

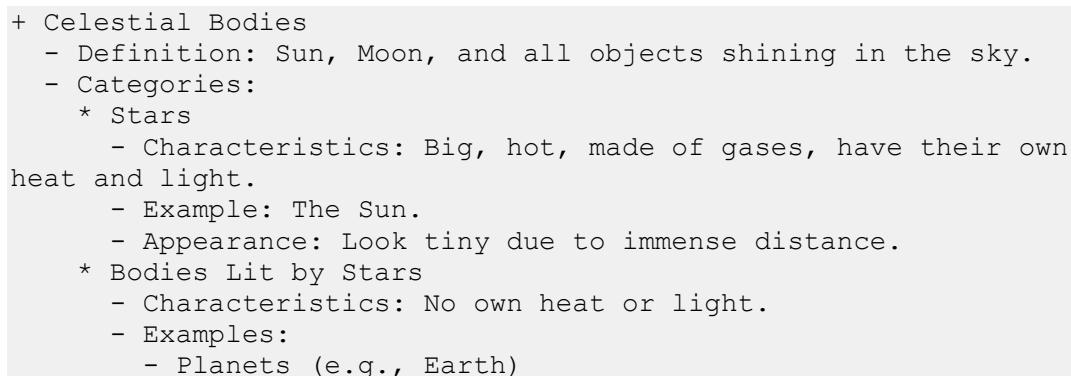
Social Studies Study Guide: Class 6

Chapter 1: Our Earth in the Solar System

Key Points: Celestial Bodies and the Universe

- **Celestial Bodies:** The Sun, the Moon, planets, stars, and all other objects shining in the night sky are collectively known as celestial bodies.
- **Stars:**
 - Stars are celestial bodies that are very big, hot, and made up of gases.
 - They possess their own heat and light, which they emit in large quantities.
 - The Sun is a star.
 - The countless twinkling objects in the night sky are stars similar to the Sun.
 - They appear tiny and their heat/light is not strongly felt because they are very far away from Earth.
- **Bodies Without Their Own Light:**
 - Some celestial bodies do not have their own heat and light; they are lit by the light of stars.
 - Examples include Planets, Satellites, Asteroids, Meteoroids, and Comets.
- **Planets:**
 - The Earth is a planet.
 - It receives all its heat and light from the Sun, which is the nearest star to us.
- **Satellites:**
 - The Moon is a satellite.
 - It is a companion to the Earth and moves around it.
 - Like Earth, seven other planets in our solar system also get heat and light from the Sun, and some of them have their own moons (satellites).
- **Constellations:**
 - These are patterns formed by different groups of stars in the sky.
 - They were named after animals, objects, and creatures based on their perceived shape.
- **Ursa Major (Big Bear):** An example of a constellation.
- **Saptarishi:** An easily recognizable constellation, it is a group of seven stars and is part of the Ursa Major constellation.
- **The Pole Star (North Star):**
 - In ancient times, people used stars to determine directions at night.
 - In the Northern Hemisphere, the North Star indicates the north direction.
 - It always remains in the same position in the sky.
 - Its position can be located with the help of the Saptarishi constellation.

Mind Map: Celestial Bodies



- Satellites (e.g., The Moon)
- Asteroids
- Meteoroids
- Comets
- * Constellations
 - Definition: Patterns of stars.
 - Naming: Based on shapes (animals, objects).
 - Examples:
 - Ursa Major (Big Bear)
 - Saptarishi (group of seven stars)
- * Pole Star (North Star)
 - Function: Indicates the north direction.
 - Characteristic: Fixed position in the sky.
 - Location Method: Found using Saptarishi.

Key Points: The Solar System

- **Definition:** The solar system is a "solar family" consisting of the Sun (as its head), eight planets, satellites, and other celestial bodies like asteroids and meteoroids.
- **The Sun:**
- **Position:** Located at the center of the solar system.
- **Composition:** Huge and made of extremely hot gases.
- **Force:** Provides the "pulling force" that binds the solar system.
- **Energy Source:** The ultimate source of heat and light for the entire solar system.
- **Surface Temperature:** Approximately 6000°C.
- **Size:** Can fit 13 lakh (1.3 million) Earths inside it.
- **Distance from Earth:** About 150 million kilometers.
- **Light Travel Time to Earth:** Light from the Sun takes about eight minutes to reach Earth, traveling at a speed of 300,000 km per second.
- **Planets:**
- **Total Number:** There are eight planets in the solar system.
- **Movement:** All eight planets move around the Sun in fixed, elongated paths called **orbits**.
- **Order from the Sun:** Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune. (Mnemonic: My Very Educated Mother Just Served Us Noodles).
- **Planet Categories:**
- **Inner Planets:** The four planets nearer to the Sun.
- Members: Mercury, Venus, Earth, Mars.
- Characteristics: Comparatively smaller in size and composed of rocks.
- **Outer Planets:** The last four planets.
- Members: Jupiter, Saturn, Uranus, Neptune.
- Characteristics: Large and made up of gases and liquids.
- **Specific Planet Details:**
- **Mercury:** Nearest planet to the Sun. Smallest planet.
- **Venus:** Considered "Earth's twin" because its size and shape are very similar to Earth's.
- **Earth:** Third nearest planet to the Sun.
- **Jupiter:** The biggest planet in the solar system.

Planet Data Table

Planet,Orbit around Sun,Spin on Axis,Number of Moons

Mercury,88 days,59 days,0

Venus,255 days,243 days,0

Earth,365 1/4 days,1 day,1

Mars,687 days,1 day,2

Jupiter,"11 years, 11 months (about 12 years)",9 hours 59 minutes,79

Saturn,"29 years, 5 months",10 hours 40 minutes,"82 (53 confirmed, 29 identified)"

Uranus,84 years,17 hours 14 minutes,27

Neptune,164 years,16 hours 7 minutes,14

Mind Map: The Solar System

- + The Solar System
 - Definition: The Sun and the bodies that revolve around it.
 - Head: The Sun
 - Position: Center of the system.
 - Composition: Extremely hot gases.
 - Role: Provides binding force, heat, and light.
 - Data: 6000°C surface temp, 150 million km from Earth.
 - Members: 8 Planets
 - Movement: Revolve around the Sun in fixed paths called orbits.
 - Categories:
 - * Inner Planets (Rocky, Smaller)
 - Mercury (Nearest, Smallest)
 - Venus (Earth's Twin)
 - Earth
 - Mars
 - * Outer Planets (Gaseous/Liquid, Larger)
 - Jupiter (Biggest)
 - Saturn
 - Uranus
 - Neptune

Key Points: The Earth and The Moon

- **The Earth:**
- **Position and Size:** Third planet from the Sun and the fifth largest in size.
- **Shape:** Described as a **Geoid**, meaning an "Earth-like shape." It is slightly flattened at the North and South poles and bulges in the middle.
- **Appearance:** Appears blue from outer space because two-thirds of its surface is covered by water. It is known as the **Blue Planet**.
- **Unique Planet:** It is the most suitable planet to support life due to its four major components, or "realms".
- **Realms of the Earth:**
- **Lithosphere:** The solid outer layer of the Earth, consisting of rocks and soils. It is the land on which we live.
- **Hydrosphere:** Consists of all water bodies, including oceans, seas, rivers, lakes, and ice caps.
- **Atmosphere:** The layer of air surrounding the Earth. It is composed of different gases, primarily Nitrogen (78%) and Oxygen (21%), with smaller amounts of Carbon dioxide, Hydrogen, Helium, Argon, and Ozone.
- **Biosphere:** The zone where all living things exist (on land, in water, in the air). It includes plants, animals, bacteria, and other organisms. Life is possible on Earth because the lithosphere, hydrosphere, and atmosphere, along with a suitable climate, create the biosphere.
- **The Moon (Earth's Natural Satellite):**
- **Characteristics:** It is Earth's only natural satellite. Its diameter is one-quarter that of Earth.

- **Appearance:** It appears big because it is closer to our planet than other celestial bodies.
- **Distance from Earth:** About 384,400 km away.
- **Movement:** It moves around the Earth in about 27 days. It takes the exact same time to complete one spin on its axis.
- **Visibility:** As a result of its synchronized rotation and revolution, only one side of the Moon is ever visible from Earth.
- **Surface Conditions:** The Moon does not have conditions favorable for life. Its surface has mountains, plains, and depressions, which cast shadows.
- **First Man on the Moon:** Neil Armstrong, an American Astronaut, on July 21st, 1969.
- **Man-Made Satellites:**
- **Definition:** Artificial bodies designed by scientists.
- **Purpose:** To gather information about the universe and Earth, and for communication.
- **Deployment:** Carried by a rocket and placed in orbit around the Earth or other bodies.
- **Indian Satellites:** Examples include INSAT, IRS, and EDUSAT.
- **ISRO:** The Indian Space Research Organisation launches satellites from Sriharikota, at the Satish Dhawan Space Centre (SDSC) SHAR.
- **Mangalyaan (Mars Orbiter Mission - MOM):** Launched by ISRO, it reached the orbit of Mars on September 24th, 2014, making ISRO the fourth space agency to do so.

Mind Map: The Earth and The Moon

- + The Earth
 - Type: A unique planet supporting life.
 - Shape: Geoid (flattened at poles, bulges at middle).
 - Nickname: Blue Planet (due to water).
 - Realms of the Earth:
 - * Lithosphere (Land: rocks, soil)
 - * Hydrosphere (Water: oceans, rivers)
 - * Atmosphere (Air: Nitrogen 78%, Oxygen 21%)
 - * Biosphere (Life: plants, animals)
- + Satellites
 - Definition: Celestial bodies that move around planets.
 - Types:
 - * Natural Satellites (The Moon)
 - Relation to Earth: Only natural satellite.
 - Data: 384,400 km away, 27-day orbit/spin.
 - Visibility: Only one side visible from Earth.
 - Surface: Mountains, plains, no life-supporting conditions.
 - Milestone: Neil Armstrong first man on Moon (July 21, 1969).
 - * Man-Made (Artificial) Satellites
 - Purpose: Information gathering, communication.
 - Launch: Via rockets.
 - Indian Examples: INSAT, IRS, EDUSAT.
 - Launch Agency: ISRO (from Sriharikota).

Key Points: Other Celestial Bodies

- **Asteroids:**
- **Definition:** Small rocky objects that also move around the Sun.
- **Location:** Found in a belt between the orbits of Mars and Jupiter.

- **Scientific View:** Believed to be parts of a planet that exploded many years ago.
- **Meteoroids:**
- **Definition:** Small pieces of rocky or metallic bodies moving around the Sun.
- **Interaction with Earth:** When they come near Earth and enter the atmosphere, friction with the air causes them to heat up, burn, and create a flash of light (a "meteor").
- **Impact:** Sometimes, a meteor falls to the Earth without being completely burnt, creating a hollow.
- **Comets:**
- **Composition:** A celestial object made of a head and a tail. The head consists of solid particles held together by ice, and the tail is made of gases.
- **Famous Example:** Halley's Comet, which comes close to the Earth every 76 years. It last appeared in 1986 and is expected next in 2061.
- **Galaxy:**
- **Definition:** A huge cluster of millions of stars.
- **Our Galaxy:** Our Solar System is part of the **Milky Way** galaxy.
- **Akash Ganga:** In ancient India, the Milky Way was imagined as a river of light flowing in the sky and was thus named Akash Ganga.
- **Universe:**
- **Definition:** The entirety of space, which is made up of millions of galaxies.
- **Scale:** It is difficult to imagine how big the universe is, and scientists are still trying to find out more about it.
- **Our Place:** We are on Earth, which is part of the Solar System, which is part of the Milky Way galaxy, which is part of the Universe.

Chapter 1 at a Glance

- + Our Earth in the Solar System
 - The Universe
 - Definition: Contains millions of galaxies.
 - Our Galaxy: Milky Way (Akash Ganga)
 - Definition: A huge cluster of stars.
 - Our Solar System
 - Center: The Sun (a star)
 - Revolving Bodies:
 - * Planets (Inner & Outer)
 - Our Planet: The Earth
 - Realms: Lithosphere, Hydrosphere, Atmosphere ->
 - Biosphere
 - Shape: Geoid
 - Companion: The Moon (Natural Satellite)
 - * Other Bodies:
 - Asteroids (between Mars & Jupiter)
 - Meteoroids (rocky/metallic pieces)
 - Comets (ice and gas)
 - Man-Made Satellites
 - Observed Phenomena from Earth
 - Stars (Celestial bodies with own light)
 - Constellations (Patterns of stars, e.g., Saptarishi)
 - Pole Star (Indicates North)

Chapter 2: Globe – Model of the Earth

Key Points: The Globe and Earth's Structure

- **Globe as a Model:**
 - A globe is a true model of the Earth. It is useful for studying the Earth as a whole.
 - It shows countries, continents, and oceans in their proportionate size.
 - The oldest terrestrial globe was made in 1492 by Martin Behaim.
- **Earth's Shape:** The Earth is not a perfect sphere. It is slightly flattened at the North and South poles and bulges in the middle.
- **Axis:**
 - A globe is fixed with a tilted needle, which is called its axis. The globe moves around this needle from West to East.
 - The Earth's rotational axis is an imaginary straight line that runs through the North and South Poles. The real Earth has no physical needle.
- **Poles:** The two points on the globe through which the axis passes are the two poles: the **North Pole** and the **South Pole**.
- **Equator:**
 - An imaginary line running horizontally in the middle of the globe. It is the 0° latitude.
 - It divides the Earth into two equal halves.
- **Hemispheres:**
 - **Northern Hemisphere:** The half of the Earth that lies north of the Equator.
 - **Southern Hemisphere:** The half of the Earth that lies south of the Equator.

Mind Map: The Globe & Earth's Structure

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+ Globe: A True Model of the Earth
 - Purpose: To study Earth as a whole, showing proportionate sizes of features.
 - Representation of Earth's Key Features:
 * Shape: Not a perfect sphere; flattened at poles, bulges at middle.
 * Axis: An imaginary line through the center.
 - The globe has a physical, tilted needle representing the axis.
 - Earth's axis is imaginary.
 * Poles: The two endpoints of the axis.
 - North Pole
 - South Pole
 * Equator (0° Latitude): An imaginary horizontal line.
 - Function: Divides the Earth into two equal parts.
 * Northern Hemisphere
 * Southern Hemisphere
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#### Key Points: Latitudes and Longitudes

- **Latitudes:**
- **Definition:** Imaginary circular lines running parallel to the Equator. They are also called parallels.
- **Characteristics:** They are parallel to each other and never meet. They get smaller towards the poles.
- **Measurement:** Range from  $0^{\circ}$  at the Equator to  $90^{\circ}$  North (at the North Pole) and  $90^{\circ}$  South (at the South Pole).
- **Purpose:** Help to measure distances north or south of the Equator and are used to study the climatic divisions of the Earth.
- **Important Latitudes:**
- **Equator:**  $0^{\circ}$
- **Tropic of Cancer:**  $23\frac{1}{2}^{\circ}$  N
- **Tropic of Capricorn:**  $23\frac{1}{2}^{\circ}$  S

- **Arctic Circle:**  $66\frac{1}{2}^{\circ}$  N
- **Antarctic Circle:**  $66\frac{1}{2}^{\circ}$  S
- **North Pole:**  $90^{\circ}$  N
- **South Pole:**  $90^{\circ}$  S
- **Longitudes:**
- **Definition:** Imaginary semi-circle lines that join the North and South Poles. They are also called Meridians.
- **Characteristics:** They are equal in length and meet at the poles. They are farthest apart at the Equator. They run in a North-South direction.
- **Purpose:** Measure the distance east or west of the Prime Meridian. Used with latitudes to find exact locations, time, and climate.
- **Important Longitudes:**
- **Prime Meridian (Greenwich Meridian):**  $0^{\circ}$  longitude.
- **International Date Line:**  $180^{\circ}$  longitude, which is opposite the Prime Meridian. The  $180^{\circ}$  E and  $180^{\circ}$  W lines are the same.
- **Eastern and Western Hemispheres:**
- The Prime Meridian divides the Earth into the **Eastern Hemisphere** ( $0^{\circ}$  to  $180^{\circ}$ E) and the **Western Hemisphere** ( $0^{\circ}$  to  $180^{\circ}$ W).

#### *Mind Map: Latitudes & Longitudes*

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+ Imaginary Lines on the Globe
  - Latitudes (Parallels)
    - Definition: Horizontal circles parallel to the Equator.
    - Characteristics: Never meet, get smaller at poles.
    - Key Lines:
      * Equator ( $0^{\circ}$ )
      * Tropic of Cancer ( $23\frac{1}{2}^{\circ}$  N) & Capricorn ( $23\frac{1}{2}^{\circ}$  S)
      * Arctic Circle ( $66\frac{1}{2}^{\circ}$  N) & Antarctic Circle ( $66\frac{1}{2}^{\circ}$  S)
      * North Pole ( $90^{\circ}$  N) & South Pole ( $90^{\circ}$  S)
  - Longitudes (Meridians)
    - Definition: Vertical semi-circles connecting the Poles.
    - Characteristics: Meet at the poles, equal in length.
    - Key Lines:
      * Prime Meridian ( $0^{\circ}$ ) at Greenwich.
      * International Date Line ( $180^{\circ}$ ).
    - Division of Earth:
      * Eastern Hemisphere (East of Prime Meridian)
      * Western Hemisphere (West of Prime Meridian)

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Key Points: Movements of the Earth and Their Effects

- **Two Basic Movements:** Rotation and Revolution.
- **Rotation:**
- **Definition:** The movement of the Earth on its own axis.
- **Direction:** From West to East.
- **Speed:** 1610 kilometers per hour.
- **Duration:** Takes 23 hours, 56 minutes, and 4.09 seconds (approximately 24 hours or one day) to complete one rotation.
- **Effect:** Causes **day and night**. The half of the Earth facing the Sun experiences day, while the other half is in darkness (night).
- **Revolution:**
- **Definition:** The movement of the Earth around the Sun in a fixed path.
- **Orbit:** The fixed, regular, and elliptical (elongated) path of revolution. The length of the orbit is 965 million kilometers.

- **Duration:** Takes $365\frac{1}{4}$ days (one year) to complete one revolution.
- **Leap Year:** The extra $\frac{1}{4}$ day is added up every four years, creating a "Leap Year" with 366 days. In a leap year, February has 29 days instead of the usual 28.
- **Effect:** Causes the **cycle of seasons**.
- **Seasons:**
- Seasons (summer, winter, spring, autumn) change due to the change in the Earth's position around the Sun and its tilted axis.
- **Summer Solstice (June 21st):**
 - The Northern Hemisphere is tilted towards the Sun.
 - The Sun's rays fall directly on the Tropic of Cancer.
 - Results in the longest day and shortest night in the Northern Hemisphere (summer). The Southern Hemisphere experiences winter.
- **Winter Solstice (December 22nd):**
 - The Southern Hemisphere is tilted towards the Sun.
 - The Sun's rays fall directly on the Tropic of Capricorn.
 - Results in summer in the Southern Hemisphere (longer days) and winter in the Northern Hemisphere.
- **Equinox (March 21st and September 23rd):**
 - The Sun's direct rays fall on the Equator.
 - The entire Earth experiences equal day and night.
- **September 23rd:** Autumn in the Northern Hemisphere, spring in the Southern Hemisphere.
- **March 21st:** Spring in the Northern Hemisphere, autumn in the Southern Hemisphere.
- **Eclipses:**
- Occur when the Sun, Moon, and Earth come into a straight line during their revolutions.
- **Solar Eclipse:**
- **Alignment:** The Moon passes between the Sun and Earth (Sun-Moon-Earth).
- **Effect:** The Moon's shadow falls on the Earth, blocking the Sun's light.
- **Timing:** Occurs only on a new moon day (but not every new moon).
- **Lunar Eclipse:**
- **Alignment:** The Earth passes between the Sun and Moon (Sun-Earth-Moon).
- **Effect:** The Earth's shadow falls on the Moon.
- **Timing:** Occurs only on a full moon day (but not every full moon).

Mind Map: Earth's Movements

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+ Earth's Movements
 - Rotation (Spinning on axis)
 - Direction: West to East.
 - Duration: ~24 hours (1 day).
 - Effect: Causes Day and Night.
 - Revolution (Moving around the Sun)
 - Path: Elliptical Orbit.
 - Duration: $365\frac{1}{4}$ days (1 year).
 - Note: Leads to Leap Year every 4 years.
 - Effect: Causes Seasons.
 * Solstices (Longest/Shortest Day)
 - Summer (June 21): Sun over Tropic of Cancer.
 - Winter (Dec 22): Sun over Tropic of Capricorn.
 * Equinoxes (Equal Day/Night)
 - March 21 & Sept 23: Sun over Equator.
 - Effect: Causes Eclipses (when aligned).
 * Solar Eclipse (Sun-Moon-Earth)
 * Lunar Eclipse (Sun-Earth-Moon)

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## Chapter 2 at a Glance

- + Globe - Model of the Earth
  - Representing the Earth
    - \* Globe: True 3D model.
    - \* Key Features:
      - Axis (Tilted, Imaginary)
      - Poles (North & South)
      - Equator ( $0^{\circ}$  Latitude)
      - Hemispheres (N, S, E, W)
    - Grid System for Location
      - \* Latitudes (Horizontal Parallels)
        - Key Lines: Equator, Tropics, Circles, Poles.
      - \* Longitudes (Vertical Meridians)
        - Key Lines: Prime Meridian, International Date Line.
    - Earth's Dynamics
      - \* Movements:
        - Rotation (Spinning)
          - > Effect: Day & Night
        - Revolution (Orbiting)
          - > Effect: Seasons (Solstices, Equinoxes)
          - > Effect: Eclipses (Solar, Lunar)

## Chapter 3: Maps

### Key Points: Introduction to Maps

- **Map vs. Sketch:**
- **Sketch:** A drawing based mainly on memory and spot observation. It is a rough drawing and is not to scale.
- **Map:** A representation of the whole Earth, or a part of it, on a flat surface drawn to a proportionate scale. It must include components like direction, scale, and symbols.
- **Limitations of a Globe:** A globe is useful for studying the Earth as a whole, but for studying parts of the Earth (like a country, state, or village), maps are more helpful.
- **Map Terminology:**
- **Cartographers:** People who make maps.
- **Atlas:** A book of maps.

### Key Points: Components of a Map

A map has four main components: Directions, Scale, Symbols, and Colours.

- **1. Directions:**
- **Principal Direction:** North is treated as the principal direction. Most maps contain a North arrow with the letter 'N' at the top right-hand corner.
- **Cardinal Directions:** The four major directions: North (N), South (S), East (E), and West (W).
- **Intermediate Directions:** The four directions between the cardinal points: North-east (NE), South-east (SE), South-west (SW), and North-west (NW). These allow for more accurate location.
- **2. Scale:**
- **Definition:** The ratio of a distance on a map to the corresponding distance on the actual ground.

- **Purpose:** It is used to calculate the actual distance between two locations shown on a map. For example, a scale might state that 1 cm on the map equals 1 km on the ground.
- **3. Symbols:**
- **Purpose:** Since it's impossible to draw the actual shape and size of features like buildings, roads, bridges, or trees, symbols are used.
- **Function:** They provide a lot of information in a limited space, making maps easy to draw and read.
- **Universality:** Symbols allow a person to understand a map even if they do not know the local language.
- **4. Colours:**
- **Use in Physical Maps:** Different colours are used to represent different physical features.
- **Blue:** Water Bodies (Rivers, Seas, Oceans)
- **Green:** Plains or Lowlands
- **Yellow:** Plateaus
- **Brown:** Mountains
- **Use in Thematic Maps:** Colours and patterns (like shades and lines) can be used to show different intensities of a specific feature (e.g., population density, rainfall).

#### *Mind Map: Components of a Map*

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+ Components of a Map
- 1. Directions
  * Cardinal: North, South, East, West.
  * Intermediate: NE, SE, SW, NW.
  * Indicator: North Arrow ('N') on maps.
- 2. Scale
  * Definition: Ratio between map distance and ground distance.
  * Purpose: To calculate real-world distances.
- 3. Symbols
  * Definition: Letters, shades, pictures, lines representing real features.
  * Purpose: Convey information efficiently; universal understanding.
- 4. Colours
  * Usage: Represent different types of features.
  * Examples (Physical Maps):
    - Blue -> Water
    - Green -> Plains
    - Yellow -> Plateaus
    - Brown -> Mountains
```

Key Points: Types of Maps

Maps can be classified into three main types based on their content or purpose.

- **1. Political Maps:**
- **Function:** Show villages, cities, towns, districts, states, and countries with their boundaries.
- **2. Physical Maps:**
- **Function:** Show the physical features of an area, such as Mountains, Plateaus, Plains, Oceans, Rivers, and Deserts.
- **3. Thematic Maps:**
- **Function:** Used to show the distribution of a specific feature or theme.

- **Examples:** Maps showing land use, temperature, rainfall, population, soils, crops, minerals, industries, or transportation routes (railways, roads). Maps can also be classified based on scale:
- **Large-Scale Maps:**
- Represent small areas in great detail.
- Examples: Cadastral maps (showing individual property) and Topographical maps (showing detailed surface features).
- **Small-Scale Maps:**
- Represent large areas like the World, Continents, or Countries.
- Examples: Wall maps and Atlas maps. Wall maps are larger and used for teaching or administrative purposes.

Chapter 3 at a Glance

- + Maps
 - Definition: Scaled representation of an area on a flat surface.
 - Distinction: Different from a Sketch (not to scale).
 - Core Elements (Components)
 - * Directions (Cardinal & Intermediate)
 - * Scale (Ratio of distances)
 - * Symbols (Represent features)
 - * Colours (Represent elevation/feature type)
 - Classification (Types of Maps)
 - * Based on Content:
 - Political (Boundaries)
 - Physical (Landforms)
 - Thematic (Specific data, e.g., crops, rainfall)
 - * Based on Scale:
 - Large-Scale (Small area, high detail)
 - Small-Scale (Large area, low detail)
 - Uses of Maps
 - * Locating places, showing physical features, transport routes, resource distribution, military planning, and tourism.

Chapter 4: Landforms - Andhra Pradesh

Key Points: Understanding Landforms

- **Landforms (Relief):** The different natural shapes of the Earth's surface. The lifestyle, food habits, and dressing patterns of people often differ according to the landform of their region.
- **Variety:** Landforms are not uniform; they vary from highly elevated mountains to flat plains and low-lying valleys.
- **Measurement:** The height of landforms is measured from the **Mean Sea Level (MSL)**.
- **Main Categories:** Landforms can be broadly categorized into three types: Plains, Plateaus, and Mountains (or Hills).

Key Points: Major Landform Types

- **1. Mountains:**
- **Definition:** A natural, highly elevated feature of the Earth's surface, considerably higher than the surrounding area.
- **Characteristics:** May have a small summit (peak) and a broad base.
- **Climate:** The climate becomes colder as one goes to higher altitudes on mountains.
- **Example in India:** The Himalayas are a huge mountain range.

- **In Andhra Pradesh:** The majority of high landforms are classified as hills.
- **2. Plateaus:**
- **Definition:** An elevated, flat land; a flat-topped tableland standing above the surrounding area.
- **Characteristics:** May have steep or gentle slopes on one or more sides.
- **Mineral Resources:** Plateaus are generally rich in mineral deposits, leading to the location of many mining areas. Minerals available in plateaus include limestone, manganese, asbestos, iron ore, gold, diamonds, and graphite.
- **Example in India:** The **Deccan Plateau** is the oldest plateau in India, formed from volcanic origin. The larger part of the Rayalaseema region in Andhra Pradesh is part of the Deccan Plateau.
- **Soil:** Lava plateaus, like the Deccan, are rich in black soil, which is fertile and good for cultivating cotton.
- **Highest Plateau:** The Tibet plateau is the highest in the world (4,000 to 6,000 meters above MSL).
- **3. Plains:**
- **Definition:** Level lands with flat surfaces, having a maximum height of 200 meters above sea level.
- **Characteristics:**
- **Population:** They are typically densely populated areas.
- **Productivity:** Highly productive due to fertile soils.
- **Habitation:** Most suitable for human inhabitation because the flat land is ideal for building houses and for cultivation.
- **Transportation:** Construction of transport networks is easy.
- **Example in India:** The Indo-Gangetic plains are world-famous.

Chapter 4 at a Glance

- + Landforms
 - Definition: The natural shapes of the Earth's surface (also called Relief).
 - Measurement: Height is measured from Mean Sea Level (MSL) .
 - Major Categories:
 - * Mountains / Hills
 - Description: Highly elevated land with a peak.
 - Climate: Colder at higher altitudes.
 - A.P. Context: Mostly hills.
 - * Plateaus
 - Description: Elevated flat-topped land (tableland) .
 - Significance: Rich in minerals (mining areas).
 - Example: Deccan Plateau (volcanic, black soil for cotton), which includes the Rayalaseema region.
 - * Plains
 - Description: Low-lying, flat land (max 200m above MSL) .
 - Significance: Fertile, densely populated, easy for construction and cultivation.
 - Example: Indo-Gangetic Plains.
 - Influence on Life: Landforms affect lifestyles, food, and clothing of people.

Comprehensive Glossary

- **Akash Ganga:** The ancient Indian name for the Milky Way galaxy, imagined as a river of light.

- **Asteroids:** Small, irregular-shaped rocky objects found orbiting the Sun, primarily between Mars and Jupiter.
- **Atlas:** A book of maps.
- **Atmosphere:** The layer of gases that surrounds the Earth.
- **Axis:** An imaginary line about which a body, like the Earth, rotates.
- **Biosphere:** The layer of life on Earth, encompassing all living things on land, in water, and in the air.
- **Cardinal Directions:** The four main directions: North, East, South, and West.
- **Cartographers:** People who make maps.
- **Celestial Bodies:** All objects in the sky, such as the Sun, Moon, stars, and planets.
- **Comet:** A celestial object made of ice, dust, and gas that develops a tail as it nears the Sun.
- **Compass:** An instrument used to find the main directions.
- **Constellation:** A recognizable pattern of stars in the night sky.
- **Eclipse (Lunar):** Occurs when the Earth passes directly between the Sun and Moon, casting a shadow on the Moon.
- **Eclipse (Solar):** Occurs when the Moon passes between the Sun and Earth, casting a shadow on the Earth.
- **Equator:** The imaginary line at 0° latitude that divides the Earth into the Northern and Southern Hemispheres.
- **Equinox:** The two days of the year (around March 21 and September 23) when the Sun is directly above the Equator, resulting in day and night being of equal length everywhere on Earth.
- **Galaxy:** A huge system of millions or billions of stars, together with gas and dust, held together by gravitational attraction.
- **Geoid:** The true shape of the Earth, described as "Earth-like" (slightly flattened at the poles and bulging at the Equator).
- **Globe:** A spherical, true model of the Earth.
- **Hydrosphere:** The layer of water on the Earth's surface, including oceans, lakes, and rivers.
- **Intermediate Directions:** The directions between the cardinal points: northeast, southeast, southwest, and northwest.
- **Landforms:** The natural physical features of the Earth's surface, such as mountains, plateaus, and plains.
- **Latitudes:** Imaginary horizontal lines that run parallel to the Equator, used to measure distance north or south.
- **Lithosphere:** The solid, outer rocky layer of the Earth.
- **Longitudes:** Imaginary vertical lines (meridians) that run from the North Pole to the South Pole, used to measure distance east or west.
- **Map:** A diagrammatic representation of an area of land or sea showing physical features, cities, roads, etc., drawn to scale.
- **Meteoroids:** Small rocky or metallic bodies in outer space that create a flash of light (a meteor) when they burn up in Earth's atmosphere.
- **Orbit:** The fixed, elliptical path in which a planet or other celestial body moves around a star.
- **Plains:** Large areas of flat land with low elevation.
- **Plateau:** An area of relatively high, flat land.
- **Revolution:** The movement of one celestial body in an orbit around another (e.g., Earth moving around the Sun).
- **Rotation:** The spinning movement of a planet or other celestial body on its axis.
- **Satellite:** A celestial body that moves around a planet. Can be natural (the Moon) or man-made.
- **Scale:** The ratio between the actual distance on the ground and the distance shown on a map.

- **Seasons:** Divisions of the year defined by changes in weather, caused by the Earth's revolution and axial tilt.
- **Sketch:** A rough drawing made from memory or observation, not to scale.
- **Solstice:** The two days of the year when the Sun reaches its highest or lowest point in the sky at noon, marked by the longest and shortest days (around June 21 and December 22).
- **Star:** A celestial body made of hot gases that produces its own heat and light.
- **Universe:** All existing matter and space considered as a whole; the cosmos.