

Locating Places on the Earth

CLASS: VI

SUBJECT: GEOGRAPHY

CHAPTER: 1

EXPLORING SOCIETY: INDIA AND BEYOND

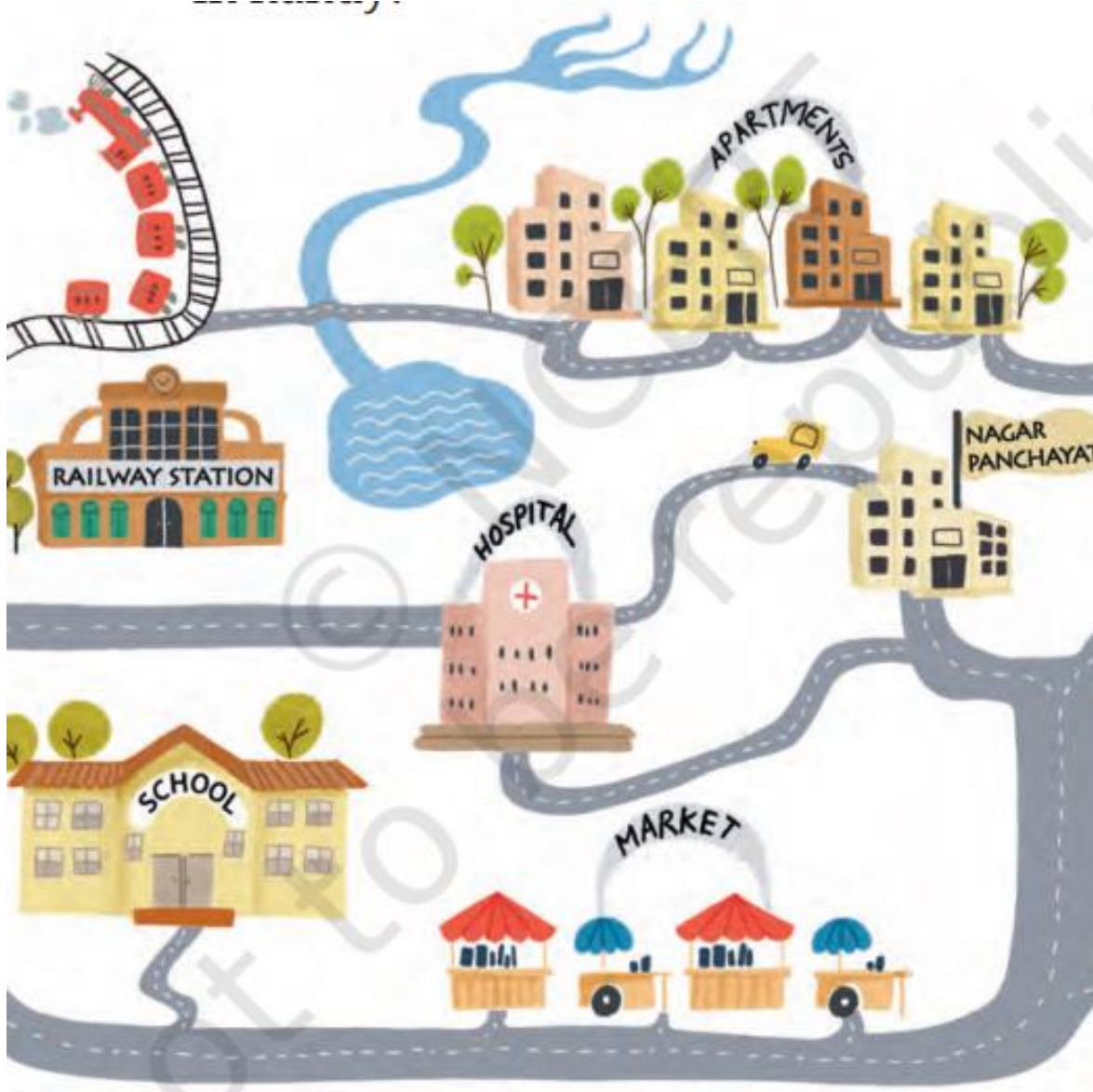


The Big Questions?

What is a map and how do we use it?
What are its main components?

What are coordinates? How can
latitude and longitude be used to
mark any location on the Earth?

How are local time and standard time
related to longitude?



Examine the map of this small city. Imagine that you just got off a train at the railway station, and you want to visit the bank marked on the map. Which way would you go? This is where a map comes in handy.

MAP

- A map is like a treasure guide; it shows you where things are and how to get to them.
- Notice the four arrows in the top right corner of the map.
- They point to some specific directions and make maps even more helpful.



MAP



Map is a representation, or a drawing, of some area — it may be a small area (a village, a town, etc.), a bigger area (say, your district or state), or a very large area like India or even the whole world.



In a map, you look at the surface as if you are viewing it from the top. An atlas is a book or collection of maps.

Kinds of maps

There are several kinds of maps —

- Physical maps, which mainly show some natural features such as mountains, oceans and rivers
- Political maps, which show details of countries or states, boundaries, cities, etc. (for instance, a map of India with all its States, Union Territories and their capitals)
- Thematic maps, with a specific kind of information

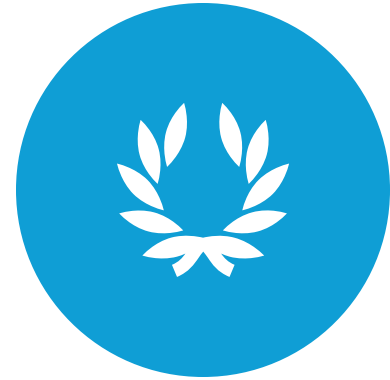
There are three important components of maps—



DISTANCE



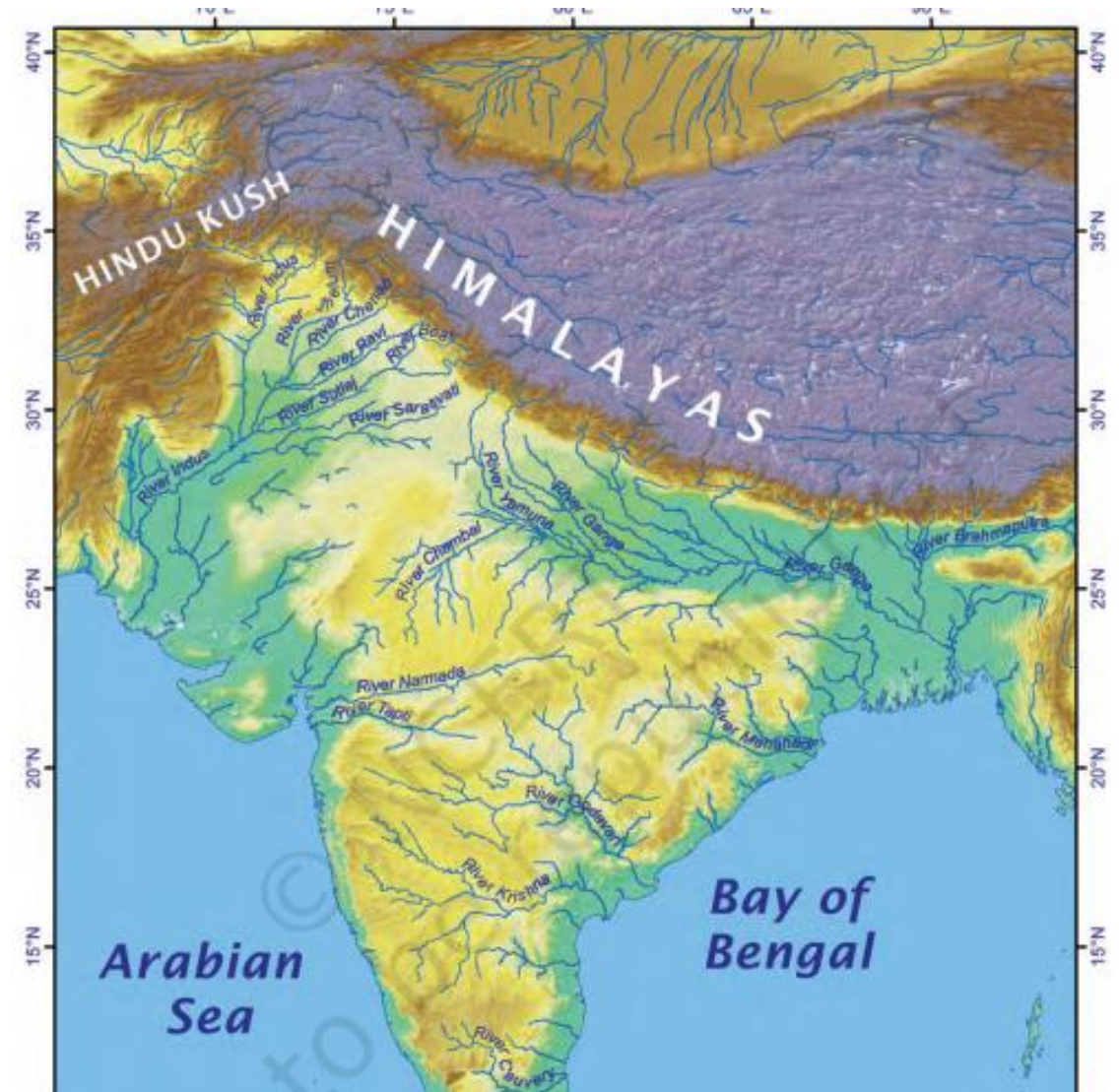
DIRECTION



SYMBOLS.

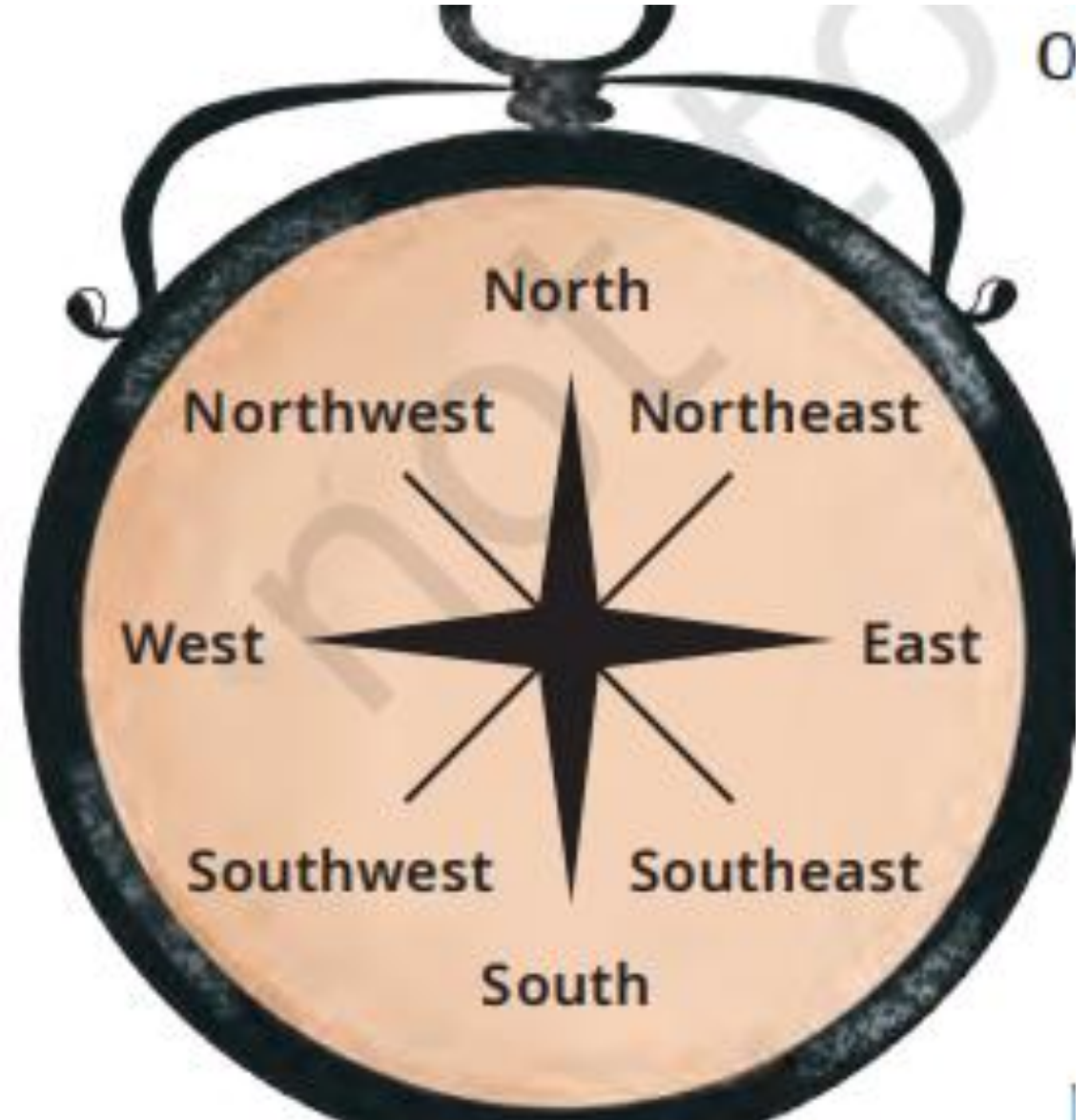
Scale

- The actual distance between two points represented on the map depends on the scale that the map is using.
- Scale simply means ruler, which measures distance in the printed map, corresponds to distance on the ground.



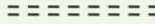
Directions

- There are four directions, which are north, at the top, and, moving clockwise, east, south and west.
- These are called the cardinal directions, also cardinal points.
- Other than these, intermediate directions are also used — northeast (NE), southeast (SE), southwest (SW) and northwest (NW).
- Most maps simply have an arrow marked with the letter 'N', which points to the north direction.



Symbol

A symbol is used to represent these features — symbols for different kinds of buildings (for instance a railway station, a school, a post office), for roads and railway lines, and for natural elements such as a river, a pond or a forest. In that way, numerous details can be shown in the limited space available on a map.

Railway Line: broad gauge, metre gauge, railway station	  
Roads: metalled, unmetalled	 
Boundary: international, state, district	  
River, well, tank, canal, bridge	    
Temple, church, mosque, chhatri	   
Post Office, Post & Telegraph Office, Police Station	<i>PO</i> <i>PTO</i> <i>PS</i>
Settlement, graveyard	 
Trees, grass	 

Why do we need symbols and colours in the map?



Symbols are an important component of maps.



Our map has small drawings of actual buildings and a few other elements, but there would not be enough space on the map of a large city or a country to draw them all.



Instead, a symbol is used to represent these features — symbols for different kinds of buildings (for instance a railway station, a school, a post office), for roads and railway lines, and for natural elements such as a river, a pond or a forest.



In that way, numerous details can be shown in the limited space available on a map.



To make maps more easily understood by a variety of users, map makers use specific symbols.



Different countries use different sets of symbols. The Survey of India, a government body, has fixed a set of symbols for maps of India.

Why is mapping the Earth accurately on a flat sheet of paper difficult?

Curved Surface: The Earth is nearly spherical, and a flat sheet of paper can't accurately represent a curved surface without distortion.

Distortion: Flattening a sphere leads to stretching, tearing, or overlapping, as seen when trying to flatten an orange peel.

Projection Challenge: A map projection can never perfectly represent all aspects of a sphere at once, leading to distortions in size, shape, or distance.

What are coordinates? How can latitude and longitude be used to mark any location on the Earth?

Coordinates are a system used to identify specific locations on the Earth.

Latitude and longitude are the two key coordinates that allow you to pinpoint any place.

Latitude measures how far north or south a location is from the Equator, while longitude measures how far east or west a location is from the Prime Meridian.

Together, these coordinates form a unique reference for any location on the planet, enabling you to accurately find and navigate to any spot on a map.

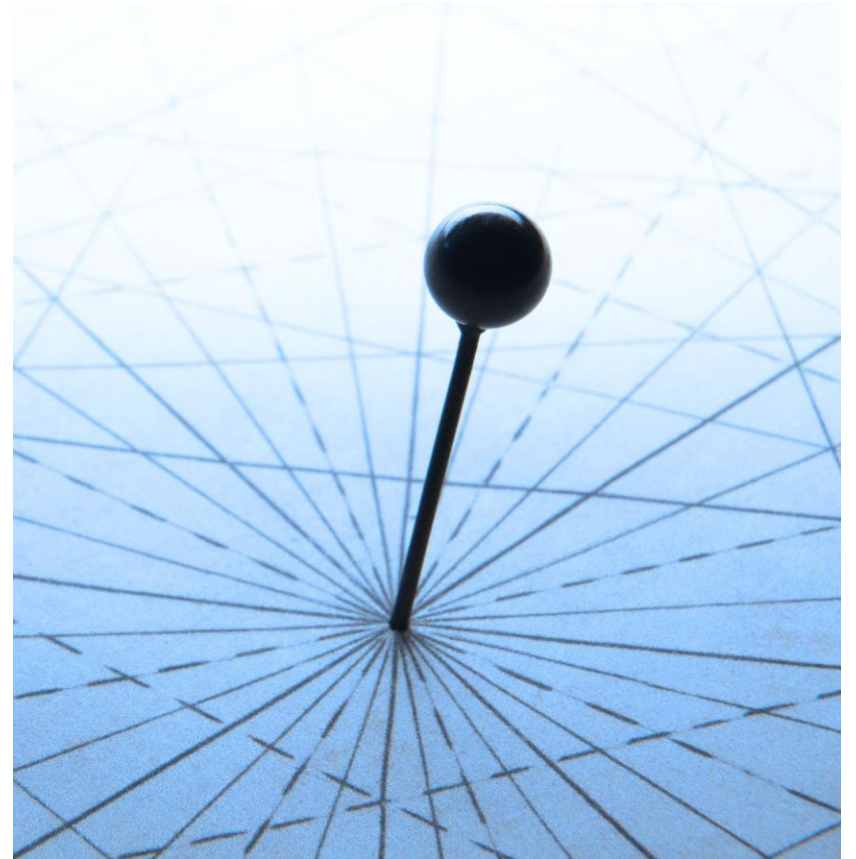
For e.g., “Delhi lies at 29°N latitude and 77°E longitude” It means Delhi is located at the place where these lines meet on the globe.

The difference between local time and standard time lies in their definitions and uses:

Local Time	Standard Time
a. Local Time is the time based on the position of the sun in a specific location.	a. Standard time based on a central meridian
b. It can vary from one place to another depending on the longitude.	b. Standard Time provides a uniform time across larger areas.
c. Each location generally has its own local time, which is determined by the local meridian (the line of longitude).	c. Each country has its own Indian Standard Time. For e.g. Standard Time (IST) is 5 hours and 30 minutes ahead of Greenwich Mean Time (GMT).

How are local time and standard time related to longitude?

- **Local Time:** This is the time based on the position of the sun in a specific location. It can vary from one place to another depending on the longitude. Each location generally has its own local time, which is determined by the local meridian (the line of longitude).
- **Standard Time:** Standard Time provides a uniform time across larger areas. Countries adopt a standard time based on a central meridian. For example, **Indian Standard Time (IST)** is 5 hours and 30 minutes ahead of Greenwich Mean Time (GMT). This helps avoid confusion that would arise from using different local times within a country.
- **Indian Standard Time (IST)** is 5 hours 30 minutes (also noted 5.5 hours) ahead of the local time at Greenwich (called Greenwich Mean Time or GMT).
- **International Date Line:** The Prime Meridian was fixed at Greenwich, the opposite line — at approximately 180° longitude — is called the International Date Line.
- The International Date Line is located approximately at 180 degrees longitude, opposite the Prime Meridian. Crossing the International Date Line changes the date by one day



An aerial photograph of a long, multi-lane highway bridge stretching across a vast body of turquoise water. The bridge has several lanes in each direction, with white lane markings. Several vehicles, including cars and trucks, are visible traveling across the bridge. The water is a vibrant greenish-blue with visible ripples. The sky is not visible, as the bridge and water fill the frame.

THANK YOU