

Dawood Public School
Course Outline 2020-21
Geography
Grade VII

Book:
Crawford, D (2013) Geography Today Pupil Book 1 and 2 Revised Edition, Peak Publishing Ltd, UK

Month	Contents	Pages
August	Basic Skills Trade and Transport	Book 1: 4 - 12 Book 2: 110 - 126
September	Natural Vegetation	Book 1: 70 - 90
October	Fresh Water	Book 2: 29 - 39
November	Revision for Mid-Year Exam	
December	Mid-Year Examination	
January	Weather and Climate	Book 2: 4 - 28
February	Agriculture	Book 1: 36 - 69
March	Settlements	Book 1: 91 - 105
April	Revision for Final Exam	
May	Final Examination	

Syllabus Distribution

August

Chapter: Basic Skills

Book 1 - Pages no: 4 - 12

Content	Learning Objectives
<p>Maps and its Types</p> <p>A map is a visual representation of an area. Maps are used to show the distribution of natural and manmade features, to locate places and examine the interrelationships between people and environment.</p> <ul style="list-style-type: none">Political maps show individual countries, each separated by national boundary.Thematic Maps are especially designed to show a particular theme related to a specific geographic area.Climatic or Weather maps give general information about the weather condition, temperature and precipitation (rain and snow) of a region.Physical or Topographical maps show all the natural and manmade features on the earth’s surface. Topographical maps can be choropleth or contour.	<ul style="list-style-type: none">Define ‘map’.Explain the importance of a map.Name and define the different types of maps:<ul style="list-style-type: none">➤ Political map➤ Thematic map➤ Climatic or Weather map➤ Physical or Topographical mapExplain the following terms:<ul style="list-style-type: none">➤ boundary➤ topography➤ precipitation➤ choropleth➤ contour
<p>Understanding maps</p> <p>There are several key elements that should be included each time a map is created</p> <ul style="list-style-type: none">Title: The title is important because it instantly gives the viewer a brief description of the subject matter of the map.North Arrow: For orientation; the north arrow allows the viewer to determine the direction of the map and always points due north.Scale: The scale explains the relationship of the data frame extent in relation to the real world. The description is a ratio.Legend: The legend serves as the decoder for the symbols used; commonly known as the key.Grid Lines: These lines enable us to find and make reference to exact locations on a map.	<ul style="list-style-type: none">Identify the elements on a given map.List and define the elements of a map:<ul style="list-style-type: none">➤ title➤ north arrow➤ scale➤ legend➤ gridlinesState the purpose of gridlines.State the purpose of north arrow.Write an appropriate title by observing a map.Interpret the keys and symbols on a map.
<p>Lines of Latitude and Longitude</p> <p>Latitude represents north-south location and it is shown on a map by a series of east-west running lines that are parallel to the equator. Longitude represents east-west location and it is shown on a map by a series of north-south running lines that all come together. There are some important lines of latitude that run</p>	<ul style="list-style-type: none">Differentiate between ‘latitude’ and ‘longitude’.State the purpose of ‘latitude’ and ‘longitude’.Locate latitude and longitude on a provided map in degrees of the given places.Suggest why latitude and longitude vary in size.Describe ‘coordinates’ in the light of the globe.

<p>parallel to the equator in both the hemispheres. Latitudes and Longitudes help us measure accurately the position of any place on the Earth’s surface.</p> <p>Every location on earth has a global address. Because the address is in numbers, people can communicate about location no matter what language they might speak. A global address is given as two numbers called coordinates. The two numbers are a location's latitude number and its longitude number ("Lat/Long").</p>	<ul style="list-style-type: none">• Identify the following on the diagram of a globe:<ul style="list-style-type: none">➤ Equator➤ Prime meridian➤ North pole➤ Tropic of Cancer➤ Tropic of Capricorn
<p>Understanding Graphs</p> <p>A graph is a diagram showing the relation between two variable quantities, each measured along one axis. It is an important tool for a geographer:</p> <ul style="list-style-type: none">• To measure precipitation received by an area in the course of month or year• To trace the population growth of a town or a country. <p>The three types of graphs are:</p> <ul style="list-style-type: none">• Bar Graph• Line Graph• Pie Chart <p>Line graphs are used to track changes over short and long periods of time. When smaller changes exist, line graphs are better to use than bar graphs.</p> <p>Pie charts are best to use when you are trying to compare parts of a whole. They do not show changes over time.</p> <p>Bar graphs are used to compare things between different groups or to track changes over time. However, when trying to measure change over time, bar graphs are best when the changes are larger.</p>	<ul style="list-style-type: none">• Define the following types of graphs:<ul style="list-style-type: none">➤ Bar Graph➤ Line Graph➤ Pie chart• Explain what is shown on given graphs.• Suggest why graphs are important tools.• Identify the types of graphs from given pictures.• Make a graph with the help of given data.• Identify which graph will be best for showing given statistical data.• Suggest which types of graphs are more suitable to represent what type of data.
<p>Understanding diagrams</p> <p>Diagrams can be of two types:</p> <ul style="list-style-type: none">• Cross sectional diagrams represent the interior of an object.• Block diagrams are three-dimensional diagrams representing a block of the Earth’s crust, showing geographical structure.	<ul style="list-style-type: none">• Explain the difference between a photograph and a cross section diagram.• Differentiate between cross section and block diagram.
<p>Studying and understanding photographs</p> <p>Photographs are an important source of data for geographical analysis.</p> <p>Photographs can be interpreted using a structural method of division into three vertical and three horizontal directions.</p> <p>Photographs can be ground photographs or aerial photographs.</p>	<ul style="list-style-type: none">• Differentiate between photographs and maps.• Define the two types of photographs:<ul style="list-style-type: none">➤ Ground photograph➤ Aerial photograph• Describe the steps for the interpretation of any photograph.• Interpret photographs with the help of techniques.

Reference Books:

- Crawford, D (2013) Geography Today Pupil Book 1 Revised Edition, Peak Publishing Ltd, UK
- Jay, Sian E; Lim, Solomon and Nathan, Edward (n.d.) Our World: a Closer Look, Secondary 3, Federal Publications, Singapore.

Key Words:

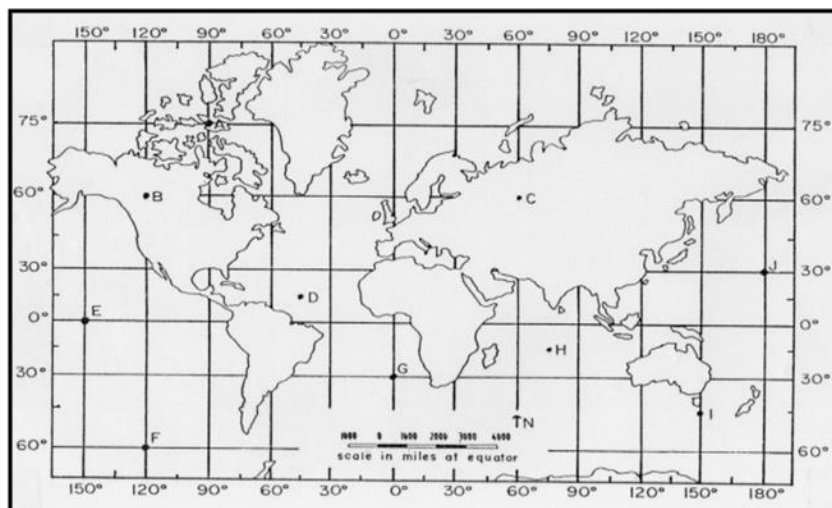
political map, dot map, thematic map, choropleth, cross section, statistical data, grid, latitudes, longitudes

Practice Questions:

1. Differentiate between a ground and an aerial photograph.
2. Interpret the following photograph:



3. Find out the position of alphabets A-J on Map 1.



Map 1

Projects, Assignments and Activity:

- Video links will be sent for students to watch.
- Circles of latitude interactive sheet will be created.

Surf I.T:

- <http://geographyfieldwork.com/DataPresentationMappingTechniques.htm>
- <http://www.slideshare.net/adeshipp/photographs-geography>
- <https://www.youtube.com/watch?v=swKBi6hHHMA>

Content	Learning Objectives
<p>Trade and its Dimensions</p> <p>Trade is the flow of goods and services from producers to consumers. It is the buying and selling of goods and services either on the domestic markets or on the international markets.</p> <p>There are seven dimensions of trade:</p> <ul style="list-style-type: none">• Internal trade• International trade• Import• Export• Visible trade• Invisible trade• Barter trade	<ul style="list-style-type: none">• Define ‘trade’.• Differentiate between producers and consumers.• List the seven dimensions of trade.• Describe the following:<ul style="list-style-type: none">➤ internal trade➤ international trade➤ import➤ export➤ visible trade➤ invisible trade➤ barter trade• Differentiate between domestic and international markets.• Differentiate between the following:<ul style="list-style-type: none">➤ internal trade and international trade➤ visible and invisible trade• Suggest some international markets for local products.
<p>Why do people trade?</p> <p>Every country or town is not self-sufficient in all the necessities of a life. In order to fulfill needs, people trade on domestic and international levels.</p> <p>Trade activities are carried out to satisfy people’s need for basic commodities as well as to enjoy luxuries and to improve country’s economic and social condition.</p> <p>Trade may have a direct impact on the rate of employment.</p>	<ul style="list-style-type: none">• List the purpose of trade.• Describe how trade can stimulate employment.• Suggest how trade can improve the economic condition of a country.• Suggest how trade can improve the social condition of a country.
<p>How do we trade?</p> <p>Trade is carried out using different modes of transport depending upon the cost, availability of natural routes, feasibility, nature and size of product.</p> <p>Transport is the physical movement of goods and individuals from one place to another.</p> <p>Three modes of transport are:</p> <ul style="list-style-type: none">• Land transport• Water transport• Air transport	<ul style="list-style-type: none">• Define the term ‘transport’.• Explain the importance of transport for trade.• Name and describe the different modes of transport in the following categories:<ul style="list-style-type: none">➤ land transport➤ water transport➤ air transport• List the advantages and disadvantages for using:<ul style="list-style-type: none">➤ land transport➤ water transport➤ air transport• State the factors which affect trading goods through different modes of transport.

<p>A Container Ship and an Oil Tanker</p> <p>Containers are used to transport bulk quantities of products across the sea.</p> <p>Oil tankers are designed specifically to transport large quantities of oil from the source to destinations around the globe.</p> <p>Container ships carry containers stacked close together and on top of each other.</p> <p>The widespread availability and relative housing, and as retail and office spaces. These cheapness of used intermodal shipping containers meant that architects began to consider them as an alternative to traditional building materials. Used shipping containers were converted for use in are also used in the film and television industry for building temporary sets.</p>	<ul style="list-style-type: none">• Differentiate between the features of an oil tanker and a container ship.• Describe how a container ship is the safest way of transporting things.• Describe how containers are stored in a container ship.• Develop awareness that containers are used for various reused in various purposes.• Explain what preventive measures are taken to transport oil.
<p>An Oil Terminal and a Container Terminal</p> <p>A port is a town or city with a harbor or access to navigable water where ships load or unload</p> <p>A port requires calm waters which are sheltered from storms, deep enough for large vessels with close-by storage areas and connected road and rail networks.</p> <p>Some of the important ports of Pakistan are:</p> <ul style="list-style-type: none">• Gwadar port• Port Qasim• Karachi Port <p>All the inland areas served by the port lie in the hinterland.</p> <p>The docking of an oil tanker requires different equipments set upon port such as tankers, pumps and connected pipes etc. to unload and store oil on the port while container terminals require cranes and warehouses.</p>	<ul style="list-style-type: none">• Differentiate between an oil terminal and a container terminal.• Name the ports in Pakistan which assist trade.• State what facilities are required at a port.• Describe the ideal conditions of a docking port.• Develop awareness that mishandling of oil containers may lead to an oil spill, which is an environmental hazard.• Define the term ‘hinterland’.
<p>Pakistan’s Imports and Exports</p> <p>Pakistan’s imports are based on:</p> <ul style="list-style-type: none">• Capital goods• Consumer goods• Raw material for capital and consumer goods <p>Pakistan’s exports are based on:</p> <ul style="list-style-type: none">• Primary commodity• Processed goods• Manufactured goods <p>Due to industrialization there was a sharp decline in the exports of primary commodities and the imports of consumer goods whereas there was an increase in the exports of manufactured goods due to an introduction of new machines and technologies for a set of industries. This ultimately increased imports of raw material and capital goods.</p>	<ul style="list-style-type: none">• Name the major imports and exports of Pakistan which fall in the following categories:<ul style="list-style-type: none">➤ capital goods➤ consumer goods➤ raw material➤ primary commodities➤ processed goods➤ manufactured goods• State an example for each category of imports and exports of Pakistan.• Differentiate between ‘raw materials’ and ‘goods’.• Explain the advent of ‘industrialization’.• Explain how the trend of imports and exports has changed from raw products to manufactured value added products.

<p>Pakistan: Negative Balance of Trade</p> <p>The value of Pakistan’s imports and exports are not the same so we say that it is not balanced, hence Pakistan has a trade deficit, whereas, Japan has a trade surplus.</p> <p>Pakistan’s major exports comprise of agricultural products that are comparatively low in cost while imports are of high value products such as oil and motors.</p> <p>Pakistan has an agro-based economy due to which the major exports are agricultural products such as cotton and rice.</p>	<ul style="list-style-type: none">• Define the terms:<ul style="list-style-type: none">➤ balance of trade➤ trade deficit➤ trade surplus• Explain why Pakistan has a negative balance of trade.• State examples of products for the following:<ul style="list-style-type: none">➤ high value imports➤ agricultural exports• Describe ‘agro-based’ economy.
<p>Pakistan: Increasing exports</p> <p>Export Processing Zone and Export Promotion Bureau can play a vital role in boosting the economic condition of a country. It further gives incentives to investors to set up a unit in EPZs such as 100% ownership rights, duty free imports of machinery and equipment and no sales tax on input goods and services. EPZ are the areas designated specifically to export oriented industries, where investors are offered incentives from the government, while EPB searches markets for the country’s product, creates brand awareness, hold fairs and exhibitions at local and international levels to improve exports.</p>	<ul style="list-style-type: none">• Give examples of some steps taken by Pakistan to increase exports.• Describe the role of the Export Promotion Bureau.• Suggest how Export Promotion Zones may help to increase industrialization.• Develop awareness regarding some incentives given by governments towards international trade:<ul style="list-style-type: none">➤ tax relief➤ interest rates on loans➤ procedural facilitation
<p>Co- operation in trade</p> <p>Pakistan main trading agreements include ECO, SAARC, and ATTA etc.</p> <p>Transit trade is the business connected with the passage of goods through a country through their destination.</p> <p>Despite China is not a landlocked country but it also wants to use the land route of Pakistan to trade through the Gwadar port as this trade route provides shortest and less busy route to connect China with Western countries. For using this facility Pakistan and China has signed CPEC Project. China-Pakistan Economic Corridor is a framework of regional connectivity. CPEC will not only benefit China and Pakistan but will have positive impact on Iran, Afghanistan, India, Central Asian Republic, and the region.</p>	<ul style="list-style-type: none">• Name the countries of Economic Co-operation Organization.• Explain ‘transit trade’.• State the full form of EC and OPEC.• Name the countries included in EC and OPEC.• Develop awareness for the CPEC; the China-Pakistan Economic Corridor being a significant contributor to trade.

<p>Reference Books:</p> <ul style="list-style-type: none">• Book: Crawford, D (2013) Geography Today Pupil Book 2 Revised Edition, Peak Publishing Ltd, UK.• Reference Book: Sethi, Huma Naz (2007) The Environment of Pakistan, Pakistan Studies, Peak Publications, Pakistan. <p>Key Words:</p> <p>exports, imports, GDP, GNP, balance of trade, balance of payment, visible trade, invisible trade,</p>

internal trade, international trade, capital goods, consumer goods, barter system, oil depot, container terminal, hinterland, sheltered harbor, transit trade, land locked country

Practice Questions:

1. Describe the seven dimensions of trade with examples.
2. Describe the features of the port and vessel shown in Figure.1.



Figure 1

Projects, Assignments and Activity:

- Students will complete research based assignment on:
Reasons and Prevention of Wildlife trade

Surf I.T:

- <http://www.economywatch.com/international-trade/benefit.html>
- <http://www.epza.gov.pk/>

September

Chapter: Natural Vegetation

Book 1 – Pages no: 70 – 90

Content	Learning Objectives
<p>Natural Vegetation</p> <p>Natural vegetation consists of plants which grow naturally and have not been planted by people. For examples scrubs, creepers, and lichens. Each type of natural vegetation has its own variety of plants, depending on differences in the amounts of rainfall and temperature.</p> <p>Cultivated vegetation consists of plants which require human efforts. For example wheat, rice and mangoes.</p>	<ul style="list-style-type: none">• Define the following:<ul style="list-style-type: none">➤ natural vegetation➤ cultivated vegetation• Name some of the plants which grow naturally.• Name some examples of cultivated vegetation.• Explain the role of altitude in natural vegetation.• Develop awareness that natural vegetation plays a significant role in environmental affairs.
<p>World distribution of natural vegetation</p> <p>Natural vegetation is of three main types:</p> <ul style="list-style-type: none">• Forest vegetation• Grassland vegetation• Desert vegetation <p>These different types are divided into the different world temperature zones such as:</p> <ul style="list-style-type: none">• Tropical Rain Forest• Coniferous Forest• Tropical Grasslands• Cold and Hot Desert Vegetation	<ul style="list-style-type: none">• Define ‘distribution’.• Locate various types of natural vegetation on the world map.• Explain the distribution of natural vegetation on the basis of three groups:<ul style="list-style-type: none">➤ forest vegetation➤ grassland vegetation➤ desert vegetation

<p>Tropical Rain Forest</p> <p>Tropical Rainforests lie both north and south of the Equator and between the Tropic of Cancer and Tropic of Capricorn. High temperatures and heavy rainfall throughout the year lead to the trees growing tall and close together. These trees are evergreen.</p> <p>The vegetation consists of multiple layers such as:</p> <ul style="list-style-type: none">• Emergent layers• Canopy layer• Understory layer• Forest floor <p>Tropical Rain Forest has adapted to survive in the equatorial climate due to its various features.</p>	<ul style="list-style-type: none">• Define the following:<ul style="list-style-type: none">➤ evergreen➤ adaptation• Identify the region of Tropical Rain Forest on world map.• List the features of the vegetation found in Tropical Rain Forests.• Describe the characteristics of the layers of Tropical Rain Forest:<ul style="list-style-type: none">➤ emergent layer➤ canopy layer➤ understory layer➤ forest floor• State and explain the adaptation features of Tropical Rain Forest.
<p>Cold Temperate Coniferous Forest</p> <p>This type of forest is found only to the north of the Equator. The trees in these areas have special features such as flexible branches, a thick bark and needles instead of leaves which help them to survive in temperatures below freezing point.</p>	<ul style="list-style-type: none">• Locate the region of Cold Temperate Coniferous Forest on world map.• List the features of Cold Temperate Coniferous Forest.• Explain the adaptations of the vegetation in Cold Temperate Coniferous Forest.
<p>Tropical Grassland</p> <p>Tropical Grassland consists of grasses and scattered trees. Tropical grasslands, or savannas, are typically found between two other biomes which are rainforests and deserts. This means that they are found around the Equator, Tropics of Cancer and Capricorn, especially where the rain falls seasonally. Near the semi-desert areas, the grasses are quite short. Near the tropical rainforest, where there is more rainfall, the grasses grow tall to over 0.5m.</p>	<ul style="list-style-type: none">• Locate the region of Tropical Grassland on the map.• List the features of Tropical Grassland.• Explain how the location of Tropical Grassland affects the height and color of grass.
<p>Hot Desert vegetation</p> <p>The existence of such vegetation is the result of low rainfall and high temperatures. Most of the Hot Deserts have some plants and they are all adapted to surviving long periods of drought. Various types of cactus, e.g. the prickly pear have long roots, which occur widely near the surface so that they can catch any rainfall.</p>	<ul style="list-style-type: none">• Describe ‘drought’.• Develop awareness for the devastating effects of drought on the natural vegetation in African countries.• Locate the region of Hot Desert vegetation on a map.• List the features of Hot Desert vegetation.• Explain the adaptations of the vegetation in Hot Desert.
<p>Tundra (cold desert) vegetation</p> <p>The Tundra vegetation can survive under the snow during the long winter when the temperature remains below freezing point for about nine months of the year. This vegetation consists of lichens. All these plants are small and close to the ground.</p>	<ul style="list-style-type: none">• State the meaning of the word Tundra.• Locate the region of Tundra vegetation on the map.• List the features of Tundra vegetation.• Explain the adaptations of the vegetation in

	Tundra.
<p>The Natural Vegetation of Pakistan</p> <p>Topography is the study and description of the surface features of land, which includes both natural and artificial features.</p> <p>Pakistan consists of a variety of natural vegetation because of diverse topography and variant climatic conditions. We can see mangroves near the coast at south and coniferous trees at the north, while Indus Plain consists of scrub vegetation.</p> <p>The Government of Pakistan is making an effort to increase plantation in Pakistan. The Climate Change Ministry has initiated a project at a cost of Rs 3.652 billion in all four provinces through which plantation of 100 million new trees will be ensured until 2021. The project called ‘Revival of Forestry Resources in Pakistan’ is initiated under the prime minister’s ‘Green Pakistan Program’.</p>	<ul style="list-style-type: none">• Define ‘topography’.• List the types of natural vegetation in Pakistan.• State the reasons why Pakistan has variety of natural vegetation.• Develop awareness for governmental measures for increasing plantation in Pakistan.
<p>The uses of Natural Vegetation</p> <p>Natural vegetation consists of hardwoods and softwoods. Hardwood is hard and strong and has always been important for construction of boats and building. Coniferous trees are softwood and mostly used for paper making. Forests are the habitat of wildlife, provide grazing ground for herds and attract tourists to enjoy natural features.</p>	<ul style="list-style-type: none">• State the uses of natural vegetation.• Differentiate between the hardwoods and softwoods.• Explain how natural vegetation may influence the tourism industry
<p>Causes of the destruction of natural vegetation</p> <p>The Yanomami, plantation owners, farmers in the Indus Plains and logging companies destroy natural vegetation for construction and building purposes. Overgrazing is to graze (grassland) so heavily that the vegetation is damaged and the ground becomes liable to erosion.</p>	<ul style="list-style-type: none">• Define the following terms:<ul style="list-style-type: none">➤ logging➤ overgrazing• Describe the work of logging companies.• State what logging is used for.• Explain how over grazing leads to a decline in juniper trees.
<p>Result of the Destruction of Natural Vegetation</p> <p>Destruction of natural vegetation results in soil erosion and desertification. Soil erosion is defined as the wearing away of top soil. Top soil is the top layer of soil and is the most fertile because it contains the most organic, nutrient-rich materials. Desertification is the process by which fertile land becomes desert, typically as a result of drought, deforestation, or inappropriate agriculture. This has increased the rate of evaporation causing the world’s climate to change.</p> <p>Deforestation has led to the loss of habitat (natural home or environment) for many animals which results to the extinction or endangering of various species.</p>	<ul style="list-style-type: none">• Define the following terms:<ul style="list-style-type: none">➤ soil erosion➤ desertification➤ topsoil➤ habitat• Explain how vegetation is affecting world’s climate.• Differentiate between extinct species and endangered species.• Explain how habitat can be affected by the destruction of natural vegetation.
<p>Importance of Conservation</p> <p>Preserving Natural Vegetation is of great</p>	<ul style="list-style-type: none">• List the benefits of preserving natural

<p>importance in preventing runoff into storm water. Vegetation provides erosion control, storm water detention, biofiltration, and aesthetic values to any area. Preserving natural vegetation means protecting desirable trees, vines, bushes, and grasses from damages during project development.</p>	<p>vegetation.</p> <ul style="list-style-type: none"> • Describe the role of vegetation in the various biochemical cycles. • State the benefits of reserves. • Describe how conservation of natural vegetation will help reduce climate change. • Explain the environmental importance of natural vegetation. • Explain the economic importance of natural vegetation.
---	---

Reference Books:

- Book: Crawford, D (2013) Geography Today Pupil Book 1 Revised Edition, Peak Publishing Ltd, UK.
- Reference Books: Liew, Jeanne, (2011) International Lower Secondary Geography 1, Marshall Cavendish Education, Singapore.
- (2001) New Secondary Geography, FEP International (Private) LTD, Rawalpindi.

Key Words:

Tropic of Cancer and Capricorn, dense vegetation, evergreen, conifer trees, deciduous, tundra vegetation, scrub, shrubs, cultivated vegetation, deforestation, overgrazing, soil erosion, conservation, desertification, endangered species, extinct

Practice Questions:

1. Identify the type of vegetation shown in the following figure and explain the features which help it to adapt itself to the environment.



2. Discuss why it is necessary to conserve natural vegetation.

Projects, Assignments and Activity:

- Students will collect variety of leaves and barks to distinguish between their adaptations.
- Students will demonstrate soil erosion in a plastic bottle.

Surf I.T

- <http://eschooltoday.com/forests/types-of-forests.html>
- <http://www.sciencekids.co.nz/sciencefacts/earth/rainforests.html>

Content	Learning Objectives
<p>What is water?</p> <p>Water is made up of tiny particles called molecules. Each molecule of water contains even tinier particles called atoms. In one molecule of water there are two atoms of hydrogen and one atom of oxygen.</p> <p>There are three states of water:</p> <ul style="list-style-type: none">• Solid• Liquid• Gas	<ul style="list-style-type: none">• State the various forms of water as it exists on Earth.• Recall the names of the 5 major oceans.• State the location of each ocean on the globe.• Differentiate between a sea and an ocean.• Revise how water from various sources drains into the sea.
<p>Where is all the water of Earth</p> <p>There is a fixed amount of water on the Earth. 97% is salty water in the seas and oceans. We cannot drink it. 3% is fresh water found in rivers, lakes, rainfall, clouds, and water vapors and also underground and trapped in ice and snow.</p>	<ul style="list-style-type: none">• Differentiate between fresh water and sea water.• State where salty water is found.• Name three source of freshwater.• State the percentage of salty and freshwater present on Earth.
<p>The importance of fresh water</p> <p>The United Nations declared 2003 to be the International year of Fresh water.</p> <p>Water is needed for many agricultural, domestic and industrial purposes. Fresh, clean water is also imperative for drinking. Despite this, there are still serious shortages in many countries and climate change has also affected the availability of fresh water.</p> <p>Some impacts of climate change are:</p> <ul style="list-style-type: none">• Rivers running dry• Water tables are falling on every continent• A rise in average temperature in mountainous regions can cause more rain and less snow, because of this change there is more flooding and more runoff during the rainy season.	<ul style="list-style-type: none">• List the purposes of water.• Develop awareness about the importance of fresh, clean water.• Explain the industrial importance of water.• Identify the impact of climate change with respect to the following:<ul style="list-style-type: none">➤ rivers➤ water table➤ rainfall• Describe how climate change is influenced by water reduction.• Suggest daily behavior practices which may lead to minimized wastage of water.• List the domestic uses of water.
<p>Desalination of sea water</p> <p>In desalination process, a large volume of saline water is treated to produce freshwater while concentrated brine is discharged back into the environment. The concentrated brine contains a high concentration of salt and also chemicals used during desalination operations.</p> <p>The process of desalination is an expensive method because it includes high cost for the land, equipments, machinery, skilled labor and maintenance.</p>	<ul style="list-style-type: none">• Define the following:<ul style="list-style-type: none">➤ desalination➤ brine• State the purpose of desalination.• Explain the process of desalination.• Define the process of ‘brine’.• Give reasons why desalination is an expensive way of getting freshwater.• Explain how desalination of water will affect marine life.

<p>Shortages of fresh water</p> <p>A shortage of freshwater has serious results. It can lead to problems within a country and disputes between countries. It can also lead to serious damage being caused to the environment. Furthermore, shortage of freshwater damages and disturbs trade, causes a decline in industrial and farming activities and leads to a loss of income for a large number of people like farmers and fishermen.</p>	<ul style="list-style-type: none">• List the effects of water shortages for countries.• Describe some of the problems which may be caused by water shortages within a country.• Describe how water shortage may cause dispute between countries.• Develop awareness for the Pakistan-India dispute on water.• Explain how exports may be affected by shortage of water.• Link the relation between shortage of water and a subsistence farmer’s income.• Suggest how a shortage of water can cause serious damage to the environment.
<p>Possible solutions for the water shortages in Pakistan</p> <p>Desalination of seawater was rejected up to 2004 because of the high cost of building the desalination plants. However, in 2004 plans were announced to build Pakistan’s first desalination plants at Korangi Creek in Karachi and near Port Qasim.</p>	<ul style="list-style-type: none">• Suggest some possible solutions for saving water.• Explain how desalination will fulfill the demand of freshwater.• State where Pakistan is looking to develop desalination plants.

Reference Books:

- Book: Crawford, D (2013) Geography Today Pupil Book 2 Revised Edition, Peak Publishing Ltd, UK.
- Reference Book: Liew, Jeanne, (2011) International Lower Secondary Geography 1, Marshall Cavendish Education, Singapore.

Key Words:

desalination, brine, salinity

Practice Questions:

1. Discuss the merits and demerits of the desalination plant shown in the following photograph.



2. Sort out the information about problems of water supplies in Karachi
 - (a) description of the problems
 - (b) The reasons for the problems
 - (c) The attempt to solve the problems.

Projects, Assignments and Activity:

- Students will gather in groups to construct a Bio Sand filter.

Surf I.T

- <http://video.nationalgeographic.com/video/env-freshwater-whycarech6.1>
- <http://www.planetseed.com/laboratory/drinking-water-sea>
- <http://www.treehugger.com/clean-water/how-desalination-works.html>

November

Revision for Mid Year Examination
--

December

Mid Year Examination

January

Chapter: Weather and Climate

Book 2 – Pages no: 4 - 28

Content	Learning Objectives
Weather Weather is the state of the atmosphere at a particular place and at a particular time. Weather is recorded by measuring different elements such as temperature, air pressure, wind direction, rainfall, and humidity.	<ul style="list-style-type: none">• Define the term ‘weather’.• List the elements of weather.• Describe how weather may be recorded.• Define ‘short term phenomenon’.

<p>The composition of atmosphere</p> <p>The atmosphere is composed of 78% nitrogen, 21% oxygen and 1% other gases such as carbon dioxide, nitrous oxides, methane etc. Variable quantities of water vapors i.e. tiny droplets of water which are invisible and also described as a gas are also part of the atmosphere.</p>	<ul style="list-style-type: none">• Name and state the percentages of gases in the atmosphere.• List the following layers of the atmosphere:<ul style="list-style-type: none">➤ troposphere➤ stratosphere➤ mesosphere➤ thermosphere➤ exosphere• Explain why the atmosphere is important.
<p>Weather Forecasts</p> <p>Meteorologists use a variety of tools to gather information about weather and climate. Some more familiar ones are:</p> <ul style="list-style-type: none">• Thermometers which measure air temperature• Anemometers which gauge wind speeds• Barometers which provide information on air pressure. <p>These instruments allow meteorologists to gather data about what is happening near Earth's surface. Collecting data from other sources and other parts of the atmosphere helps to create a more descriptive picture of the weather.</p>	<ul style="list-style-type: none">• State where the weather forecast takes place.• Describe how a meteorologist records data.• List the uses of different meteorological tools:<ul style="list-style-type: none">➤ thermometers➤ anemometers➤ barometers• State the purpose for collecting data regarding weather.• List the four sources of recording data.
<p>Elements of Weather</p> <p>Temperature is one of the key elements of weather which is measured using a thermometer. For more accurate results, thermometers are placed in a Stevenson Screen.</p> <p>Type of rainfall is determined by the way the air gets cooled. When moist air gets cool due to rise in the atmosphere because of high temperature, conventional rainfall occurs. When the moist air gets cool due to rise in the atmosphere because of high relief, relief rainfall occurs. Cyclonic rainfall occurs when the moist air gets cooled because of mixing of warm and cold air mass.</p>	<ul style="list-style-type: none">• Define the following terms:<ul style="list-style-type: none">➤ temperature➤ conventional rainfall➤ relief rainfall➤ cyclonic rainfall• Describe the use of a Stevenson Screen.• Differentiate between a Six's thermometer and a regular thermometer.• Define 'air pressure'.• State the unit of measurement for air pressure.• Name the person who has given the scale for measuring wind speed.• Describe the processes for the following:<ul style="list-style-type: none">➤ conduction➤ convection➤ radiation• Explain three phenomenon of rainfall.
<p>Wind -Sea Breeze and Land Breeze</p> <p>During the summer season, the coastal regions experience sea breezes while during winter season they experience land breezes. These winds blow over thousands of miles due to differences in temperature and air pressure between land and sea.</p>	<ul style="list-style-type: none">• Differentiate between wind and air.• Name the instrument used to measure wind speed and wind direction.• State the unit of wind direction.• Explain the movement of breeze during day and night in coastal and in land areas.• Develop awareness for the differences in evening weather in coastal areas and landlocked areas.

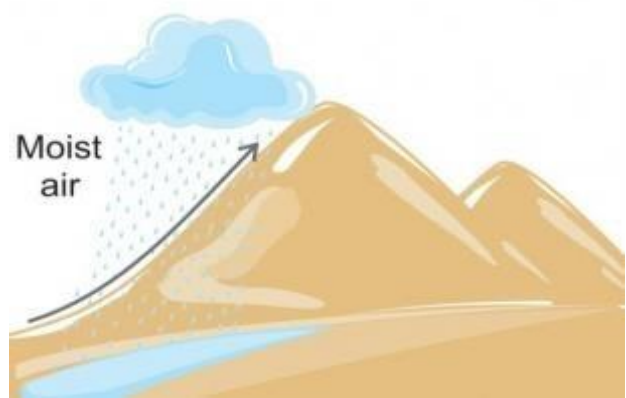
<p>What is a cyclone</p> <p>In meteorology, a cyclone is a large scale air mass that rotates around a strong center of low atmospheric pressure. Cyclones are characterized by inward spiraling winds that rotate around a zone of low pressure.</p>	<ul style="list-style-type: none">• Define ‘cyclone’.• List the other names for cyclone.• Describe the eye of a cyclone.• State the temperature at sea which leads to the formation of a cyclone.• Name two elements which accompany a cyclone.
<p>Climate</p> <p>Climate is the average weather condition of an area over many years. There are different climatic conditions in the world depending on the latitudinal position such as equatorial climate which remain same throughout the year because it receives overhead sun throughout the year. Polar climate which remains very cold due to six months day and six months night. The Monsoon Climate which brings rainfall in South and South-East Asia during summer seasons. During winter seasons wind blows in opposite direction. There are other factors too which determine the types of climate such as altitude, distance from the sea, direction of the wind, ocean currents etc.</p>	<ul style="list-style-type: none">• Define the term ‘climate’.• Differentiate between ‘weather’ and ‘climate’.• Name the person who studies climate.• Explain why climate is a long term phenomenon.• Describe how the world can be divided into different climatic zones.• State and explain the factors of difference in the climate of any area.• Describe how the following affect climate:<ul style="list-style-type: none">➤ altitude➤ distance from sea➤ wind direction➤ ocean currents• Differentiate between Equatorial and South East Asia’s climate.• Describe the polar climate.

Reference Books:

- Book: Crawford, D (2013) *Geography Today Pupil Book 2* Revised Edition, Peak Publishing Ltd, UK.
- Reference Book: Chun, Tham Yoke, (1998) *Understanding Geography 3*, Longman, Singapore.

Key Words:
troposphere, water vapour, barometer, wind vane, Beaufort scale, evaporation, condensation

- Practice Questions:**
1. Explain the differences between weather and climate.
 2. Identify the type of rainfall shown in the following figure.





- Projects Assignments and Activity:**
- Students will complete an assignment on the lifestyle of Yanomami, Masai, Kalash, Eskimos and Gypsies.
 - Students will make an Anenometer.

Content	Learning Objectives
<p>The importance of agriculture in Pakistan</p> <p>Agriculture includes the cultivation of land and the rearing of animals. It is the livelihood for a large number of people in Pakistan. 75% of the population depends in some way on farming for their living. Farmers provide food to people and to farm animals. Agriculture provides raw materials for industries that make goods.</p> <p>Wheat, cotton, rice and sugar-cane are the most important crops grown in Pakistan.</p>	<ul style="list-style-type: none">State the scope of work which is involved in ‘agriculture’.Describe the importance of agriculture in the life of:<ul style="list-style-type: none">➤ a farmer➤ a citizen➤ a countryExplain the importance of agriculture for a livestock farmer.List the main crops grown in Pakistan.State how agriculture can boost a country’s economy.Describe the relation between agriculture and employment.Develop awareness for ‘crop yield’ being the defining factor for successful agriculture.
<p>Chief crops in Pakistan</p> <p>In Pakistan, Punjab has the most agriculture, where wheat and cotton are the most grown. Mango orchards are mostly found in Sindh and Punjab provinces. Pakistan is the world's 4th largest producer of mangoes.</p>	<ul style="list-style-type: none">Identify the areas in Pakistan where the following crops are grown:<ul style="list-style-type: none">➤ wheat➤ rice➤ sugarcane➤ mangoes➤ orangesDescribe how crops help to earn foreign exchange.Suggest why chief crops are grown in the Indus Plains of Sindh and Punjab.List the crops grown in the mountainous areas of Pakistan.Describe how farming is difficult in the mountainous areas of Pakistan.
<p>Types of agriculture</p> <ul style="list-style-type: none">Small scale Farming <p>Small-scale agriculture is an alternative to factory farming or more broadly, intensive agriculture or unsustainable farming methods that are prevalent in primarily first world countries.</p> <p>Due to low inputs, the output produced by a small scale farmer is also low because of which a small scale farmer remains trapped in the cycle of poverty.</p> <ul style="list-style-type: none">Large Scale Commercial Farming <p>Large-scale agriculture is also called industrial farming. Unlike small-scale farms, large-scale farms utilize various industrial methods to maximize production.</p>	<ul style="list-style-type: none">Identify small scale farming and large scale farming in provided photographs.Describe the methods involved in:<ul style="list-style-type: none">➤ small scale farming➤ large scale farmingDefine ‘arable land’.Explain why small scale arable land is fragmented and irregular in shape.Explain the irrigation methods used in:<ul style="list-style-type: none">➤ small scale farming➤ large scale farmingList the types of fertilizers used for crops in:<ul style="list-style-type: none">➤ small scale farming➤ large scale farmingDescribe the ‘cycle of poverty’ with respect to small scale farmers.

<p>Cash crop farming</p> <p>A crop which is grown for sale is called a cash crop. Farmers sell crops to receive cash.</p> <p>In Pakistan agriculture activities continue throughout the year due to favorable climatic condition.</p> <p>Crops that are sown in summer and harvested in early winter are known as Kharif crops. For example rice, sugar cane, millets, maize and cotton. The crops that are sown at the beginning of the winter season and harvested in early summer are known as Rabi crops.</p>	<ul style="list-style-type: none">• Differentiate between a cash crop and a food crop.• Differentiate between the inputs of a small scale farmer and a cash crop farmer.• Differentiate between Rabi and Kharif crops.• List some Rabi crops• List some Kharif crops.
<p>Rice</p> <p>Rice is a Kharif crop and is usually grown on a large scale for commercial purposes in Punjab and Sindh. Rice cultivation requires various processes. The crop also requires plenty of rain during the 4 to 6 months growing period.</p>	<ul style="list-style-type: none">• Describe the steps that are required to grow rice.• Define the following terms:<ul style="list-style-type: none">➤ transplanting➤ harvesting➤ threshing
<p>Methods of Agriculture</p> <ul style="list-style-type: none">• Subsistence and Commercial Farming Subsistence farming is small scale farming by a farmer who grows crops only for himself and for his family. A crop which is grown for sale is called a cash crop. Farmers sell these crops for commercial gain.• Nomadic Herding Nomadic pastoral is when livestock are herded in order to find fresh pastures to graze. The herded livestock include cattle, yaks, sheep, goats, reindeer, horses, donkeys or camels, or mixtures of species. Animal domestication and herding spread from centers in Eurasia to Europe, South and East Asia, and Africa.• Shifting Cultivation This is a farming system where crops are grown for a few years in a clearing. This type of farming is practiced by tribes in forests around the world. Shift cultivation is also one of the reasons for deforestation.• Plantation Agriculture Plantation agriculture is generally practiced on a large farm or estate, especially in a tropical or semitropical country, on which cotton, tobacco, coffee, sugar cane etc is cultivated, usually by resident laborers.• Soilless Cultivation Soilless cultivation is practiced in Singapore which is a very small country and a very small area is left for farming due to growing population and industrialization. This involves high-tech methods to grow a lot of vegetation in a small area. Two methods of soilless cultivation are aeroponics and hydroponics.	<ul style="list-style-type: none">• Compare the subsistence and commercial method of farming.• Describe the term ‘Nomadic Herding’.• State the factors for practicing Nomadic herding in Baluchistan, Pakistan.• Suggest why Masai people still practice Nomadic herding in Kenya.• Describe ‘animal domestication’.• Describe the cycle of shifting cultivation.• Describe how shifting cultivation is linked to deforestation.• Locate the zone of shifting cultivation on the map.• Explain why plantation agriculture is an expensive way of producing rubber and tea.• Define the term ‘latex’.• Describe who ‘resident labourers’ might be.• Differentiate between plantation agriculture and subsistence farming.• Describe soilless cultivation.• List the countries where soilless cultivation is practiced.• Describe the requirement for soilless cultivation.• Describe the methods ‘aeroponic’ and ‘hydroponic’.

<p>Agriculture as a system</p> <p>Types of agriculture can be divided into 3 parts:</p> <ul style="list-style-type: none"> • Input: These are all the things necessary to create a particular type of agriculture. • Processes: These are all the activities necessary to make the crops grow and to look after animals. • Outputs: These are all the things that are produced. 	<ul style="list-style-type: none"> • Explain 'system' with respect to agriculture. • List some natural inputs. • List some human inputs. • Describe the process of growing any crop in sequence.
--	--

<p>Reference Books:</p> <ul style="list-style-type: none"> • Book: Crawford, D (2013) <i>Geography Today Pupil Book 1</i> Revised Edition, Peak Publishing Ltd, UK • Reference Book: Sethi, Huma Naz (2007) <i>The Environment of Pakistan, Pakistan Studies</i>, Peak Publications, Pakistan. <p>Key Words: agriculture, export, tributaries, arable land, plantation, hydroponic, aeroponic</p> <p>Practice Questions:</p> <ul style="list-style-type: none"> • Discuss the importance of agriculture for the economy of Pakistan. • Identify the following processes of farming. <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Projects, Assignments and Activity:</p> <ul style="list-style-type: none"> • Students will complete a research assignment on any one of the following: <ul style="list-style-type: none"> ➤ Pearl farming ➤ Apiculture ➤ Effects and threats of Modified Seeds <p>Surf I.T</p> <ul style="list-style-type: none"> • http://www.neok12.com/Agriculture.htm • http://www.kidsgardening.org/node/3760 • https://www.towergarden.com/what-is-tower-garden/how-it-works/aeroponics
--

Content	Learning Objectives
<p>Settlement Types</p> <p>A settlement is any form of human dwelling, from the smallest house to the largest city.</p> <p>Types Of Settlements</p> <ul style="list-style-type: none">• Temporary <p>Settlements that are occupied for a short time are temporary settlements. Examples of temporary settlements are deep forests, hot and cold deserts, mountains.</p> <p>People living in such temporary settlements practice hunting, gathering, shifting cultivation and transhumance.</p> <ul style="list-style-type: none">• Permanent <p>In permanent settlements people build homes to live in. Most of the settlements these days are permanent settlements. A permanent settlement is a community which is planned to remain in one place for a long time. One example of permanent settlement is a city, where even though people come and go, the buildings remain in use.</p>	<ul style="list-style-type: none">• Define the term ‘settlement’.• Differentiate between a permanent and temporary settlement.• Differentiate between rural and urban settlements.• Explain the activities practiced in:<ul style="list-style-type: none">➤ rural settlements➤ urban settlements➤ temporary settlements➤ permanent settlements• Describe ‘transhumance’.• Suggest why people would prefer to live in urban areas.• Suggest why people would prefer to live in rural areas.
<p>Settlement Pattern</p> <ul style="list-style-type: none">• Nucleated <p>Nucleated settlements are ones where houses are grouped closely together, often around a central feature like a church, mosque or village green. New settlements that are planned often have a nucleated pattern.</p> <ul style="list-style-type: none">• Scattered / Dispersed <p>Dispersed settlements are ones where the houses are spread out over a wide area. They are often the homes of farmers and can be found in rural areas.</p> <ul style="list-style-type: none">• Linear <p>Linear settlements are settlements where the buildings are constructed in lines, often next to a geographical feature like a lakeshore, a river or following a road. Where linear settlements follow a road, the road is often older than the settlement.</p>	<ul style="list-style-type: none">• Identify a settlement pattern.• List different settlement pattern.• Describe the reasons for settlement in different regions.• Explain why people prefer to live in a nucleated settlement.• Describe how communicating routes will increase the number of settlements.
<p>Settlement Size</p> <p>A settlement hierarchy is a way or system of arranging settlements by population, physical size and number of available services and facilities. Smaller settlements tend to provide only low order services such as a post office and newsagents. Whereas, larger settlements have more high order services such as leisure centers and chain stores.</p> <p>Hamlets have very tiny populations and few services, if any.</p>	<ul style="list-style-type: none">• Define and explain the term ‘hierarchy’.• Explain the reasons for hierarchy in settlements.• Define the term ‘hamlet’.• Describe the services available in different sizes of settlements.

Factors for the settlements

- Availability of water
Areas with sufficient water attract more people to settle, as compared to arid or dry areas.
- Availability of land for agricultural activities
Areas which have fertile land attract people to settle, while infertile land makes people move away.
- Relief of the area
People prefer areas which have gentle slopes and tend to avoid settling in areas which have steep slopes due to difficulty in establishing infrastructure as thin soil is found in steep slopes. As people tend to avoid settling in flat areas as they are susceptible to flooding.
- Availability of social services
People prefer to live in areas which have social services such as education, water and electricity and avoid settling in areas which lack social services.
- Climatic condition
Areas which have adequate rainfall tend to have high growth of settlement due to high agricultural production while areas which experience low rain fall tend to have low growth of settlement due to shortage of water and poor agricultural production
- Government policy
Government can affect the growth of settlement by forcing people to settle in a certain area or persuade people to settle in certain area by supplying social services and other incentives. Also government policy affects settlement growth through town and land use planning.

- Identify the reasons for settlement in provided photographs.
- Explain how the following can influence settlements:
 - water
 - land
 - relief
 - climate
 - rainfall
 - social services
 - government policy
- Explain the factors for rise in settlements in Karachi.
- Describe the different services which can be provided in any area to lead to a rise in settlements.
- Explain the term ‘gap town’.
- Suggest some government policy which can force people to move away from a settlement.
- Explain how infrastructure facilities will increase the settlements in a particular area.

Planned and unplanned settlements

- Unplanned cities
An unplanned city lacks the form of structure and road networks as part of geographical plans. This can lead to many problems.
- Planned cities
A planned community, or planned city, is one which is carefully planned from its inception and is typically constructed in a previously undeveloped area. This contrasts with settlements that evolve in a more adhoc fashion.

- Differentiate between planned and unplanned areas.
- Suggest why living in planned areas is preferred over living in unplanned areas.
- Suggest the benefits of living in planned cities.
- State the drawbacks of living in an unplanned city.
- Name some planned cities.
- Name some unplanned cities.

<p>History of settlements</p> <p>Humans have been living together in settlements for over 7,000 years. During this time, they have arranged their communities according to the values of their society and the specific challenges they face.</p> <p>The leaders of Babylon in ancient times were concerned with issues very similar ones we face today, including access to water and ease of transportation. Key periods in history such as the industrial revolution dramatically changed the way we think about the places we live.</p>	<ul style="list-style-type: none">• Describe the circumstances which led to the first settlements.• State the location areas for the first settlers.• State the era for the first settlements.• Suggest why hunters and gatherers may have remained at a single place.• Describe how the Industrial Revolution affected people and their thoughts about living.
<p>Types of urban settlements</p> <p>An Urban settlement is a concentrated settlement that constitutes or is part of an urban area. It is an area with high density of human-created structures. These geometrical patterns are usually in squares and rectangles and are well laid out. The classification of urban settlements is determined by their economic and social functions and the size of their population. Availability of economic activities for example mining sites, industrial centers and ports promote and encourage an increase in population.</p> <p>Bridging Point is a settlement site where a river is narrow or shallow enough to be crossed. The bridge becomes a route and trading center or a natural location for a market. This is the case in Hyderabad.</p> <p>Whereas a gap town is a town located at a gap between hills, providing a good defensive site and route center that can lead to a trade and market function, for example Peshawar.</p>	<ul style="list-style-type: none">• Describe an urban settlement.• Describe the economic and social functions provided within urban settlements.• Suggest reasons for people’s choice of living in Karachi.• Give reasons why any mining site will lead to increase in population.• Define ‘bridging point’.• Explain the benefits of bridging point.• State where gap towns are found in Pakistan.

Reference Books:

- Book: Crawford, D (2013) *Geography Today Pupil Book 1* Revised Edition, Peak Publishing Ltd, UK.

Key Words:

urban zone, residential zone, nucleated settlement, consolidation, service, household industries, sanitation, squatter settlements

Practice Questions:

1. Identify the types of settlements as depicted in the images.

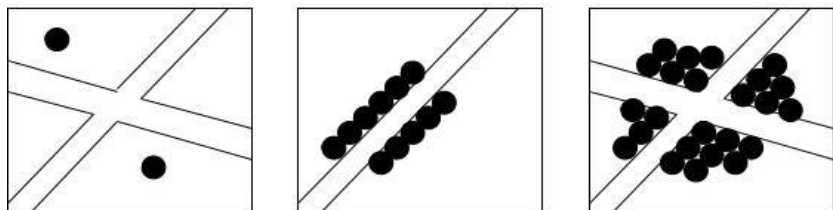


Figure 1

2. Why do settlements vary from place to place?

Projects, Assignments and Activity:

- Students will identify types of settlements through flashcards.
- Students will make settlement patterns using play dough.

Surf I.T:

- <http://www.3dgeography.co.uk/#!/settlement-geography/c11jl>

April

Revision for Final Examination

May

Final Examination