Dawood Public School
Course Outline 2017-2018
Geography
Class VI

Books:

- Song, Tan Kim, (2011) *International Lower secondary Geography 3,* Marshall Gavendish Education, Singapore.

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Syllabus Content

August:

Chapter: Plate Tectonic page #: 2-12

Topics:

- **Earth's Interior:**
  The Earth's interior is divided in to four major layers.
  The crust is the outer most layer of the Earth. It is made up of granite and basalt.
  Mantle is the second layer it consists of semi liquid rocks, rich in olivine and basalt.
  Outer core consists of molten iron
  Inner core consists of iron and nickel.

- **Tectonic Plates and their Movements.**
  Plate tectonic is a theory that describes how convectional currents broke the Earth's crust into plates and is responsible for the movements of these plates across the Earth's surface.

- **Types of Crustal Plates.**
  There are two types of plates.
  Continental Plates are made up of continents. These are comparatively less dense and lighter than oceanic plates.
  Oceanic Plates form the sea bed. They usually rest lower on the mantle.

- **Movement of Crustal plates**
  Plates move in three ways.
  Convergent Plate Movement: When the plates move towards each other, they collide and folding may take place.
  Divergent Plate Movement: When the plates move away from each other, they diverge.
  Transform Plate Movement: When two plates slide past each other in opposite direction.

- **Earthquake and Volcanic Eruptions.**
  Earthquakes are tremors or vibrations that occur in the earth's crust. While volcano is the opening or hole in the Earth's crust. These occur mainly along the boundaries of major and minor crustal plates.

- **Structure and Classification of a Volcano.**
  A volcano consists of a vent, cone, pipe, crater, lava and magma chamber. A volcano can be classified according to the frequency of its eruption. A volcano which erupts frequently is called an active volcano. Volcanoes which have erupted during historic times, but are now quiet are called dormant and the volcanoes which have not erupted during historic times are called extinct volcanoes.

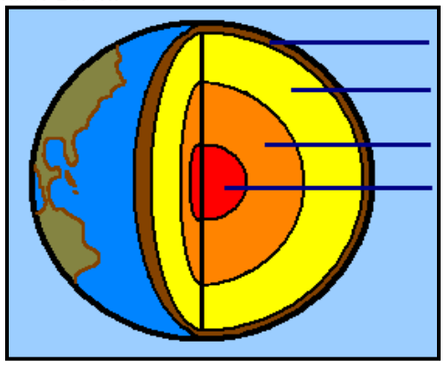
- **Mud Volcanoes in Pakistan.**
  The types of volcanoes found in Pakistan are mainly mud volcanoes. These are generally passive, emitting gases that bubble passively in their craters.

- **Plate Tectonics in Pakistan.**
  Pakistan lies on the boundaries of Indo-Australian and the Eurasian plates. The mountains of Pakistan are the result of movements of these plates.

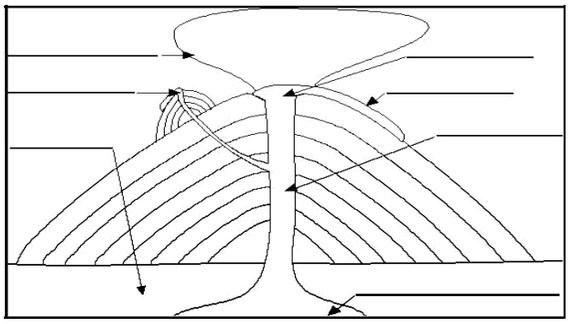
Key Words: lithosphere, plate boundary , continental and oceanic plates, magma, lava, subduction, destructive, constructive and passive plate boundary, vent, cone, pipe, crater, lava, magma chamber
(Refer to glossary given on Page number 99)

Model Questions:

1. Identify the different layers of Earth.



2. Why is the Earth fragile?
3. State reasons that cause the plates to move.
4. How did Himalayas begin to form?
5. Label the structure of the given volcano and distinguish between each of its features.



Projects, Assignments and Activity:

- Work Sheet will be provided.
- A multimedia presentation on the types of volcanoes and their effects will be shown.
- A short video on the volcanic eruptions.
- Research assignment on the classification of volcanoes.

Map Work:

- Distribution of world's active volcanoes.

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- http://www.cotf.edu/ete/modules/msese/earthsysflr/plates4.html
- http://www.see.leeds.ac.uk/structure/dynamicearth/himalayas/index.htm

September:

Chapter: Folding and Faulting. Page #: 13-23

Topics:

- **The Folding Process:**
  When two geological forces from opposite directions act on each other, folding of rock layers within the Earth's crust takes place.
- **Landform Resulting from Folding:**
  Fold Mountain is the result of folding. It is formed when the two crustal plates collide. It is also an example of the process of folding occurring on a very large scale such as Himalayas were formed when the Indo-Australian Plate moved towards the Eurasian Plate.
- **The Faulting Process**:
  It takes place when rocks within the Earth's crust develop fractures or cracks causing displacement of

rocks to occur vertically, horizontally or diagonally. Faulting occurs due to tensional or compression forces.

- **Landforms Resulting from Faulting**

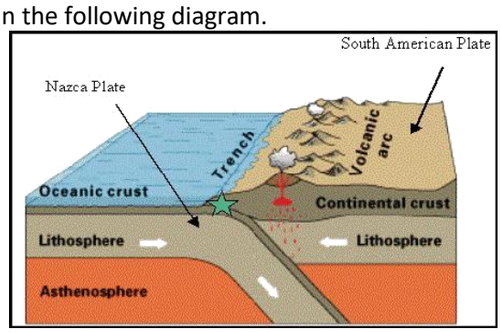
  Block Mountain: It is a mountain that is formed by the large-scale displacements of rocks caused by either tension or compression forces.

- **Rift Valleys:** It is an elongated lowland between two highlands that were created from the vertical displacements of rock due to tensional or compression forces as a result of faulting such as the East African Rift Valley.

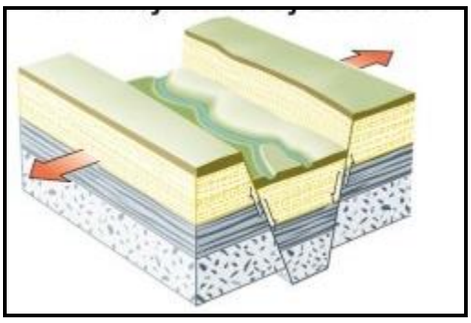
Key Words: folding, fold mountain, anticline, syncline, faulting, valley, rift valley and block mountain.
(Refer to glossary given on Page number 99)

Model Questions:

1. Explain why plates move.
2. Label subduction zone in the following diagram.



3. Differentiate between Fold Mountains and Block Mountains.
4. Label the rift valley in the following diagram.



Projects, Assignments and Activity:

- Work Sheet will be provided.
- A multimedia presentation about folding and faulting will be screened.
- Students will bring play dough and make their own folds and fault using it.

Map Work:

- Students will make Pangaea using the world map.
- Students will label the Earth's major plates in the map.

Surf I.T

- http://www.bennett.karoo.net/topics/fold mountain.html
- http://www.geolor.com/East_African_Rift_Valley_geolor.htm

October:
Chapter: Rivers. Page #: 67-75

Topics:

- **River:**
  (Introduction to the running water as an erosive force). A river flows from highlands and lowlands, influenced by earth's gravity.

- **Hydrological Cycle:**
  Hydrological cycle is the continuous movement of water within the Earth's natural system. It Involves processes such as precipitation, evaporation, condensation, and transpiration.

- **River's Work:**
  River is involved in three kinds of work that are erosion, transportation and deposition. The type of work determines the type of river features such as waterfall forms due to erosion; flood plain is formed due to deposition. When the river loses its energy it deposits its load.

- **Courses of River:** The river course is divided into three parts:
  Upper course: River passes through rough gradient of land, steep slopes, with high velocity and pressure. The prominent work of river at this stage is erosion.
  Middle Course: River flows through less rough gradient and gentler slopes. The velocity and pressure gets lower while volume of water increases. The prominent work at this stage is transportation of eroded materials.
  Lower Course: The gradient drops, velocity and pressure gets negligible. The prominent work at this stage is deposition.

- **Formation of Meanders and Ox-bow Lake:**
  Meanders are the corkscrew motion of a river. Meanders are formed due to erosion at the outer bank and deposition at the inner bank of a river. When a meander gets cut off from the main stream, an oxbow lake is formed.

- **Formation of Flood Plain (Lower Course of river)**
  A plain is formed when a river deposits its sediment on the flat land next to its channel during a flood. Successively flooding raises up the river bank forming levees.

- **Formation of a Delta:**
  Delta is formed at a river mouth, when a river deposits its sediments. It is triangular in shape.

- **Impact of Rivers on People:**
  Positive Impacts: Domestic use, transport, farming, food supply and power.
  Negative Impacts: Floods

Key Words: source, tributary, distributaries, drainage basin, watershed, hydrologic cycle, evaporation, condensation, precipitation, transpiration, waterfall, river cliff, slip off slope, delta, hydraulic action, solution (Corrosion), attrition, traction, saltation, suspension, solution.
(Refer to glossary given on Page number 99)

Model Questions:

1. Why is the action of river water in the upper section different from the lower section?
2. Name the three sections of a river and briefly describe the work of river in each section.
3. Describe the formation of river valley shown in the following photograph

Projects, Assignments and Activity:

- Work Sheet will be provided.
- Students will make an assignment on the topic "Effects of Floods in Pakistan".
- Multimedia presentation to develop students' understanding about River's feature and phenomenon
- Research assignment on:
  Vanishing seas
  Waterfall
  Rivers
  Lakes

Map Work:

- Identify the major rivers of the world.
- Identify the major rivers of Pakistan.

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- http://www.enchantedlearning.com/geography/rivers
- http://www.internationalrivers.org

NOVEMBER-REVISION FOR MID TERM EXAMINATION 2017
DECEMBER-MID TERM EXAMINATION 2017

January:

Chapter: Rocks and Rock formation. Page #: 48-54

Topics:

- **Rocks:**
  Rocks are solid aggregates or substances that make up the earth's crust.
- **Classification of Rocks:**

  Igneous Rocks: A rock formed from solidified magma or lava. There are two types of igneous rocks.

  Sedimentary Rocks: A rock resulting from the successive deposition of sediments. It can be classified into three main groups.

  Metamorphic Rocks: They are formed when the rocks undergoes intense pressure and heat.

- **Types of Igneous Rock:**
  Intrusive Igneous Rock: It is formed when magma solidifies within the earth's crust.
  Extrusive Igneous Rock: It is formed when lava solidifies on the earth's crust.

- **Types of Sedimentary Rocks:**

  Mechanically Formed Sedimentary Rocks: They are formed when the weathered rocks are transported and deposited at the bottom of the sea as sediments.

  Chemically Formed Sedimentary Rocks: They are formed when a chemical reaction occurs between rock minerals and water such as rock salt.

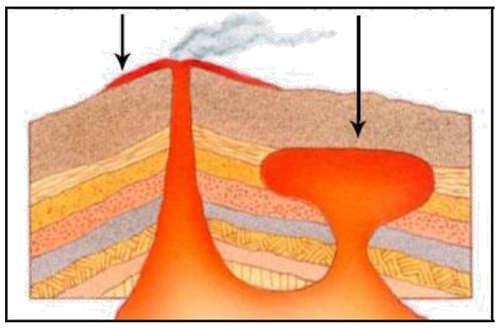
  Organically Formed Sedimentary Rocks: They are formed when shells and skeleton parts of the plants and animals settle on the sea bed such as coal and limestone.

- **Rock Cycle:** All the rocks that make up the Earth today are continuously recycled within a closed system call the rock cycle.

Key Words: minerals, elements, solidification, sedimentation, metamorphism
(Refer to glossary given on Page number 99)

Model Questions:

1. Describe the formation of rock salt and coal.
2. Differentiate between a sedimentary and a metamorphic rock.
3. Identify the intrusive and extrusive rocks in the following diagram.



Projects, Assignments and Activity:

- Work Sheet will be provided.
- Different types of rocks and minerals will be shown to the students.
- Students will be taken to the parking area of the school to observe sedimentation.
- A multimedia presentation on types of rocks and their formation will be given.
- Research assignment on Gold mines, Salt mines, and Diamond mines.

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- http://geology.about.com/od/rocks/a/whatisarock.htm

February:

Chapter: Weathering and Erosion. Page #: 57-65

Topics:

- **Weathering**:

  It refers to the process whereby a rock disintegrates at or near the Earth's surface.

  Weathering depends on the hardness and softness of the rock. Fine grained rocks are weathered more rapidly than the coarse grained rocks. The heavily jointed rocks are more susceptible to weathering. Natural Agents of Weathering: The rate of weathering is high in hot and humid region or in hot and dry region. Plants and animals also aid in the breaking down of rocks.

- **Types of Weathering**

  Physical Weathering: Breaking down of rocks through physical forces without the changing of chemical composition.

  Chemical Weathering: Chemical weathering is a process in which rocks are broken down by chemical processes such as oxidation, carbonation.

  Biological Weathering: It refers to the process whereby rocks are broken down through the action of plants and animals.

- **Erosion:**
  It refers to the removal of weathered material by the action of water, glaciers, and wind

Key Words: weathering, physical weathering, exfoliation, chemical weathering, biological weathering, erosion, (Refer to glossary given on Page number 99)

Model Questions:

1. Name the process of weathering which takes place in deserts.
2. Identify the type of weathering shown in the following photograph.

Projects, Assignments and Activity:

- Work Sheet will be provided.
- A multimedia presentation on the types of weathering and erosion will be given.
- Carbonation process will be demonstrated in the class.
- Students will be taken to the parking area of the school to observe the weathered rocks.
- Pictorial research assignment on:
  Silkworm to silk
  Cotton to cotton yarn
  Wool processing

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- http://www.bbc.co.uk/schools/ks3bitesize/science/environment_earth_universe_rock_cycle/revise1.shtml

March:

Chapter: Earthquakes. Page#: 35-45

Topics:

- **Earthquake:**
  It occurs due to tremors or vibrations in the Earth's crust or when there is a sudden release of stored up energy in the Earth's upper mantle.

- **Magnitude of Earthquake:**
  It is the amount of energy released by the earthquake.

- **Richter Scale:**
  It is used to calculate the magnitude of an earthquake with the help of an instrument known as 'Seismograph'.

- **Focus and Epicenter of Earthquake**: The point at which earthquake takes place is known as the focus while the place directly above the focus is known as the epicenter.

- **Earthquake Zones in the World:** Earthquakes usually occur at the boundaries of crustal plates and within areas with frequent volcanic activities.

- **Minimizing loss of lives and damages:** Measures which can minimize the loss of lives and damages are conducting earthquake evaluation drills, plan for the construction of low lying buildings in earthquake prone areas, construction of buildings with material and design to withstand

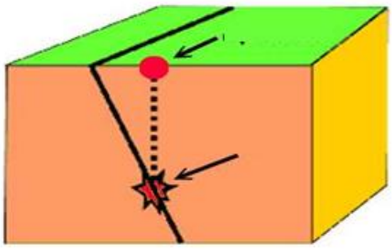
earthquake, ensure food, water and medicine supply.

- **A case study on 2005 Muzaffarabad earthquake:** It took place on October 8, 2005. The focus of the earthquake was only 26km below the earth surface. The magnitude of the earthquake was 7.6 on Richter scale.

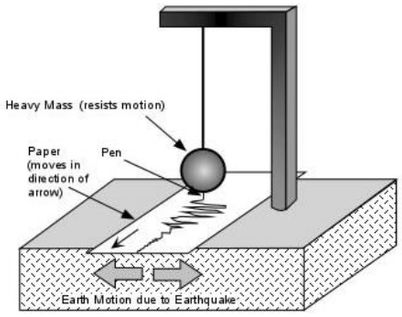
Key Words: earthquakes, focus, epicenter, magnitude
(Refer to glossary given on Page number 99)

Model Questions:

1. What causes an earthquake to occur?
2. Label epicenter and focus of an earthquake in the following diagram.



3. Identify the following instrument and state its use.



Projects, Assignments and Activity:

- Work Sheet will be provided.
- A short video on earthquakes will be screened.

Map Work:

- Students will mark earthquake zones in the world map.

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- http://earthquake.usgs.gov/earthquakes/eqarchives/year/eqstats.php
- http://earthquake.usgs.gov/regional/world/events/1976_07_27.php

April:

Chapter: Mineral and Energy Resources .Page #: 89-97

Topics:

- **Minerals and their Types:**

  Minerals are inorganic substances found in rocks in the ground. Minerals which contain metallic elements are called metallic minerals such as copper, iron. The minerals which do not have metallic elements in them are called non- metallic minerals such as clay, rock salt. Energy mineral resources are coal and petroleum.

- **Non-Renewable Energy Resources**:

  It refers to energy resources that are finite. For example: Coal, petroleum, natural gas and nuclear power.

- **Renewable Energy Resources:**

  It refers to energy resources that are non-finite and can be replaced after they have been used. For

example: Hydroelectric energy, solar energy, wind energy, geothermal energy, and biomass energy.

- **Uses of Energy Resources and their Impact on the Environment**

  Worldwide use of mineral and energy resources has been increasing steadily over many years due to increasing population and rising standards of living. This is causing negative impact on the environment such as scarring and alteration of the environment, soil erosion, leaking of poison used in processing the mineral resources, land, air and water pollutions.

Key Words: mining, quarrying, scarring,
(Refer to glossary given on Page number 99)

Model Questions:

1. With the help of examples distinguish between metallic, non-metallic and energy mineral resources.
2. Identify and discuss the importance of the type of energy resource shown in the following diagram.

Projects, Assignments and Activity:

- Work Sheet will be provided.
- An assignment on the topic "Khewra Salt Mines in Pakistan" will be given to the students.

Surf I.T

- http://www.miracosta.edu/home/MEggers/MRE%20Mineral%20ResourcesCh13.pdf
- http://www.ucsusa.org/clean_energy

Reference Book:

- Chun, Tham Yoke, (1998) *Understanding Geography 3,* Longman, Singapore
- Bunnett,R.B (1988)*Physical Geography in Diagrams,*4th ed. Longman, England.
- (2001) *New Secondary Geography,* FEP International (Private LTD), Rawalpindi.

APRIL-REVISION FOR FINAL EXAMINATION 2018

MAY- FINAL EXAMINATION 2018