

**Dawood Public School**  
**Course Outline 2019-20**  
**Geography**  
**Grade V**

**Books:**

Liew, Jeanne; International Lower, Geography Book I; Marshall Cavendish Education. Moss, Peter; Oxford History for Pakistan Book I; OUP

**Yearly Syllabus:**

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## Syllabus Content

August 2019

Chapter: Weather and Climate

Pages no: 65 - 84

Content	Learning Objectives
<p><b>Weather and Climate</b></p> <p>Every planet is surrounded by a layer of gases called 'atmosphere'. The change in atmosphere for a short period of time at a given place is termed as 'weather'.</p> <p>An average weather condition recorded over a long period of time at a particular place is termed as 'climate'.</p> <p>The Earth is surrounded by five protective atmospheric layers:</p> <ul style="list-style-type: none"> <li>• Troposphere</li> <li>• Stratosphere</li> <li>• Mesosphere</li> <li>• Thermosphere</li> <li>• Exosphere</li> </ul>	<ul style="list-style-type: none"> <li>• Recall the definition of the following: <ul style="list-style-type: none"> <li>➤ weather</li> <li>➤ climate</li> <li>➤ atmosphere</li> </ul> </li> <li>• List the different layers of the Earth.</li> <li>• State the importance of each atmospheric layer of the Earth.</li> </ul>
<p><b>Hydrologic cycle:</b></p> <p>The hydrologic cycle begins with the evaporation of water from the surface of the ocean. As moist air is lifted, it cools and water vapor condenses to form clouds. Water vapors condense in four different types:</p> <ul style="list-style-type: none"> <li>• dew</li> <li>• frost</li> <li>• mist</li> <li>• fog</li> </ul> <p>Moisture is then transported around the globe until it returns to the surface as precipitation in forms of rain, snow, hail or sleet.</p>	<ul style="list-style-type: none"> <li>• Revise the four processes of Hydrological Cycle.</li> <li>• List the types of water vapor.</li> <li>• List the forms of precipitation.</li> <li>• Recall the definition of the following terms: <ul style="list-style-type: none"> <li>➤ evaporation</li> <li>➤ transpiration</li> <li>➤ condensation</li> <li>➤ precipitation</li> </ul> </li> </ul>
<p><b>Elements of Climate and Weather</b></p> <p>There are many elements which become part of climate and weather.</p> <p>Temperature refers to the degree of hotness or coldness of the air, which is carries in the atmosphere through the movement of winds. Winds can be of varying speeds in different places. The atmosphere also carries water vapor in the form of humidity. Water also falls to the Earth as rainfall from the clouds which are formed by condensation. Clouds also affect temperature.</p> <p>Atmospheric pressure is exerted by the weight of air per unit area.</p>	<ul style="list-style-type: none"> <li>• List the elements of weather.</li> <li>• Define the following elements: <ul style="list-style-type: none"> <li>➤ temperature</li> <li>➤ wind direction</li> <li>➤ humidity</li> <li>➤ air pressure</li> <li>➤ rainfall</li> <li>➤ wind speed</li> <li>➤ clouds</li> </ul> </li> <li>• Name the instruments and the units used for measuring weather.</li> <li>• Explain why different areas have different weather.</li> <li>• Explain the importance of clouds.</li> </ul>
<p><b>Clouds</b></p> <p>Clouds are made up of water droplets. They appear in different shapes and sizes.</p> <p>The three important types of clouds are:</p>	<ul style="list-style-type: none"> <li>• List the important types of clouds.</li> <li>• Describe the characteristics of the three important types of clouds:</li> </ul>

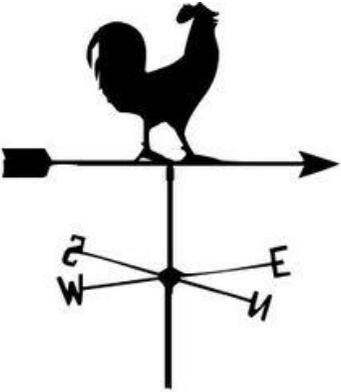
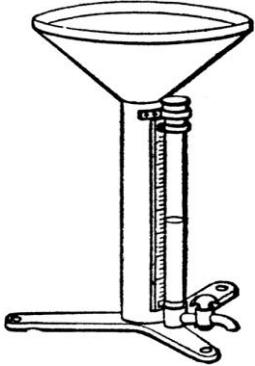
<p><b>Cumulus clouds:</b> They are white and fluffy. The clouds pile up from a flat base, as warm air rises. Strong updrafts may cause <b>cumulonimbus</b> to form, which can grow very tall and cause heavy rain.</p> <p><b>Cirrus clouds:</b> They are high wispy clouds. They usually form at high altitude.</p> <p><b>Stratus clouds:</b> They are shapeless layers of clouds. They cause long periods of rain.</p>	<ul style="list-style-type: none"> <li>➤ Cumulus clouds</li> <li>➤ Cirrus clouds</li> <li>➤ Stratus clouds</li> <li>• Differentiate between cumulus and cumulonimbus clouds.</li> </ul>
<p><b>Rainfall:</b> Rainfall is caused by precipitation. Air rises as precipitation to the atmosphere for different reasons. Due to this we have different types of rainfall. Warm air rises by the heating of the ground in the form of convection currents, the rain formed by this called convectional rain. Air is forced to rise when it meets high hills or mountains. Clouds formed as a result cause relief rain. This rain occurs on the windward side of the hill; whereas the leeward side will not receive the rain and will remain dry. When a warm air mass meets a cold air mass, a front is formed. The warm air is forced to rise over the cold air mass and frontal rain occurs.</p>	<ul style="list-style-type: none"> <li>• List the different types of rain.</li> <li>• Describe the following: <ul style="list-style-type: none"> <li>➤ Convectional rain</li> <li>➤ Relief rain</li> <li>➤ Frontal rain</li> </ul> </li> <li>• Describe the following: <ul style="list-style-type: none"> <li>➤ Windward side of a hill/mountain</li> <li>➤ Leeward side of a hill/mountain</li> </ul> </li> </ul>
<p><b>Climate and its factors</b> The average weather condition over a long period of time is climate.</p> <p><b>Factor affecting climate:</b></p> <p><b>Latitude</b> The further away from the equator, the cooler the place is. This is due to the different angle of sun's rays on the surface of Earth.</p> <p><b>Land and sea breeze</b> The sea has a cooling effect on the places near to it. Sea breeze too, plays a cooling effect to places.</p> <p><b>Distance from sea</b> The places nearer to the sea experience cooler summer and warmer winter in comparison to the places which are away from the sea.</p> <p><b>Ocean current</b> Ocean current can be warm or cold depending on where they flow from.</p> <p><b>Prevailing Winds</b> There are winds which generally blow frequently throughout the year, also affecting climate.</p>	<ul style="list-style-type: none"> <li>• List the factors which affect climate.</li> <li>• Explain the effects of latitude on climate.</li> <li>• Describe the influence of land and sea breeze on any area.</li> <li>• Explain the change in the climate of areas which are near or away from the sea.</li> <li>• Define 'ocean current'.</li> <li>• Explain the effects of ocean currents on areas near the coast.</li> <li>• Describe 'maritime influence'.</li> <li>• Explain the 'continental effect'.</li> <li>• Differentiate between 'cold currents' and 'warm currents'.</li> <li>• Explain how winds can be moist.</li> </ul>
<p><b>Is our Climate changing?</b> Human activities accelerate climate change and</p>	<ul style="list-style-type: none"> <li>• Develop awareness that 'climate change' is a</li> </ul>

<p>cause global warming. Use of CFC's, fossil fuels etc. cause these changes in the climate of many areas on Earth.</p>	<p>serious concern.</p> <ul style="list-style-type: none"> <li>List the activities that may have a positive effect for the environment.</li> <li>List the activities that may have a negative effect for the environment.</li> <li>Define 'global warming'.</li> <li>Describe the activities which are causing global warming.</li> <li>Explain the change in climate by the activities which are causing global warming.</li> <li>Explain the change in climate during the previous ten years.</li> </ul>
<p><b>Evidence of Climate change</b></p> <ul style="list-style-type: none"> <li>Increase in global temperature</li> <li>Melting of glaciers</li> <li>Rise in sea level</li> </ul> <p>Climate change has many consequences such as droughts which are prolonged periods without water and floods: which are overflow of water.</p>	<ul style="list-style-type: none"> <li>Define the following terms: <ul style="list-style-type: none"> <li>evidence</li> <li>consequence</li> </ul> </li> <li>Describe what happens in 'drought'.</li> <li>Describe the occurrence of a 'flood'.</li> <li>State the negative and positive impacts of flooding on the environment.</li> </ul>

**Key Words:**  
weather, climate, atmosphere, precipitation, evaporation, transpiration, climate change, drought, consequence, current, forecast

**Practice Questions:**

- State the difference between weather and climate.
- Identify the following weather instruments & state the name of their weather elements and recording units.

**Projects, Assignments and Activities:**

- Activity from Textbook, Page no: 83: "How green are you?"
- Students will make different types of clouds to display on soft board.
- Students will conduct a survey during break time interviewing fellow students about how summer and winter vacations are spent.

September 2019

Chapter: Agriculture

Pages no: 116 - 128

Content	Learning Objectives
<p><b>Agriculture</b>  Farmers grow crops and raise animals for food. They also provide raw materials for industries. All this is part of 'agriculture'.</p>	<ul style="list-style-type: none"> <li>Define 'agriculture'.</li> <li>Identify the source of foods.</li> <li>Name the two types of farming.</li> </ul>

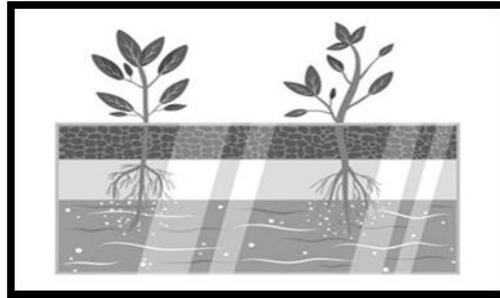
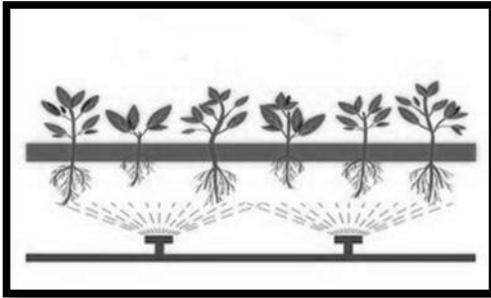
<p>There are two types of farming:</p> <ul style="list-style-type: none"> <li>• Arable farming</li> <li>• Pastoral farming</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the following: <ul style="list-style-type: none"> <li>➤ arable farming</li> <li>➤ pastoral farming</li> </ul> </li> </ul>
<p><b>Purpose and Importance of Agriculture</b></p> <p>Subsistence agriculture refers to growing crops or keeping animals by farmers for their own use or to feed their own families.</p> <p>Commercial farming refers to growing crops or keeping animals for selling purposes.</p> <p>Farming is important due to the following reasons:</p> <ul style="list-style-type: none"> <li>• Source of food supply</li> <li>• Employment</li> <li>• Foreign exchange earner</li> <li>• Solution to poverty and hunger</li> </ul>	<ul style="list-style-type: none"> <li>• Define the following: <ul style="list-style-type: none"> <li>➤ subsistence agriculture</li> <li>➤ commercial agriculture</li> </ul> </li> <li>• List the reasons for the importance of agriculture.</li> <li>• Describe how agriculture can provide employment.</li> <li>• Differentiate between ‘food supply’ and ‘raw materials’.</li> <li>• Develop awareness regarding the difference between agricultural nations and industrial nations.</li> <li>• Develop awareness about the role of agricultural nations for providing food for the world.</li> </ul>
<p><b>Shifting Cultivation</b></p> <p>In the tropical zones, the shifting cultivators use the land of the forest and do cultivation. These farmers use the land for three to four years, after which the land loses its fertility and the farmers have to shift to another piece of land.</p> <p>It is common in tropical region because the land of tropical region can be reclaimed.</p>	<ul style="list-style-type: none"> <li>• Describe plantation agriculture.</li> <li>• Describe shifting cultivation.</li> <li>• Describe small scale farming.</li> <li>• Name the areas where shifting cultivation is practiced.</li> <li>• State why shifting cultivation is dominant in tropical climatic zones.</li> <li>• Differentiate between ‘shifting cultivation’ and ‘permanent systems of agriculture’</li> <li>• Develop awareness about how ‘permanent systems of agriculture’ may cause harm to the environment.</li> </ul>
<p><b>High Technology Agriculture</b></p> <p>Scientists have discovered new farming technology to feed the growing population and increasing demand for food.</p> <ul style="list-style-type: none"> <li>• Greenhouse technology</li> <li>• Hydroponics</li> <li>• Aeroponics</li> </ul> <p><b>Eden Project</b></p> <p>The largest greenhouse in the world is the Eden Project in United Kingdom. It consists of enclosures that house plant species from all over the world.</p>	<ul style="list-style-type: none"> <li>• Suggest two reasons for using new farming technology.</li> <li>• List the high-tech methods of agriculture.</li> <li>• Describe how greenhouse technology can be used for agriculture.</li> <li>• Describe the differences between aeroponics and hydroponics.</li> <li>• Describe the advantages and disadvantages of hydroponics.</li> <li>• Describe the advantages and disadvantages of aeroponics.</li> <li>• Explain the purpose of the Eden Project.</li> </ul>

**Key Words:**

agriculture, arable farming, pastoral farming, plantation agriculture, shift cultivation

**Practice Questions:**

1. Differentiate between arable farming and pastoral farming.
2. Describe the importance of agriculture.
3. Identify the type of farming technique shown in the figure.

**Projects, Assignments and Activity:**

- Students will conduct the activity given on page number 127.
- Video links will be sent as HW to show techniques of hydroponics and aeroponics.
- Students will write a research report on any of the following:  
Ostrich Farming, Sheep Farming, Oil seeds Farming.

October 2019

Chapter: Climate and Natural Vegetation

Pages no: 91 - 115

Content	Learning Objectives
<p><b>Natural vegetation and Ecosystem</b></p> <p>An ecosystem comprises of living things such as plants, natural vegetation and animals as well as non-living things such as soil, water and climate present together in an environment.</p> <p>Natural vegetation is the variety of plants that grow before any human effort through activities like farming, mining, etc.</p>	<ul style="list-style-type: none"> <li>• Define the following terms:               <ul style="list-style-type: none"> <li>➤ natural vegetation</li> <li>➤ ecosystem</li> <li>➤ food Chain</li> <li>➤ chain of reaction</li> </ul> </li> <li>• Differentiate between man-made and natural vegetation.</li> <li>• Describe an ecosystem with reference to the food chain.</li> </ul>
<p><b>Distribution of Natural Vegetation</b></p> <p>Climatic zones and natural vegetation are closely connected. Distribution of natural vegetation type is greatly influenced by the temperature and rainfall received by an area. The following factors affect natural vegetation:</p> <ul style="list-style-type: none"> <li>• Rainfall</li> <li>• Temperature</li> <li>• Sunlight</li> </ul>	<ul style="list-style-type: none"> <li>• Develop awareness that the distribution of natural vegetation and climate are closely connected.</li> <li>• Describe the types of vegetation in areas which have:               <ul style="list-style-type: none"> <li>➤ abundant rainfall</li> <li>➤ low rainfall</li> </ul> </li> <li>• State the factors which affect the growth of natural vegetation.</li> </ul>
<p><b>The Earth's Main Ecosystems</b></p> <p>A biome is a large scale ecosystem and can be classified according to vegetation:</p> <ul style="list-style-type: none"> <li>• Forest biome</li> <li>• Grassland biome</li> <li>• Desert biome</li> </ul>	<ul style="list-style-type: none"> <li>• Define 'biome'.</li> <li>• State the three different types of Biomes.</li> <li>• Describe the region which would form the following:               <ul style="list-style-type: none"> <li>➤ a forest biome</li> <li>➤ a grassland biome</li> <li>➤ a desert biome</li> </ul> </li> </ul>

<p><b>Tropical Rainforest</b></p> <p>Tropical rainforests are found between 23.5° north and south of the equator.</p> <p>Rainforest vegetation is evergreen and home to more than half of the world's total plant, animal and insect species. They mostly comprise of dense areas with three distinct layers marked by different heights of the trees:</p> <ul style="list-style-type: none"> <li>• Emergent layer</li> <li>• Canopy layer</li> <li>• Undergrowth layer</li> </ul>	<ul style="list-style-type: none"> <li>• Define the following: <ul style="list-style-type: none"> <li>➤ tropical</li> <li>➤ flora</li> <li>➤ fauna</li> <li>➤ buttress root system</li> </ul> </li> <li>• Describe the tropical rainforest area.</li> <li>• Name the lines of latitudes which form the Tropical areas.</li> <li>• Name some countries which are in tropical areas.</li> <li>• Describe the climate of tropical rainforests.</li> <li>• Name the three distinct layers in the tropical rainforests.</li> <li>• Describe the characteristics of the emergent layer.</li> <li>• Differentiate between the trees of the emergent layer and the canopy layer.</li> <li>• Describe the plants in the undergrowth layer.</li> <li>• Explain how the following adapt for growth in the tropical rainforests: <ul style="list-style-type: none"> <li>➤ trees and other plants</li> <li>➤ structure</li> <li>➤ leaves</li> <li>➤ root systems</li> <li>➤ soil</li> </ul> </li> </ul>
<p><b>Coniferous forest</b></p> <p>Coniferous forests are found between 50° and 70° north of the equator. The forests are populated mostly with coniferous trees.</p> <p>Typical species for these upright, evergreen trees are pine, fir and spruce.</p> <p>The temperatures in the areas for Coniferous forests range between -12° C and 10° C.</p>	<ul style="list-style-type: none"> <li>• Explain why coniferous trees are 'evergreen'.</li> <li>• Give three examples of Coniferous trees.</li> <li>• Identify the areas for Coniferous forests with reference to lines of latitude.</li> <li>• Explain why Coniferous forest is mostly found in Northern hemisphere.</li> <li>• Name some countries which are in Northern hemisphere.</li> <li>• Describe the climate of the Coniferous forests.</li> <li>• Explain how the following adapt for growth in the Coniferous forests: <ul style="list-style-type: none"> <li>➤ trees and other plants</li> <li>➤ structure</li> <li>➤ leaves</li> <li>➤ root systems</li> <li>➤ soil</li> </ul> </li> </ul>

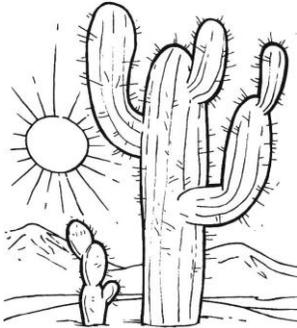
<p><b>Hot Desert Vegetation</b></p> <p>Deserts cover about one-fifth of the earth's surface and receive very little rainfall. Hot deserts are found between 15° and 35° north and south of the equator where temperatures can go up as high as 48° C.</p> <p>Vegetation in this ecosystem is dominated by cacti, short bushes and tough grasses which adapt to the hot and dry conditions.</p>	<ul style="list-style-type: none"> <li>• State the area of the earth covered by deserts.</li> <li>• Describe the characteristics of natural vegetation found in hot deserts.</li> <li>• State the latitudes of hot desert vegetation.</li> <li>• Explain how the following adapt for growth in the hot deserts: <ul style="list-style-type: none"> <li>➤ vegetation</li> <li>➤ leaves and tree trunks</li> <li>➤ soil</li> </ul> </li> <li>• Name and mark the countries which have hot desert vegetation.</li> <li>• Describe the climate of hot desert vegetation.</li> </ul>
<p><b>Tropical Grassland</b></p> <p>Savannas or tropical grasslands are found between 5° and 30° north and south of the equator. These experience high temperatures and rainy season all year</p> <p>Natural vegetation is dominated by long coarse grasses and scattered trees. Each part of the grassland adapts in order to grow in the grassland.</p>	<ul style="list-style-type: none"> <li>• Describe the characteristics of the tropical grasslands.</li> <li>• State the latitudes of tropical grassland.</li> <li>• Explain how the following adapt for growth in the tropical grasslands: <ul style="list-style-type: none"> <li>➤ grasses and other plants</li> <li>➤ leaves and tree trunks</li> <li>➤ root systems</li> <li>➤ soil</li> </ul> </li> <li>• Name some countries which have tropical grasslands.</li> <li>• Describe the climate in tropical grasslands.</li> </ul>
<p><b>Destruction of Forests</b></p> <p>The Earth's rainforests are generally found in South America, South East Asia and Africa. According to statistics, half of the rainforests have been destroyed to allow for population growth.</p> <p>The results of this deforestation are:</p> <ul style="list-style-type: none"> <li>• habitat destruction</li> <li>• soil erosion</li> <li>• disturbance in atmospheric balance for carbon dioxide and oxygen</li> <li>• climate change</li> </ul>	<ul style="list-style-type: none"> <li>• Define 'deforestation'</li> <li>• List some reasons which lead to deforestation.</li> <li>• Describe how the following will be affected with deforestation: <ul style="list-style-type: none"> <li>➤ people living in forests</li> <li>➤ animals living in forests</li> <li>➤ soil</li> </ul> </li> <li>• Explain how forests and natural vegetation helps the climate.</li> <li>• Describe what will happen if there is very less natural vegetation in the world.</li> <li>• Identify some human behavior choices which are destroying the natural vegetation.</li> <li>• List some precautions that have been taken by the Government to stop deforestation.</li> </ul>

**Key Words:**

biome, evergreen, coniferous, deciduous, rainforest, tundra, drip tip, needles, conical shape, adaptation, habitat, native species, ecosystem

**Practice Questions:**

1. Describe the factors that influence the vegetation of an area.
2. What are the results of deforestation of a rainforest?
3. State the adaptation features of the following vegetation:

**Projects, Assignments and Activity:**

- Students will conduct an activity where they will bring different leaves and will identify their adaptation characteristics.

**November 2019**

**REVISION FOR MID-YEAR EXAMINATION 2019**

**December 2019**

**MID-YEAR EXAMINATION 2019**

**January 2020**

**Chapter: Mapping skills**

**Pages no: 44 – 57**

<b>Content:</b>	<b>Learning Objectives</b>
<p><b>Maps</b> Maps are visual representations of the Earth's surface as seen vertically from above. They are used to locate places and routes. Maps have helped people travel since the 16<sup>th</sup> century. The elements of each map help us decipher what it shows.</p>	<ul style="list-style-type: none"> <li>• Define the following terms: <ul style="list-style-type: none"> <li>➤ map</li> <li>➤ title</li> <li>➤ north arrow</li> <li>➤ key</li> <li>➤ scale</li> <li>➤ grid lines</li> </ul> </li> <li>• Describe how maps may be useful.</li> <li>• List some facts about ancient maps.</li> <li>• Name the explorer who's voyages helped draw the world's first map.</li> </ul>
<p><b>Types of Maps</b> There are many types of maps, each showing different types of information.</p> <ul style="list-style-type: none"> <li>• Political maps show the boundaries of individual countries.</li> <li>• Thematic maps have specific themes e.g. climate map shows temperature, rainfall, air pressure etc. of the world.</li> <li>• Economic or Resource maps show the different natural resources and economic</li> </ul>	<ul style="list-style-type: none"> <li>• List the different types of maps.</li> <li>• Identify the type of given maps.</li> <li>• Describe the uses of the following types of maps: <ul style="list-style-type: none"> <li>➤ Political maps</li> <li>➤ Thematic maps</li> <li>➤ Economic maps</li> <li>➤ Physical maps</li> <li>➤ Road maps</li> </ul> </li> </ul>

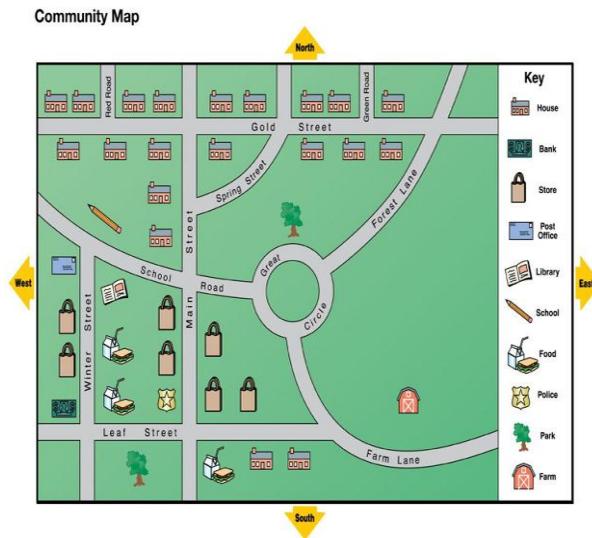
<p>activities.</p> <ul style="list-style-type: none"> <li>Physical maps show the physical features such as mountains, plains and rivers.</li> <li>Road Maps show roads, highways, railway tracks or landmarks of a place.</li> <li>Topographic Maps show both the physical and human features of an area.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Topographical maps</li> <li>Give some examples of 'thematic maps'.</li> <li>List some natural resources which may be shown on an economic map.</li> <li>Describe what the different colors on a physical map indicate: <ul style="list-style-type: none"> <li>➤ brown</li> <li>➤ green</li> <li>➤ blue</li> </ul> </li> <li>List some features which may be shown on a road map.</li> <li>Differentiate between the 'physical features' and the 'human features' on a topographical map.</li> </ul>
<p><b>Reading a Map</b></p> <p>The 'key' or 'legend' on each map helps to understand what the map is showing. The key uses 'symbols' to indicate each feature on any map. As maps cannot show the real sizes of the features indicated, a 'scale' tells us how much the area has been reduced.</p>	<ul style="list-style-type: none"> <li>Interpret the various symbols on the key of given maps.</li> <li>Measure the scale of given maps.</li> </ul>
<p><b>Finding location</b></p> <p>To find a location, we use grid lines. Vertical lines are called easting and horizontal lines are called northing.</p>	<ul style="list-style-type: none"> <li>Make a grid to locate a location.</li> <li>Describe the types of grid lines used to find locations on a map.</li> <li>Differentiate between 'easting' and 'northing'.</li> </ul>
<p><b>Latitude</b></p> <p>The imaginary lines running east to west, parallel to the equator, are called lines of latitude.</p> <p><b>Properties of latitude:</b></p> <p>There are four parallels of latitude. Two of them are Tropic of Cancer 23 ½ degrees North and the Tropic of Capricorn, 23 ½ degrees South. The other two parallels are the Arctic and Antarctic Circles, which are 66 ½ degrees North and 66 ½ degrees South. The Equator divides the Earth into a Northern and a Southern Hemisphere. Each degree of latitude is divided into 60 minutes and each minute into 60 seconds.</p>	<ul style="list-style-type: none"> <li>Define 'latitude'.</li> <li>Describe the pattern of latitudes around the globe.</li> <li>Describe the division of hemisphere through latitude.</li> <li>State the direction in which latitudes are measured.</li> <li>State the total degrees of latitudes and the distance between them.</li> <li>List the important lines of latitudes.</li> <li>State the minutes and seconds present in each line of latitude.</li> </ul>
<p><b>Longitude</b></p> <p>The imaginary lines running north to south are called lines of longitude.</p> <p><b>Properties of longitude</b></p> <p>The Prime Meridian divides the world into Eastern and Western Hemisphere at 0° longitude. Moving eastward or westward from the Prime Meridian, the longitudes are represented by degrees. Each degree of longitude is divided into 60 minutes. Longitudes, besides being useful in locating positions on the globe, are also useful for the calculation of local time in relation to Greenwich Mean Time.</p>	<ul style="list-style-type: none"> <li>Define 'longitude'.</li> <li>Name the line of longitude which divides the world into the eastern and western hemispheres.</li> <li>Describe the pattern of longitudes around the globe.</li> <li>State the direction in which longitudes are measured.</li> <li>State the total degrees of longitudes.</li> <li>State the full form of GMT.</li> <li>List the important lines of longitudes.</li> </ul>

**Key words:**

maps, political map, thematic map, physical feature, human feature, symbol, easting, northing, longitude, latitude, hemisphere

**Practice Questions:**

1. What are maps?
2. What are the uses and elements of map?
3. Identify the location of different symbols listed on the legend on map.



**Projects, Assignments and Activity:**

- Students will discuss the importance of 'maps' with respect to various professions.
- Students will make a map of their house or street with key.

February and March 2020

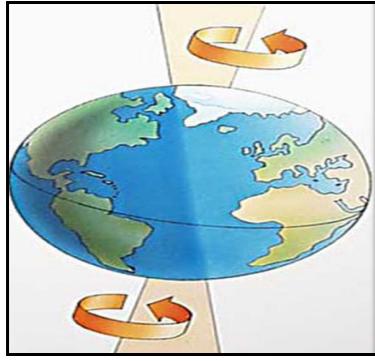
Chapter: Earth Movements and Their Causes

(Handout)

Content	Learning Objectives
<p><b>Origin of Earth</b></p> <p>The Universe came into being with a gigantic explosion in Space called Big Bang.</p> <p>The Universe consists of all existing matter and space including stars, planets, galaxies, etc.</p>	<ul style="list-style-type: none"> <li>• Recall the origin of Earth.</li> <li>• Describe why the Earth is tilted.</li> </ul>
<p><b>Earth's Axis</b></p> <p>The earth's axis is inclined at an angle of <math>66.5^{\circ}</math>. It has imaginary lines running from East to West and from North to South.</p> <p>Important lines of latitudes are:</p> <ul style="list-style-type: none"> <li>• Arctic Circle (<math>66^{\circ}\text{N}</math>)</li> <li>• Tropic of Cancer (<math>23^{\circ}\text{N}</math>)</li> <li>• Equator (<math>0^{\circ}</math>)</li> <li>• Tropic of Capricorn (<math>23^{\circ}\text{S}</math>)</li> <li>• Antarctic Circle (<math>66^{\circ}\text{S}</math>)</li> </ul> <p>The Equator divides the Earth into Northern and Southern hemispheres whereas the Prime Meridian (<math>0^{\circ}</math> longitude) divides the Earth into Eastern and Western hemispheres.</p>	<ul style="list-style-type: none"> <li>• Define the following: <ul style="list-style-type: none"> <li>➤ axis</li> <li>➤ lines of longitude</li> <li>➤ lines of latitude</li> </ul> </li> <li>• List the important lines of latitudes on Earth.</li> <li>• Locate the following on a globe or World Map: <ul style="list-style-type: none"> <li>➤ Polar region</li> <li>➤ Tropical areas</li> <li>➤ Temperate areas</li> </ul> </li> <li>• List the names of the four hemispheres of the Earth.</li> <li>• State the most important line of longitude.</li> </ul>
<p><b>Earth's Rotation</b></p> <p>The movement of earth on its axis causes day and night. It takes 24 hours of rotation to</p>	<ul style="list-style-type: none"> <li>• Define the term 'rotation'.</li> <li>• Describe what happens when the Earth</li> </ul>

<p>complete one turn.</p> <p>Day length is not equal everywhere. This is because of the tilt of the Earth's axis at 23.5° and the position of the Earth during its movement around the Sun.</p> <p>Countries near to the Equator have days and nights of equal lengths due to overhead Sun. Places further from the Equator, in the Northern and Southern hemispheres, day and night lengths are unequal.</p> <p>The Polar areas near the North and South Pole, beyond the Arctic and Antarctic Circles experience 24 hours of daylight called 'midnight sun' in the summer, and 24 hours of darkness called 'polar night' in the winter.</p>	<p>rotates.</p> <ul style="list-style-type: none"> <li>• Describe how length of day is affected by distance of a country from the Equator.</li> <li>• Describe the day length in countries which lie at the poles.</li> <li>• Describe the following phenomena: <ul style="list-style-type: none"> <li>➤ Midnight sun</li> <li>➤ Polar night</li> </ul> </li> <li>• Describe how some areas have six months of day and night.</li> </ul>
<p><b>Earth's Revolution and Seasons</b></p> <p>The movement of Earth around the Sun in its orbit is called 'revolution'. This revolution causes the change in seasons and variation in day length.</p> <p><b>Solstice:</b> When the Sun reaches its highest or lowest points in the sky at noon, it marks the longest or shortest days and nights.</p> <p><b>Equinox:</b> when day and night are equal in all parts of the Earth.</p> <p><b>Summer Solstice:</b> Condition of earth in its orbit when the northern hemisphere experiences summer.</p> <p><b>Winter Solstice:</b> Condition of earth in its orbit when the northern hemisphere experiences winter</p> <p><b>Autumnal Equinox:</b> Condition of earth in its orbit when the northern hemisphere experiences autumn.</p> <p><b>Spring Equinox:</b> Condition of earth in its orbit when the northern hemisphere experiences spring.</p>	<ul style="list-style-type: none"> <li>• Define the following terms: <ul style="list-style-type: none"> <li>➤ revolution</li> <li>➤ solstice</li> <li>➤ equinox</li> </ul> </li> <li>• State what happens when the Earth revolves.</li> <li>• Describe the following phenomena: <ul style="list-style-type: none"> <li>➤ Summer/Winter solstice</li> <li>➤ Autumn/Spring equinox</li> </ul> </li> </ul>
<p><b>Eclipse:</b></p> <p>When one celestial body obscures the light of another celestial body it is called Eclipse.</p> <p><b>Solar Eclipse:</b> When the Moon comes in between the Sun and the Earth and blocks out the Sun's rays.</p> <p><b>Lunar Eclipse:</b> When Earth's shadow blocks the Sun's rays and the resulting shadow is created on the Moon.</p>	<ul style="list-style-type: none"> <li>• Define 'eclipse'.</li> <li>• Describe the Solar Eclipse</li> <li>• Describe the Lunar Eclipse.</li> <li>• Draw diagrams for the Solar and Lunar Eclipses.</li> </ul>

<p><b>Key words:</b> solstice, equinox, overhead sun, Tropic of Cancer, Tropic of Capricorn, equator, eclipse, hemisphere, polar, equatorial</p> <p><b>Practice Questions:</b></p> <ol style="list-style-type: none"> <li>1. Why is the duration of day and night different for different places?</li> <li>2. Explain the phenomenon happening beyond Arctic and Antarctic Circles in the following diagram:</li> </ol>
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**Projects, Assignments and Activity:**

- Students will be given video links to strengthen understanding about the rotation and revolution of the Earth and their causes.
- Students will be demonstrated the concept of different angles of incidence through ball and torch.
- Video links related to 'Eclipses' will be sent to students.

**April 2020**

**REVISION FOR FINAL EXAMINATION 2020**

**May 2020**

**FINAL EXAMINATION 2020**