

Dawood Public School
Course Outline 2017-2018
Geography
Class VIII

Books:

- Sethi, Huma Naz (2015) *The Environment of Pakistan, Pakistan Studies*, Peak Publications, Pakistan.
- Crawford, D (2013) *Geography Today Pupil Book 2* Revised Edition, Peak Publishing Ltd, UK

Month	Contents	Book
August	Minerals	The Environment of Pakistan by Huma Naz Sehti
September	More About Industry	Geography Today Book 2 by Doreen Crawford.
October	Water- its Cycle, Movement, Work and Uses.	Geography Today Book 2 by Doreen Crawford.
November	Revision for Mid-Term Exam	----
December	Mid-Year Examination 2017	----
January & February	Fishing Industry	The Environment of Pakistan by Huma Naz Sehti
February & March	Forests of Pakistan	The Environment of Pakistan by Huma Naz Sehti
April	Revision for Final Exam	
May	Final Examination 2018	

Syllabus Content

August:

Chapter: Minerals

Topics:

- **Minerals – (Definition)**

"A mineral is an element or chemical compound that is normally crystalline and that has been formed as a result of geological processes." Or "A mineral is a body produced by the processes of inorganic nature, having usually a definite chemical composition and, if formed under favorable conditions, a certain characteristic atomic structure which is expressed in its crystalline form and other physical properties."

- **How are minerals formed?**

Minerals are formed under a variety of conditions, when molten materials cool, when liquids evaporate or cool and under high temperatures and pressures. Minerals are found in the earth's crust and mantle, and many were created when feldspar and quartz reacted with other materials during the formation of the Earth.

- **Mining Methods**

There are three main mining process, open cast mining, adit mining and shaft mining, others process are: crushing, grinding and sizing, leaching and adsorption, water treatment, tailings, disposal etc.

- **Metallic and non-metallic minerals**

When a mineral contains metallic elements it is called a metallic mineral and when it doesn't contain metallic elements it is called a non-metallic mineral.

- **The mining industry in Pakistan**

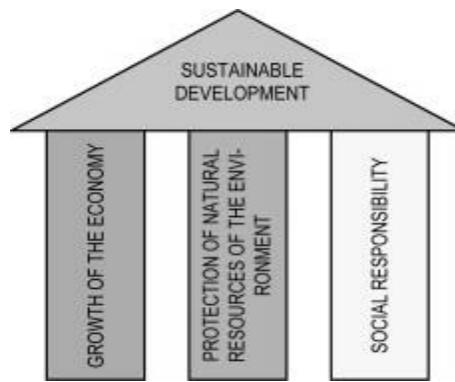
Mining is an important industry in Pakistan. Pakistan has deposits of several minerals including coal, copper, gold, chromite, mineral salt, bauxite and several other minerals. There are also a variety of precious and semi-precious minerals that are also mined. These include peridot, aquamarine, topaz, ruby, emerald, rare-earth minerals bastnaesite and xenotime, sphene, tourmaline, and many varieties and types of quartz. The Pakistan Mineral Development Corporation is the responsible authority for the support and development of the mining industry.

- **Effects of mining on the environment**

Before mining can begin, the land is cleared. The first issue is deforestation. Deforestation immediately destroys wildlife habitats. As the land is cleared and low bushes and vegetation burned and destroyed, wildlife either moves on or dies. Mining re-configures the land and its contours. Rain and subsequent ground water is diverted. As equipment is sunk and the ground hollowed out, chemicals such as cyanide, mercury, methyl-mercury and arsenic are forced through pipes (tailings). The water that runs off goes into streams, creeks, rivers, and lakes.

- **Sustainable development and mining**

Minerals are essential for modern living, and mining is still the primary method of their extraction. To date, it appears that the main constraints to sustainability in the mining sector derive from the ever-increasing demand for mined resources; the consumption of resources (mostly energy and water) needed to extract and process metals, and the increasing pollution generated by the extraction process. This holds true for both large-scale, often multinational corporate, operations as well as for small-scale or artisanal ventures.



Key Words: inorganic natural substances, adit mining, shaft mining, metallic minerals, non-metallic minerals, quarrying, extraction, environmental losses, exploration, exploitation

(Refer to handout)

Model Questions:

1. How would you differentiate between metallic and non-metallic minerals?
2. Study Fig. 1, which shows the places of limestone and rock salt extraction.
 - (i) Describe the distribution of limestone extraction in Pakistan.

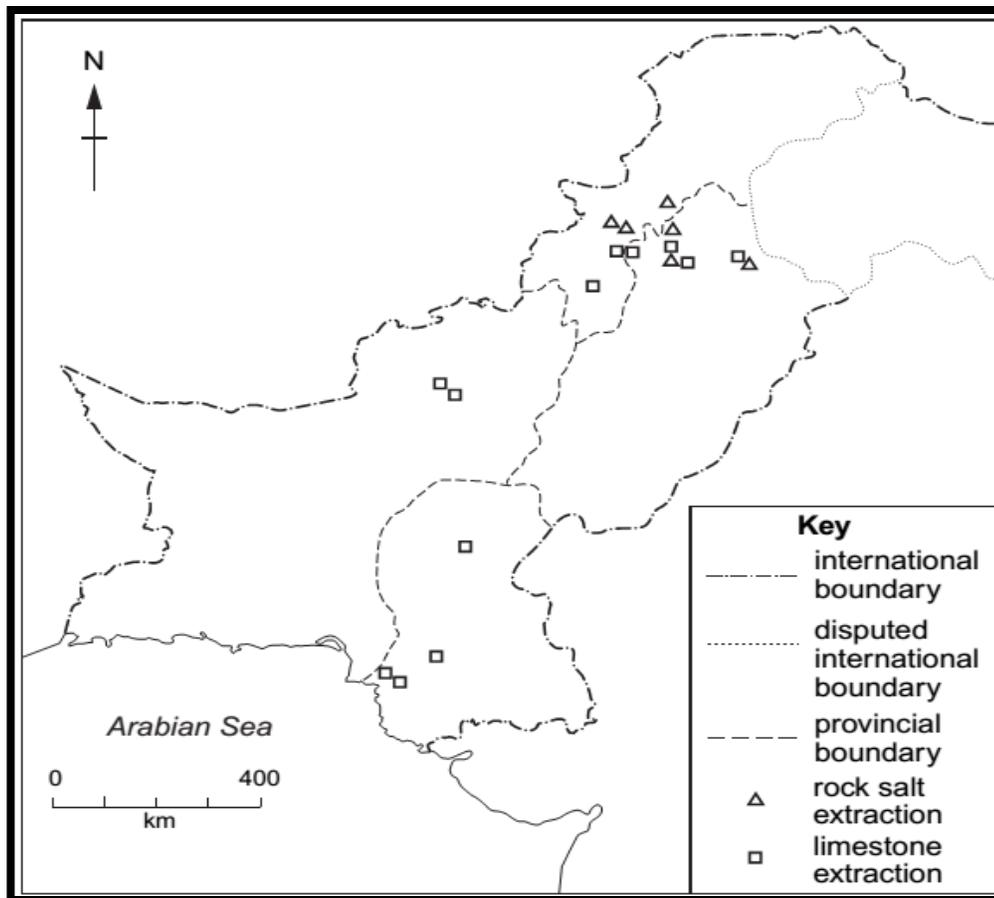


Figure 1

Projects, Assignments and Activity:

- Work Sheet and handouts will be provided.
- Students will be given a research assignment on:
 - “Reko diq Gold mine in Pakistan”
- Samples of metallic and non-metallic minerals will be shown.

Surf I.T:

- www.slideshare.net/junaidhassansheiks/mineral-resources-of-pakistan
- <http://pakistan360degrees.com/minerals-of-pakistan/>
- http://greenliving.lovetoknow.com/How_Does_Mining_Affect_the_Environment

September:

Chapter: More about Industry

Topics:

- **Industries – Introduction**

Industry is an organized economic activity concerned with manufacture, extraction and processing of raw materials, or construction. The output of an industry is a specified product or service. Industries can be classified on the basis of the type of work, products, number of employees etc.

- **Primary, Secondary and Tertiary Industries.**

Industries can be classified on the basis of obtained product or service. Primary Industry can be called as extractive industry, while secondary industry is a manufacturing industry. Tertiary Industry provides services.

- **Factors that may Influence the Development of an Industry.**

Development of an industry can be influenced by natural factors such as site requirement and natural routes and human factors such as capital, power supply, transport, skilled labor and industrial linkage.

- **Formal and Informal Sector**

Industries can be classified as a formal sector if it is legal and registered, employs number of people on fixed wages and regular working hours and provide good working conditions.

- **Primary Industry - Natural Gas Extraction in Pakistan.**

Natural gas extraction requires proper geologic study of an area to locate gas reserves and extract gas by boring wells with the help of skilled labor and high tech machineries.

- **Secondary Industry- Large, Medium and Small Scale Industries.**

Industries can be distinguished into three categories on the basis of the capital invested, number of employees and amount of production. Pakistan Steel Mills is an example of large scale industry while cottage industries are small scale industries.

- **Tertiary Industry -Tourism in Pakistan.**

Tourism industry boosts the country's economy and provides benefit to local people. Pakistan possesses a great potential for tourism industry as it is blessed with different terrains, beautiful landscapes and rich cultural diversity.

- **Effects of Industrial Pollution on the Environment.**

Industries can boost economy but poses a great threat to environment. Agriculture activities can cause eutrophication in natural water bodies; waste from chemical industries can cause high levels of heavy metals and other contaminants. Tourists coming to visit natural landscapes can degrade beauty of the area.

Key Words: Extractive industry, manufacturing, processing, assembling, raw material, capital, capital goods, value added product, GDP, trade, power supply, HEP, EPB, EPZ, green revolution, industrialization, infrastructure, syncline, iron ore .
(Refer to glossary given on Page no#220-223)

Model Questions:

1. How do industries contribute to increase in the GDP?
2. Differentiate between formal and informal industry.
3. How do the factors shown in figure 1 affect industrial production?

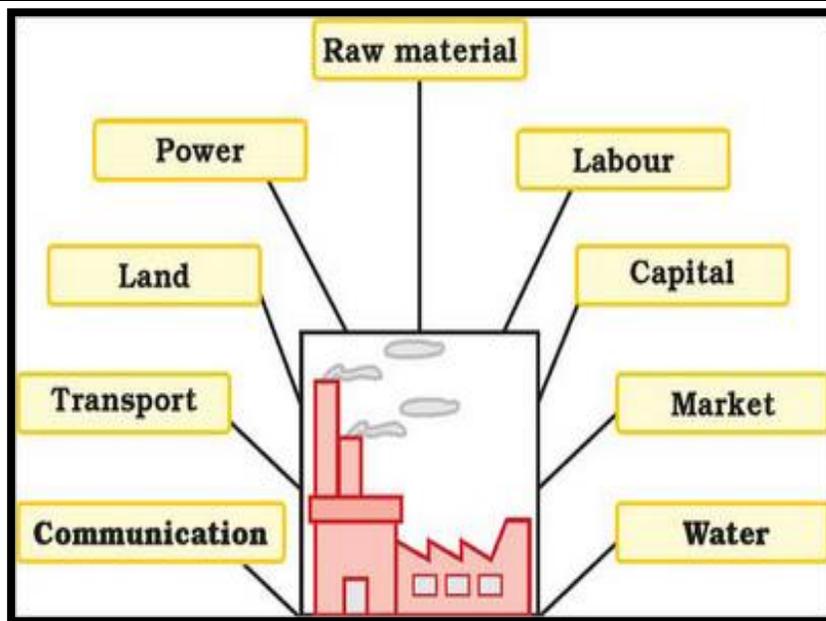


Figure 1

4. Describe the ways in which industries contribute to land, air and noise pollution.

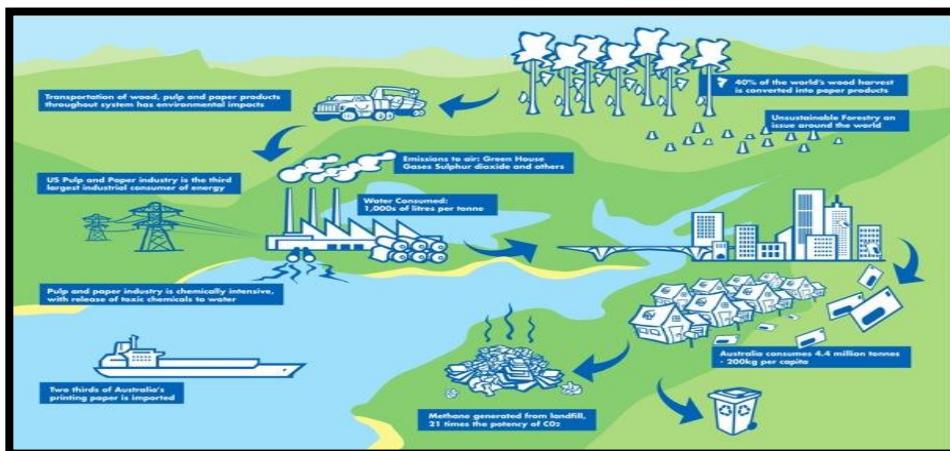


Figure 2

Projects, Assignments and Activity:

- Work Sheet and handouts will be provided.
- Students will be given a research assignment on:
 - “Pakistan’s Energy Crisis and alternative sources of energy”
- Lap book activity to show the cycle of Primary Product to Manufacturing Product”

Surf I.T:

- <http://www.learningall.com/importance-of-industrial-sector-in-economic-development/>
- [http://en.wikipedia.org/wiki/Industry_of_Pakistan\](http://en.wikipedia.org/wiki/Industry_of_Pakistan)
- <http://conservationpk.wordpress.com/2008/12/17/pollution-problems-in-pakistan/>

October:

Chapter: Water-its cycle and movement

Topics:

- **Hydrological Cycle**
Hydrological cycle is the continuous movement of water, above and below the surface of the Earth. It includes different processes of state change and movements such as evaporation, transpiration, precipitation, condensation, runoff and infiltration.
- **The Movement of Water**
The movement of water can be classified into two depending upon the system, oceans and land. Movement of water in ocean (Ocean Currents) is influenced by temperature, salinity, earth’s

rotation etc. while the movement on land is influenced by gravity. As a general rule, water flows from high land to lowland.

- **The Work of a River**

Erosion, transportation, and deposition are the work of a river. The type of work done at any point depends upon the velocity, energy and pressure of the flowing waters.

- **Features Formed by River**

River forms features by its erosion and depositional work. V-shaped valleys, waterfalls, meanders, deltas and floodplains are formed by the work of a river. River carves the landscape in the upper course forming erosion features such as V-shaped valley. In the lower stage as its energy decreases, river deposits its load and forms flood plains, levees and deltas.

- **Uses of River**

Rivers are the source of drinking, domestic, irrigation, and industrial water. Rivers are also used for transportation, and generation of HEP.

- **Irrigation in the Indus River System**

Irrigation water used across Pakistan is mainly from Indus and its tributaries. For proper management of Indus water dams, barrages and canals are constructed as there is high fluctuation in the amount of water flow during each year.

- **Sharing the Irrigation Water**

Water allocation between the provinces is regulated by IRSA, WAPDA and PIDs. The Rota system of distribution of water is based on the farmer's acreage of land and location of their fields.

- **Irrigation in Egypt**

River Nile system of irrigation is less complex than Indus river irrigation system. Aswan high dam on Indus Nile can be the point of conflict between countries.

- **Generation of HEP**

Electricity generated from HEPs is environmental friendly, renewable, low long term cost, and efficient power production. Hydel energy can be harnessed by fast flowing, high velocity water.

Key Words: evaporation, runoff, siltation, infiltration, erosion, transportation, deposition, corrosion, traction saltation, suspension, v-Shaped valley, wider v-shaped valley, waterfall, floodplain, delta, dam, HEP, perennial canals, inundation canals.

(Refer to glossary given on Pageno#220-223)

Model Questions:

1. Describe the formation of waterfalls in the upper course of a river.
2. Write at least four points in favor and against the building of dams in the area shown in the photograph 1.



Photograph 1

Projects, Assignments and Activity:

- Work Sheet and handouts will be provided.
- Students will be given assignment on:

- The Role of a river in transportation- Suez and Panama Canal.

Surf I.T:

- <http://www.slideshare.net/whiskeyhj/river-changes-and-landforms>
- <http://www.tvakids.com/electricity/hydro.htm>
- http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/how-hydroelectric-energy.html

**NOVEMBER-REVISION FOR MID TERM EXAMINATION 2016
DECEMBER-MID TERM EXAMINATION 2016**

January & February:

Chapter: Fishing

Topics:

• **Introduction to Fisheries- Primary Sector:**

Fishing industry is based on harvesting fish from natural resources such as oceans (Marine Fishing) or rivers and lakes (Inland Fishing).

• **Importance of Fishing Industry- Food Supply, Economic Benefits:**

Fish is an important diet source. It provides protein and low cholesterol white meat. Fish waste is used to make fertilizers and poultry feed; fish oil has medicinal value. People engaged in fishing rely on fish catch for their livelihoods.

• **Major Fishing Areas Along Sindh and Makran Coast:**

Makran Coast forms 70% of the coast line while Sindh forms 30% of the coast line but the amount of fish catch obtained from Sindh coast is 70%. This is mainly due to natural features (i.e. wide continental shelf, mangroves, river discharge, and creeks etc.) and more efficient fishing techniques and facilities available at Sindh Coast.

• **Marine and Inland Fishing:**

The number of people employed in Marine fishing is half of those employed in inland fishing, but the catch from marine fishing is nearly three times greater than Inland fishing. This contrast is due to the influence of natural factors and fishing techniques.

• **Fishing Methods: Subsistence and Modern Fishing Methods, Including Fish Farming:**

Subsistence fishing methods are adopted by people living along the coast and fishing runs in their families, while the commercial fishing employs large scale fishing operations and produce high fish catch.

• **Main Types of Fish Species Caught or Reared in Fish Farms:**

Fish species vary with the amount of salinity and temperature of water. Similarly fish reared in farms are influenced by the temperature of an area. For example palla can be farmed in Sindh while trout can be reared in KPK.

• **Fish Farming:**

Fish farming or aquaculture is the cultivation of aquatic species in a human controlled environment. This could reduce the burden on natural fish resources. The joint fish farming (fish and poultry/cattle farming) operations require little space, low capital investments, and gives quick returns.

• **Government's Effort for the Development of Fisheries and Fish Marketing:**

To increase GDP contribution from Fisheries Department, government is taking number of steps. These include development of ports, processing and storage facilities, monitoring of deep sea fishing vessels, strengthening of QC labs and improvements in MFD.

- **Fish Farming and Environment:**

Fish farms affect environment. They cause changes in ecosystem, low water tables, cause salinization, and chemical pollution. On the other hand, fish farms have positive impact as well as joint farming operations, recycle waste and help to protect natural fish resource.

- **Problems of the Fishing Industry:**

Fishing Industry of Pakistan is facing problems due to water pollution, overfishing and destruction of breeding grounds and nurseries of fishes, and lower silt and water discharge in delta.

- **Future Development of Fishing and its Sustainability:**

To attain sustainability several strategies need to be implemented such as ban on catching baby fish, use of small mesh size nets, protecting breeding grounds, and controlling pollution.

Key Words: subsistence fishing, commercial fishing, fish Farming, aquaculture, continental shelf, creeks, bays, , trawling, mechanized boats, endangered species, joint farming, phytoplankton, food chain, docking, harbor, Water table.
(Refer to glossary given on Pageno#220-223)

Model Questions:

1. Differentiate between Marine and Inland Fishing.
2. With the help of figure 1, determine why are fish so plentiful in the mangroves of the Indus delta coast?



Figure 1

3. Study the following photograph which shows a fish farm.
 - a. How has the physical topography of the area made it easy to construct the ponds?



- b. Discuss the impact of this human activity on the environment and people.

Projects, Assignments and Activity:

- Work Sheet and handouts will be provided.
- Multimedia presentation about construction of fish farm will be screened.
- Models will be displayed to show the Pakka and Kaccha fish farms, and the process of water logging.
- Students will be given a research assignment on:
- “Threats to Green Turtles”

Surf I.T:

- <http://www.scribd.com/doc/15943558/Fishing-in-Pakistan>
- <http://www.pakissan.com/english/agri.overview/fisheries.sector.in.pakistan.shtml>

February & March:

Chapter: Forests of Pakistan

Topics:

- **Forest, A Major Natural Resource (importance and uses of forests);**
Forest plays a vital role in balancing atmosphere, ecosystem and habitats. Forest provides ecological, social and economic benefits. They are the source of variety of products and promote tourism.
- **Types and Distribution.**
In Pakistan a variety of forests are found because of the diverse geographical location, climate and expanse of country from coast line to mountains. Pakistan is blessed with about six types of forest vegetation such as Alpine, Coniferous, Rakh, Sub tropical dry, Riverine and Mangroves.
- **Determinants of Major Forest Types.**
Forest types are influenced by temperature, amount of precipitation, altitude, and type of soil. These factors determine density and type of vegetation growth in an area such as growth of coniferous in northern areas of Pakistan and growth of mangroves along the coastline.
- **Causes of Deforestation**
Deforestation in Pakistan is a threat to forest resources. Large areas of forests are cleared for developing human settlements, infrastructure, expansion of agriculture fields, tourist resorts and for firewood and fodders.
- **Effects of Deforestation**
Human activities such as deforestation contributes to the imbalance in environment, climate change and global warming, more run off and floods, siltation in dams, conversion of fertile lands into deserts.
- **Sustainable Forestry: Plantations, Afforestation and Forest Management Techniques.**
Sustainability refers to development and strategies to make forest resources benefit present and future generations. Adaptation of afforestation, forest regeneration programs, urban and rural forestry, selective cutting, and soil conservation techniques.

Key Words: productive forest, protection forest, linear plantation, biodiversity, soil erosion, runoff, interception, siltation, stilt roots, breathing roots, relief rainfall, water logging, tourism, western depression, selective cutting, deforestation, global warming, lumbering. (Refer to glossary given on Page no#220-223)

Model Questions:

1. State the meaning of the terms “afforestation” and reforestation”.
2. Explain the importance of forests to the people of Pakistan.
3. Study the following photograph which shows a coniferous tree.

- a. Describe the adaptive features of the vegetation shown in figure.1
- b. State the factors for the growth of such vegetation in northern Pakistan



Figure 1

Projects, Assignments and Activity:

- Work Sheet and handouts will be provided.
- Students will be given an assignments on:
- Afforestation Program IUCN

Surf I.T:

- <http://pakistangeographic.com/forests.html>
- http://www.conservation.org/what/pages/forests.aspx?gclid=COSs_NSmr8CFSflwgodlh0ALw

APRIL-REVISION FOR FINAL EXAMINATION 2017-2018

MAY- FINAL EXAMINATION 2017-2018

Reference books:

- (2001) *NewSecondary Geography*, FEP International (Private) LTD, Rawalpindi.
- Khan, F. K (2015) *Pakistan Geography, Economy and People*, Oxford University Press, Pakistan.
- Fazle Karim (2015) *Pakistan geography, economy and people* Oxford University Press, Pakistan.
- Reference Book: Khalid, Prof. Nazir Ahmed (2003) *Career's Geography of Pakistan*, Career Books Publisher, Lahore.