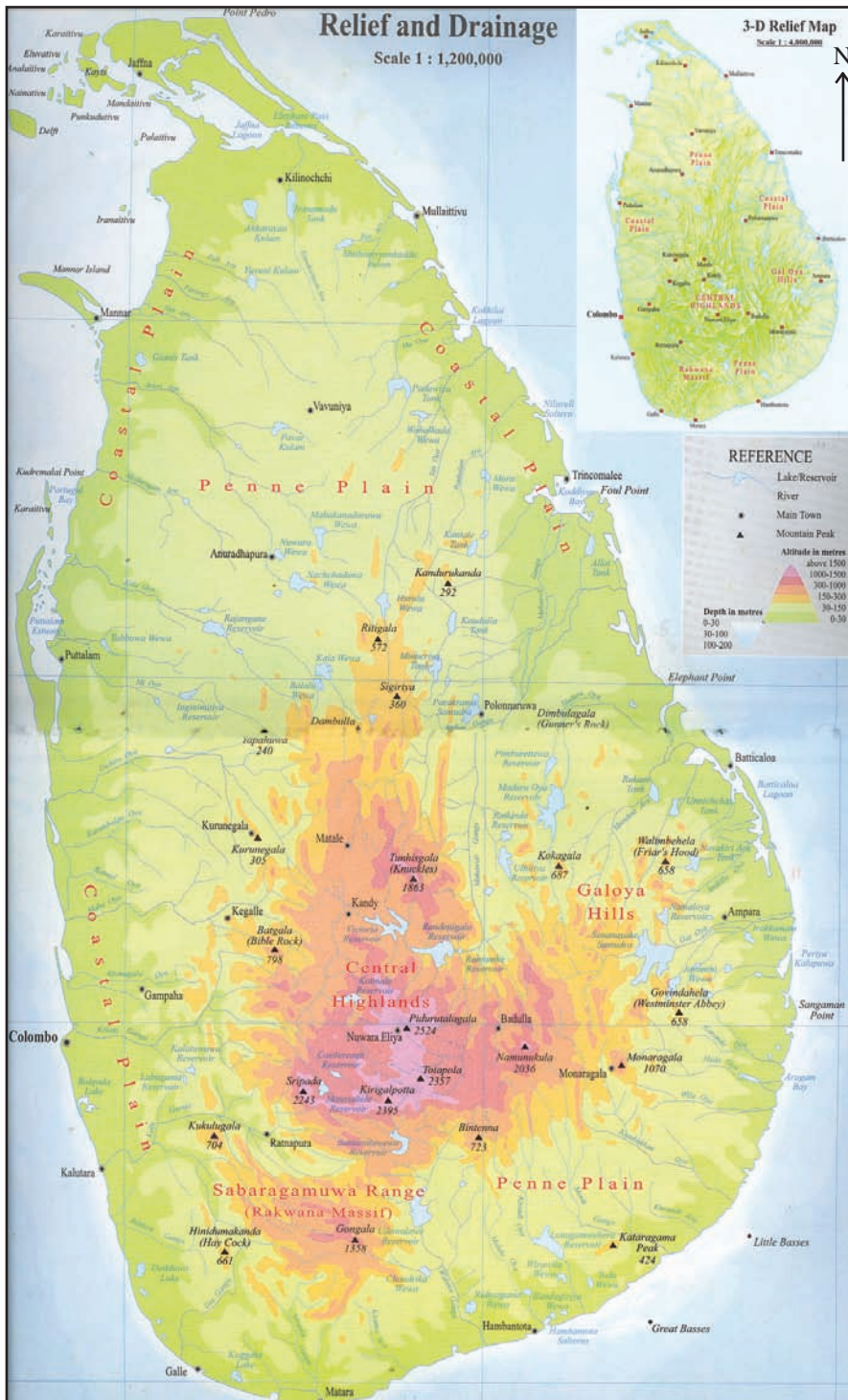
Sister

Sister, then what are symbols?

What we want to know, in a map, are shown by small pictures, English letters or numbers. We call those as symbols. Look at the fisheries map of Sri Lanka. There, fishery harbours are shown by a symbol of a ship. The symbol of a fish is shown in the fishing area.

Amal

Thank you very much. Enough for the day. Teacher will give more details.

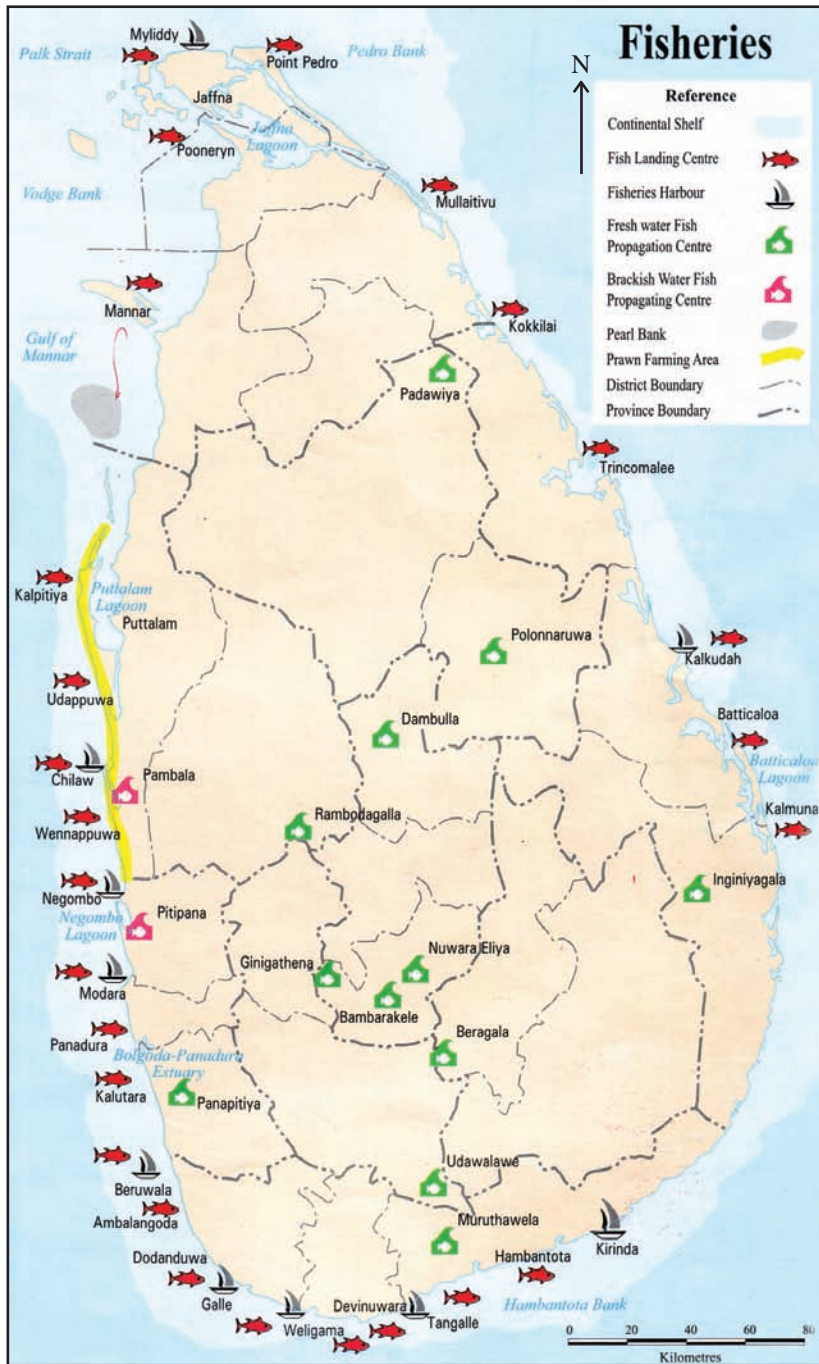


Map 6.2 - Relief of Sri Lanka

Source : Sarasavi school Atlas, 2004

Different types of symbols are used in maps

There is a key to a map for the identification of these symbols



Map 6.3 - Fishing Industry in Sri Lanka

Observe the following maps and examine how the colours and symbols are used in maps.



Map 6.4

Symbols and colours used in maps.

Many colours and symbols have been used in 1:50,000 maps prepared by the Survey Department. We are able to read a map with the help of colours and symbols given in the key. These symbols and colours are shown in fig. 6.6.

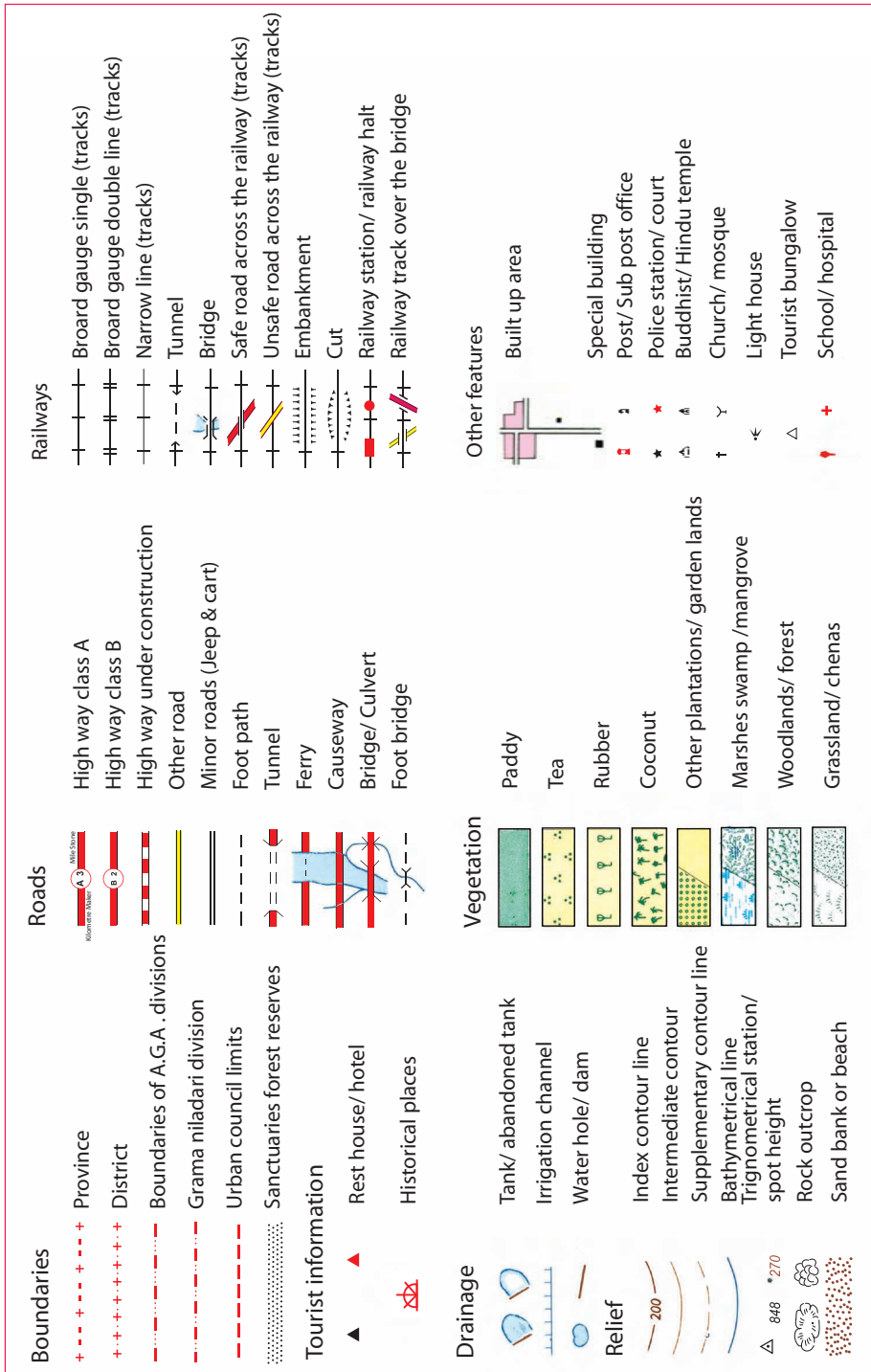


Fig. 6.6 - Key provided with a metric map of 1:50,000

Source: Sri Lanka Survey Department, National Atlas (School Edition) Survey Department



Activities

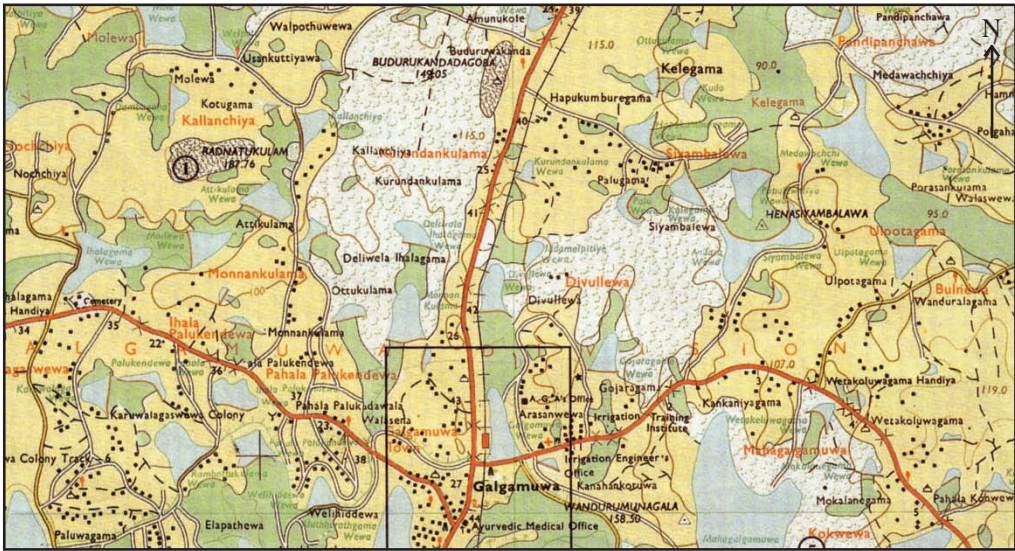
See Fig. 6.6 carefully and answer the following questions.

- 1 colour is used to show the provincial boundary.
2. Draw the symbol used to mark the provincial boundary
- 3 colour is used to show the minor road.
- 4 colour denotes paddy cultivation.
5. Draw the symbol used to show coconut cultivation
6. Draw the symbol used to show rubber cultivation
7. The railway line is shown by the symbol
8. The symbol used to show a school is
9. What is the symbol used to show the temple ?
10. What is the symbol used to show the dispensary ?

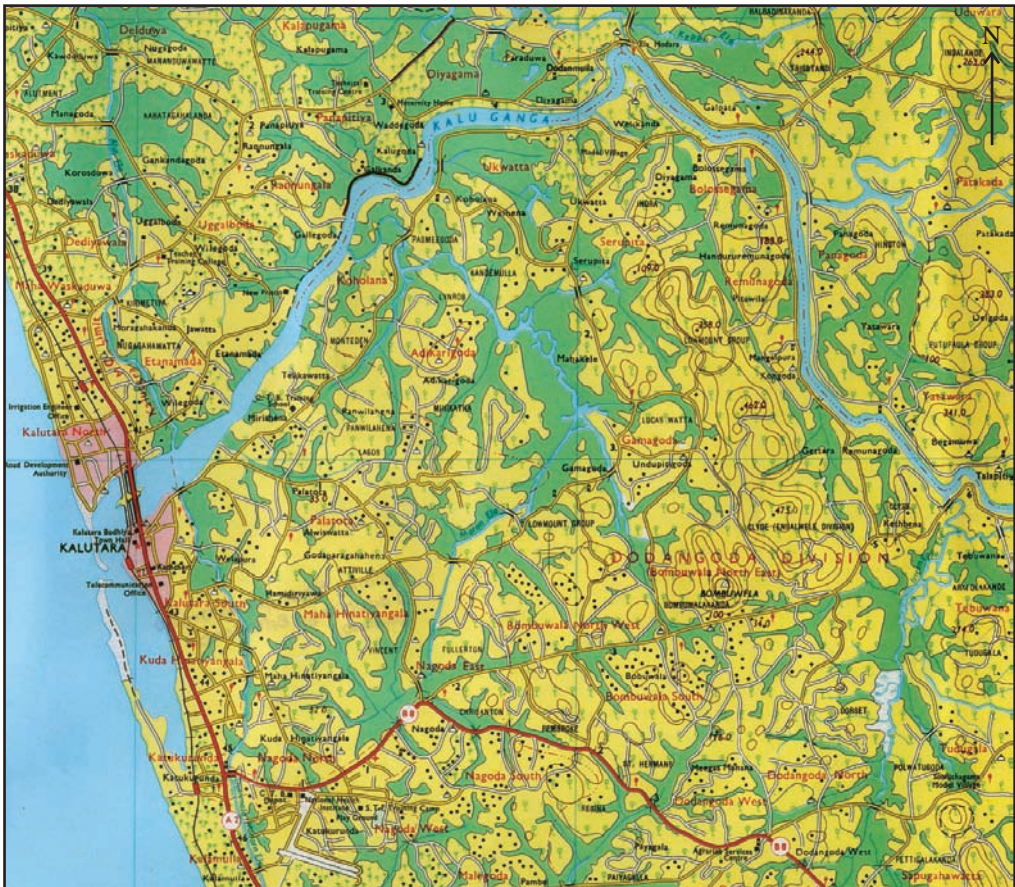
Road network is a major feature in maps. There are some maps showing only the roads. All types of roads are included in 1:50,000 metric maps. When you observe these roads you will come across some other symbols along the roads e.g. symbols for bridges, culverts, railway stations, railway crossing, tunnel are some of them.

The roads shown in metric maps are:

- Main Road
- Minor Roads
- Cart Track
- Foot path
- Railway



Map.6.5: Northern part of Galgamuwa map



Map. 6.6: Southern part of Kalutara map



Activities

1. Name the types of roads in the map of Galgamuwa.
2. Identify the cultural features located around the Galgamuwa Town.
3. In what direction is the Railway station from the town?
4. There are three roads running from Galgamuwa town. What is the distance of the road leading towards East from the town ?

Settlements

Settlement is a place where people live. Settlements differ according to occupations and modes of living. We can identify some settlement patterns in Sri Lanka.

Some of those settlement patterns are,

- Junction settlements :- Places where many roads meet.
- Tank settlements :- Places associated with a reservoir.
- Estate settlements :- Places in tea or rubber estates.
- Fisheries settlements :- Places along the sea coast.
- Linear settlements :- Places along the roads, rivers and canals or sea coast.
- Dispersed settlements :- Settlements found scattered.



Activities

Look at the Maps 6.5 and 6.6 carefully and answer the following.

1. What is the major junction settlement in the map of Galgamuwa ?
2. Name two major features of a Tank settlement.
3. Name three crops indicated in the map of Kalutara.
4. Name the administrative boundary that falls along Kaluganga.

Rivers and other water surfaces

You have learned that rivers and other water surfaces are shown in blue in a map. Seas , rivers, canals, tanks and marshes are shown in blue with different symbols.

Contour lines

Surface of land is not same everywhere. You can observe plain flat surfaces, slopes, highlands ect. When you walk in your school garden, home garden or elsewhere in the country. These different levels of the land surface is called relief. Map makers use contour lines to show the height. Contour lines are drawn by joining the similar heights measured.

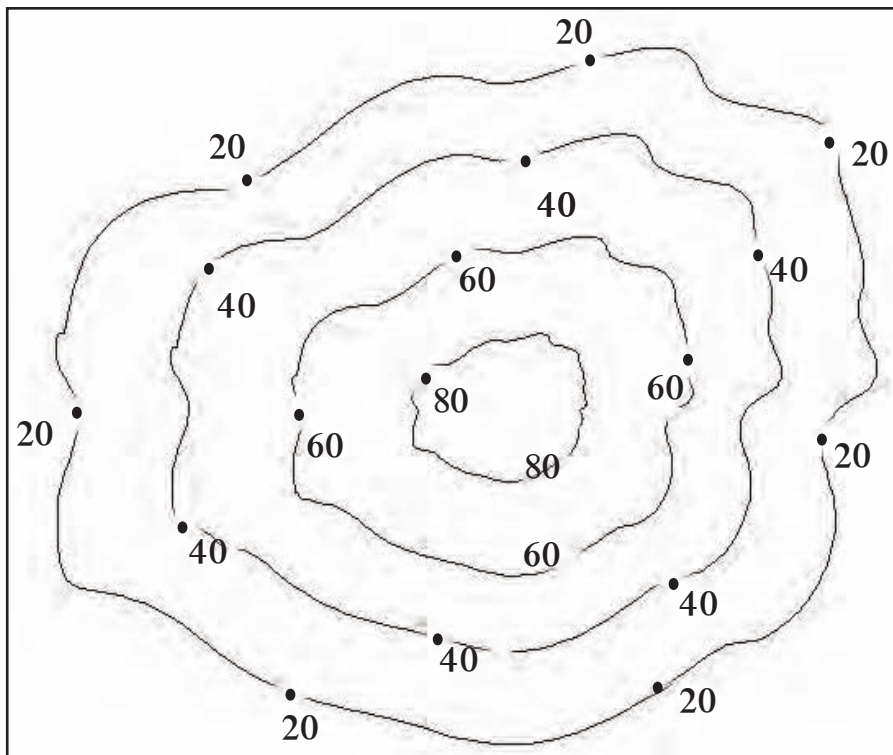


Fig. 6.7 - Contour lines.

Major contour lines in metric maps are drawn in dark brown as a thick line. Minor contour lines in between major contours are drawn in light brown.

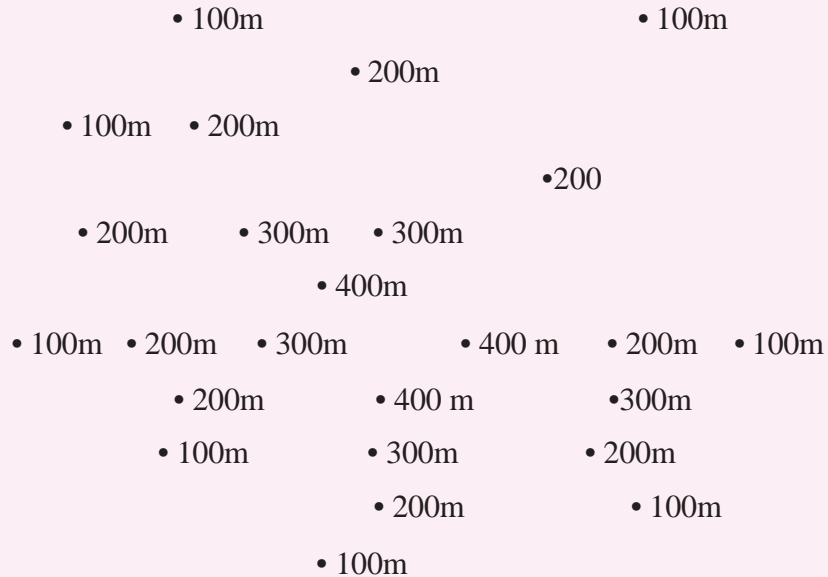
The nature of the land can be understood by the pattern of contours.

The easiest way to understand the height and morphological features is by studying contour lines.



Activities

Draw contour lines joining the places of equal values.



A Summary of what you have learned.

- A map is a graphic representation of land features on a paper according to a scale.
- There are many types of maps.
- Thematic maps are those which depict a distinct theme.
- There are some essential basic features that are shown on a map.
- Maps are prepared on scales.
- A knowledge of basic features of a map is needed to read or study a map.
- Height or relief of the land can be understood by contour lines.

Grade 7

Syllabus - Geography

Skill development

Analyses elements, characteristics and processes of the physical and human landscape.

Skill level

Describes the world we live in.

Contents

7.1 World we live in

- Shape
- Latitudes
- Longitudes
- Continents and oceans

Skill development

Analyses elements, characteristics and processes of the physical and human landscape.

Skill level

Describes the geographical identity of Sri Lanka.

Contents

7.2 Geographical identity of Sri Lanka.

- Territorial zone
- Administrative boundaries
- Climate
- Economy

Skill development

Analyses elements, characteristics and processes of the physical and human landscape.

Skill level

Examines natural hazards affecting Sri Lanka

Contents

7.3 Landscapes of Sri Lanka

- Introduction to landscapes
- Diverse regional landscapes
 - Tea plantations
 - Commercial vegetable cultivation
- Landscapes of the Dry zone
 - Irrigated agriculture
 - Chena cultivation
- Landscapes of the wet zone
 - Urban settlements
 - Flood plains
- Landscapes of the coastal belt
 - Tourist industry
 - Fishing industry

Skill development

Analyses elements, characteristics and processes of the physical and human landscape.

Skill level

Examines the landscapes of neighbouring regions.

Contents

7.4 Landscape of the living area

- Relevant regional landscape
- Central highlands
- Dry zone
- Wet zone
- Coastal belt

Skill development

Analyses elements, characteristics and processes of the physical and human landscape.

Skill level

Examines natural hazards affecting Sri Lanka.

Contents

7.5 Natural hazards affecting Sri Lanka.

- Droughts
- Floods
- Cyclones
- Lightning and thunder
- Landslides
- Tsunami

Skill development

Use of Geographical techniques to analyse, interpret and present data and information.

Skill level

Simple interpretation of thematic maps

Contents

7.6 Reading of thematic maps

- Direction and scale
- Standard colours and symbols

Roads

Settlements

Rivers and other water surfaces

Contours