Tender Heart High School
Sector 33 B, Chandigarh

Class: VII
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Sublect: Geography

Chapter 1
Representation of Geographical Features

Good Morning Students,
This is the lesson of Class VII Geography, In this lesson we will Study about Topographical Survey Maps, use of Colours on Topographical Sheets, Grid Reference, Scale - Its Uses and Types, Measuring distances on Map and Conventional Signs and Symbols.

1) Topographical Map

→ Topographical Maps are large Scale Maps that shows both Natural Features suchas mountains, hills, rivers, lakes, Plateaus etc and Manmade features such as Roads, Settlements, Railway lines etc.
→ In Topographical Maps, the shape of the land is generally shown by Contours and these Maps are based on accurate survey of the land.
→ In India, Topographical Maps are prepared by Survey of India. In Chandigarh, its office is situated in sector 32.

Purpose of Topographical Maps

→ It serves as a guide for travel.
→ They are used for Military Purposes.
→ They are very useful in studying the regional geography of an area in detail.
→ They provide useful information to engineers, surveyors, Town Planners, Geographers etc.
→ They are also useful for Navigation.

2) Use of Colours in Topographical Sheets

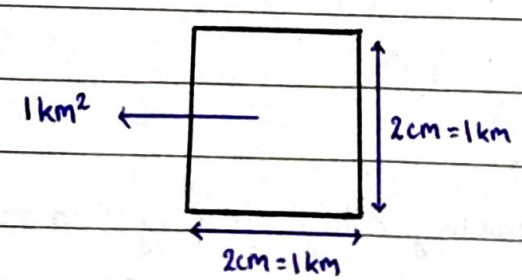
→ The Natural and Manmade Features on Topographical Maps are shown in colour.
→ Each colour used on maps has its own significance that helps us to know any feature on Toposheet
→ These colours are universally accepted.
→ For Example: Yellow for cultiveable land, desents etc.
Green for Forest Area and other vegetation.
White for Uncultiveable land.
Blue for Water Bodies.
Red for settlements etc.

3) The Grid Reference:

→ The network of Vertical and Horizontal lines is known as Grid or Grid Reference.
→ The Vertical lines in a Grid is known as Eastings and it runs from west to east.
→ The Horizontal lines in a Grid is known as Northings and it runs from South to North.
→ The Grid Reference helps us to study the Topographical Map of an area.

Reading of Grid Reference

→ The reading of Grid is always taken from SW corner of the map.
→ While giving a grid reference, eastings are stated first, followed by Northings.
→ The readings are always taken to the right of Eastings and to the North of Northings.
→ Each Grid on Toposheet is drawn to the scale of 2cm=1km
→ Each Grid on Toposheet is of $1 km^2$



Lets Recap

Q1) Who prepares the Topographical Maps in India ?

Q2) How the Shape of Land shown on a Topographical Map.

Q3) What is the importance of Colours in Toposheet ?

Q4) Define Grid Reference.

Q5) What is the importance of Grid Reference ?

Q6) What is the area of each Grid on a Toposheet ?

Now, Students you may pause the lesson for some time and try to find out the answers of these questions. After some time, Students let's discuss the answers of the above questions.

Ans 1) Survey of India.

Ans 2) It is shown with the help of Contours.

Ans 3) Colours helps us to identify features on a Toposheet.

Ans 4) The network of Vertical and Horizontal lines is known as Grid Reference.

Ans 5) It helps us to study the Topographical Map of an Area.

Ans 6) Area of each Grid on a Toposheet is equal to 1 km^2.

4) Scale : Uses and Types

→ In India, we follow the metric system in which long distances are measured in kilometres (km) and short distances in metres (m).

→ The distance between two points on a map, measured along a straight line is known as Map Distance.

→ The distance between two points on ground, measured along a straight line is known as Ground Distance.

→ Scale is the ratio between Map Distance and corresponding Ground Distance.

For Example : 1cm = 1km means 1cm on map represents 1km on Actual Ground.

Uses of Scale

* It helps to determine the size of Geographical Area.
* It helps to determine the actual distance between two places.
* Scale helps us in Enlargement and Reduction of Maps.

Types of Scales

(a) Verbal Scale OR Statement Scale:

→ In this, the scale is expressed in words.

→ Say, 2cm: 10 kms, which means 2cm on map represents 10 kms on Actual Ground.

(b) Representative Fraction (RF):

→ In this, the scale is expressed in Numerical Fraction.

→ In this method, Scale is expressed as $\frac{\text{Map Distance}}{\text{Ground Distance}}$

→ In this, the numerator is always 1.

→ This scale is universally accepted in Map Making.

→ It is more accurate as compared to Verbal Scale

→ Say, 1:50000

$= \frac{1}{50000}$ (1cm on map / 50000 cm on Ground)

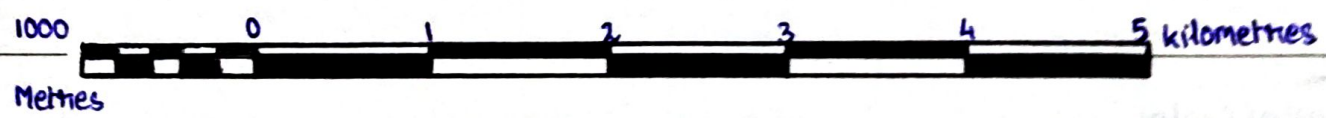
(c) Graphical or Linear Scale:

→ In this, the map distance is shown using a straight line.

→ The line is sub divided into points known as Primary Divisions.

→ The first primary division on the left is further sub divided into smaller points known as Secondary Divisions.

→ For Example – 2cm = 1 kms



5) Measuring Distances on Map:

(a) In a Straight Line:

→ with the help of Scale:

Place the scale on the two points on map and get the distance

→ with the help of divider:

Place two legs of the divider on two points on map and then place the divider on scale, the distance will be known.

(b) For a curved Line:

→ with the help of Paper Strip:

* Take a strip of paper and put its edge at the starting point and mark it on the paper.
* Follow the curve with a string and again mark the end point.
* Now place the paper string on a scale and calculate the distance.

→ with the help of a Thread:

* Take a piece of thread and put a knot at one end.
* Place the knotted part at starting point and move along the curved path
* Mark the end point with a ink dot on the Thread.
* Now stretch the thread along the scale and calculate the distance

6) Conventional Signs and Symbols:

→ The features on map are shown with the help of conventional signs and symbols.

→ These symbols gives lot of information in limited space as these symbols helps in easy knowing of Maps.

→ These conventional signs and symbols are universally accepted and they provide maximum information in detail about an area with the use of appropriate colours.

→ Thus, list of relevant conventional signs are given at the bottom of Map. It is known as Legend.

Now students let's revise the topic by means of quick retest. I will again read out the questions which you all will try to find.

Q1) Define Scale.

Q2) Give three uses of Scale.

Q3) Which Map Scale has Universal Application?

Q4) Name two methods through which curved distances on map can be measured.

Q5) What is the use of conventional signs and symbols?

Thus, After some time the answers are discussed in the class. It is mentioned below:-

Ans 1) Scale is defined as the ratio between Map Distance and corresponding Ground Distance.

Ans 2) → It helps to determine the size of Geographical Area.

→ helps to determine the actual distance between two places.

→ helps in enlargement and reduction of Map.

Ans 3) Representative Fraction (RF)

Ans 4) → with the help of Thread.

→ with the help of Paper Strip.

Ans 5) They provide maximum information in detail of an area with the use of appropriate colours.

I hope you all have understood the topic very well. So you all are required to read chapter 1 and also the question and answers of back exercise of chapter 1.

With this I conclude the interactive session.