

Dawood Public School
Course Outline 2017-18
Geography
Class V

Books:

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

Yearly Syllabus:

Month	Contents	Page #
August	Weather and Climate	64-82
September	Earth's Movement and their causes	Handouts
October	Climate and natural vegetation	91-115
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August:

Topic: Weather and Climate:

- **Weather:** Weather is the change in atmosphere for a short period of time.
- **Climate:** Climate describes the average weather condition over a long period of time.
- **Atmosphere:** is the envelope of gases around the Earth. The Earth's atmosphere is composed of variety of gases mainly Nitrogen, Oxygen and carbon dioxide.
- **Atmospheric layers:** Earth's atmosphere is divided into Troposphere, Stratosphere, Mesosphere, Thermosphere, and Exosphere.
- **Elements of Climate and Weather:** The elements of weather and climate include atmospheric conditions such as; Temperature, Precipitation, Humidity, Air pressure, Cloud Cover, and Wind direction.
- **Temperature:** Temperature refers to the degree of hotness or coldness of the air which is measured with a Thermometer.
- **Direction of the Winds:** Winds are the strong movement of air which carries the temperature of an area to other. The direction of wind is known by wind vane.
- **Humidity:** is the amount of water vapor in the atmosphere which is measured with Hygrometer.
- **Air pressure:** Atmospheric pressure which is exerted by the weight of air per unit area, which is measured with a Barometer.
- **Rainfall:** Water that falls to the Earth which is measured with a Rain Gauge.
- **Wind Strength:** Shows the speed of the wind which is measured with an Anemometer.
- **Clouds:** Clouds made up of water droplets, caused by the process of condensation. Cloud cover is recorded with Total Sky Imager.
- **Is our climate changing?** Human activities accelerate climate change and global warming. Use of CFC's, Fossil Fuels.
- **Evidences of Climate change:** Droughts which are prolonged periods without water. Floods: which are overflow of water.

Reference Books:

- ✓ Jay, Sian E; Lim, Solomon and Nathan, Edward (n.d.) *Our World: a Closer Look, Secondary 3*, Federal Publications, Singapore.
- ✓ Chun, Tham Yoke. (1998).*Understanding Geography*. Longman, Singapore.

Key Words: Weather, Climate, Atmosphere, Precipitation, Evaporation, Transpiration, Climate change, Drought. (Refer to Glossary, given on page 129)

Sample Questions:

1. State the difference between weather and climate.
2. Fill the following table:

Element of weather	Meaning	Name of the Instrument to measure the element	Units
Temperature			
Wind Pressure			

Projects, Assignments and Activity:

- Work Sheet will be provided.
- Activity from book page # 83 "how green are you?"
- Collect weather forecast report of a week and make your own report.
- Fieldwork (temperature Recording) to explain the various local influences on temperature in the school.

Surf I.T

- <http://www.weatherwizkids.com/weather-climate.htm>
- http://www.bbc.co.uk/schools/gcsebitesize/geography/weather_climate/

September:

Topic: The Earth's Movements and its causes (Handout)

- **Earth's Axis:** The earth's axis is inclined at an angle of $66\frac{1}{2}^{\circ}$ to the plane of its orbit.
- **Rotation:** The movement of earth on its own axis which causes day and night. It takes 24 hours to complete its one turn.
- **Revolution:** The movement of earth around the Sun in its orbit. Revolution of earth around the sun with its inclined axis causes the change in season and variation in day length.
- **Summer Solstice:** Condition of earth in its orbit when the northern hemisphere experiences summer. The overhead sun position is on the Tropic of Cancer.
- **Winter Solstice:** Condition of earth in its orbit when the northern hemisphere experiences winter and the overhead sun position is on Tropic of Capricorn.
- **Autumnal Equinox:** Condition of earth in its orbit when the northern hemisphere experiences autumn. Overhead sun position is on the Equator.
- **Spring Equinox:** Condition of earth in its orbit when the northern hemisphere experiences spring. Overhead Sun position on Equator.
- **Different Length of Day and Night:** Revolution of earth around the sun with its inclined axis causes the variation in day length. Different places on earth experience different day lengths in different seasons except Equator.
- **Apparent Movement of Sun:** Sun does not move but appears to move.

Reference Books:

- ✓ (2001). *Secondary Geography*. FEP International, Rawalpindi.
- ✓ Moss, peter. (1999) *Geography Alive Book 1*. Oxford University Press, Oxford.

Key words: Solstice, Equinox, Overhead Sun, Tropic of Cancer, Tropic of Capricorn, Equator. (Meanings are given in the Handout)

Sample Questions:

1. Why is the duration of day and night different for different places?
2. Explain the condition of Earth shown in the following figure.



Projects, Assignments and Activity:

- Work Sheet and handouts will be provided.
- Multimedia presentation will be screened to develop students' understanding about the rotation and revolution of the Earth and their causes.
- Different angles of incidence with the help of torch and globe will be demonstrated for the students.
- Students will be given an assignment to collect the data of sunset and sunrise for different cities of the world.

Surf I.T

- <http://www.slideshare.net/Mariadebiologia/the-movements-of-the-earth>
- http://www.windows2universe.org/kids_space/qearth_motion.html

October:

Topic: Climate and Natural Vegetation:

- **Natural Vegetation and the Ecosystem:** An ecosystem comprises of living organisms and their non-living environment
- **World distribution of Natural vegetation:** Climatic zones and natural vegetation are closely connected. Distribution of natural vegetation type is greatly influenced by the temperature and rainfall received by an area.
- **Factors affecting Natural Vegetation:** There are three factors that influence type of vegetation. These are rainfall, temperature and sunlight. Large amount of rainfall throughout the year support the growth of dense forests. High temperature throughout the year supports dense growth of the forest. Sunlight is essential for photosynthesis.
- **The Earth's main Ecosystem (Biomes):** Biome is a large scale ecosystem.
- **Tropical Rainforest:** Rainforest vegetation is evergreen. Layers of rainforest include Canopy layer, Emergent layer, Undergrowth, adaptation features are buttress roots, and broad leaves with drip tip.
- **Coniferous Forest:** Coniferous forests vegetation is evergreen. Adaptation features are conical shape, needle shaped leaves, and broad thick resinous bark.
- **Tropical Grasslands:** Savannas are dominated by long coarse grasses with scattered trees. Adaptation features of vegetation are deep roots, and swollen trunk.
- **Hot Deserts:** Deserts are dominated by cacti, short bushes and tough grasses. Adaptation features of vegetation are needle like leaves, deep roots, and swollen trunk.
- **What happens when the forest are destroyed?** The results of the destruction of rainforest land are habitat destruction, soil erosion, disturbance in carbon dioxide and oxygen atmospheric balance, and climate change.

Reference Books:

- ✓ Leong, Goh Cheng. (2001). *Excel in Geography 1*. Federal Publication, Singapore.
- ✓ Chun, Tham Yoke. (1998). *Understanding Geography*. Longman, Singapore.

Key Words: Biome, Evergreen, Deciduous, Rainforest, Tundra, Drip tip, Needles, Conical shape, Adaptation, Habitat, Native species, Ecosystem.

(Refer to Glossary, given on page 129)

Sample Questions:

1. Define biome, food chain, and producers.
2. Describe the factors that influence the vegetation of an area.
3. What are the results of deforestation of rainforest?
4. State the adaptation features of a tree shown in figure.1



Fig. 1

Projects, Assignments and Activity:

- Worksheet will be given.
- Activity “**Identify the Leave and write about it**”

Surf I.T

- <http://rainforests.mongabay.com/20brazil.html>
- <http://eschooltoday.com/forests/types-of-forests.html>
- <http://www.sciencekids.co.nz/sciencefacts/earth/rainforests.html>

November:

Revision

December:

Mid-Term Examination 2017

January:

Topic: Factual information related with the physical features.

Physical Features are:

1. Mountains
 2. Deserts
 3. Waterfall
 4. Rivers
 5. Seas
- A **mountain** range is a series of mountains that are connected together generally to form long line of mountains.
 - The **Himalayas** stretch 1,491 miles through much of central Asia. They travel through many countries.
 - At around 4,300 miles long, the **Andes Mountains** make up the world's longest mountain range. The Andes stretch north to south through much of South America
 - The **Alps** are a major mountain range in central Europe.
 - The **Rocky Mountains** Range from north to south in western North America.
 - The **Atlas Mountains** are a mountain range across a northern stretch of Africa extending about 2,500 km (1,500 miles) through Morocco, Algeria, and Tunisia.
 - **Deserts** are areas that receive little precipitation, classified as an area that receives less than 250 millimeters (10 inches) of annual precipitation on average.
 - The largest deserts in the world are polar deserts: the **Antarctic Desert** and the **Arctic Desert**.
 - The third largest desert in the world and the largest non-polar desert is the **Sahara**. Situated in North Africa.
 - The **Arabian Desert** is the fourth largest desert in the world, with an area of about 2,330,000 square kilometers. The Arabian Desert is situated on the Arabian peninsula
 - The fifth largest desert on Earth is Asia's **Gobi Desert**. Situated in northwestern China and southern Mongolia.
 - **Inga Falls**, a 3,000-foot wide waterfall, is located on the Congo River, in the Democratic Republic of the Congo.
 - **Niagara Falls** is undoubtedly the best known waterfall on the planet. It has three separate parts: American Falls, Bridal Veil Falls and Horseshoe, or Canadian, Falls.
 - **Victoria Falls** is a 5,600-foot wide waterfall located on Zambezi River in Zimbabwe.
 - **Vermilion Falls** is the sixth biggest waterfall in the world. It's located along Peace River, in Northern Alberta, Canada.
 - **The Nile River** is 4,135 miles long. It is located in the continent of Africa, mostly in the countries of Egypt and Sudan. It flows north into the Mediterranean Sea.
 - **The Amazon River** is 3,980 miles long. It is located in the continent of South America and flows through several countries.
 - **Yangtze** - Located in China, the Yangtze River is 3,917 miles long and flows into the East China Sea.
 - The river system of the **Mississippi River** and the Missouri Rivers is the longest river system in North America at 3,902 miles. It flows south into the Gulf of Mexico.
 - A **sea** is commonly defined to be an extended body of saline water associated with one of the worlds five oceans (Atlantic, Indian, Pacific, Arctic, and Southern oceans).
 - **South China Sea**, Chinese **Nan Hai**, arm of the western Pacific Ocean that borders the Southeast Asian mainland. It embraces an area of about 1,423,000 square miles (3,685,000 square km), with a mean depth of 3,976 feet (1,212 metres).
 - The **Caribbean Sea** is a tropical sea in the center of the Caribbean area. The body of water is part of the Atlantic Ocean. The sea is southeast of the Gulf of Mexico.
 - The **Mediterranean Sea** is the body of water that separates Europe, Africa and Asia. The Mediterranean Sea is connected to the Atlantic Ocean by a narrow passage called the Strait of Gibraltar.

- The **Bering Sea** is a marginal sea of the Pacific Ocean. It has a deep water basin, which then rises through a narrow slope into the shallower water above the continental shelves. It covers over two million square kilometers.
- The **Sea of Okhotsk** is a marginal sea of the western Pacific Ocean. It covers 611,000 sq.mi. ($1,583,000 \text{ km}^2$). The average depth is 2,818 feet (859 metres). Its maximum depth is 11,063 feet (3,372 metres).

Topic: Longitude and Latitude

- There are two sets of lines running through a globe or a flat world map. Lines running north and south, parallel to the equator, are called lines of latitude while those running east and west of the Prime Meridian are lines of longitude.
- Properties of latitude:** Latitude is the angular distance of a point on the Earth's surface north or south of the equator, measured in degrees.
- All latitudes run parallel to the equator.
- There are four parallels of latitude. Two of them are Tropic of Cancer $23\frac{1}{2}$ degrees North and the Tropic of Capricorn, $23\frac{1}{2}$ degrees South.
- The other two parallels are the Arctic and Antarctic Circles, which are $66\frac{1}{2}$ degrees North and $66\frac{1}{2}$ degrees South.
- Equator divides the Earth into Northern and Southern Hemisphere.
- Each degree of latitude is divided into 60 minutes and each minute into 60 seconds.
- Properties of longitude:** it is the angular distance, measured in degrees east or west of the Prime Meridian.
- All meridians of longitude converge at the poles.
- The **Prime Meridian** divides the world into Eastern and Western Hemisphere.
- Each degree of longitude is subdivided into 60 minutes and each minute into 60 seconds.
- Longitudes, besides being useful in locating positions on the globe, are also useful for the calculation of local time in relation to **Greenwich Mean Time (G.M.T)**

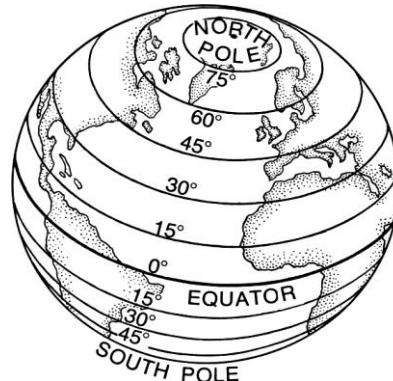
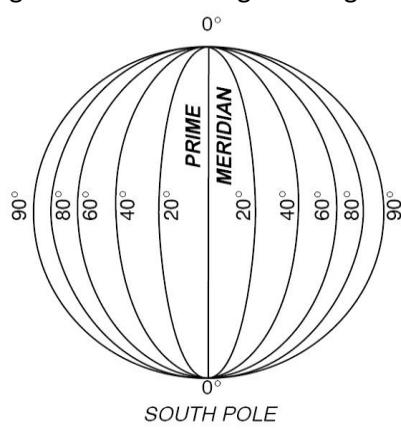
Reference Books:

- ✓ (2001). *Secondary Geography*. FEP International, Rawalpindi.
- ✓ *Excel in Geography, Secondary 1*, Goh Cheng Leong, Federal.

Key words: Longitude, Latitude, Equator, Prime Meridian, Greenwich Mean Time, Hemisphere
(Meanings are given in the handout)

Sample Questions:

- Why are longitudes and latitudes important?
- Name the important parallels of latitudes. Why are they important?
- Distinguish between the given diagrams.



Projects, Assignments and Activity:

- Work Sheet and handouts will be provided.
- Multimedia presentation to develop students' understanding about latitudes and longitudes.
- Map of latitude and longitudes

Surf I.T

- <http://www.socialstudiesforkids.com/articles/geography/latitudelongitude.htm>
- <http://www.mrdowling.com/601-grid.html>
- http://www.abcyo.com/latitude_and_longitude_practice.htm

February:

Topic: Longitude and Time

- Longitude is used for fixing the time in different places and all places on the same meridian are supposed to have the same time.
- The earth takes 24 hours or 1440 minutes to turn one complete circle on its axis. When we divide 1440 by 360, we obtain 4 minutes. This means that the earth turns one degree of longitude in 4 minutes.
- The difference in time between different places on the earth depends on the degrees of longitude separating them.
- All places within certain time zone have the same time called **Standard Time**.
- The International Date Line is defined as an imaginary line that goes north and south through the Pacific Ocean, one day is on the east side of the line and the following day is on the west side.
- **Two simple rules:** For every 15 degrees of longitude east of Greenwich, one hour has to be added to G.M.T. In crossing the Date Line eastwards, one day has to be subtracted from the calendar.
- For every 15 degrees of longitude west of Greenwich, one hour has to be subtracted to G.M.T. In crossing the Date Line eastwards, one day has to be added to the calendar.

Key words: Longitude, Latitude, Equator, Prime Meridian, Greenwich Mean Time, Hemisphere, International Date Line

(Meanings are given in the handout)

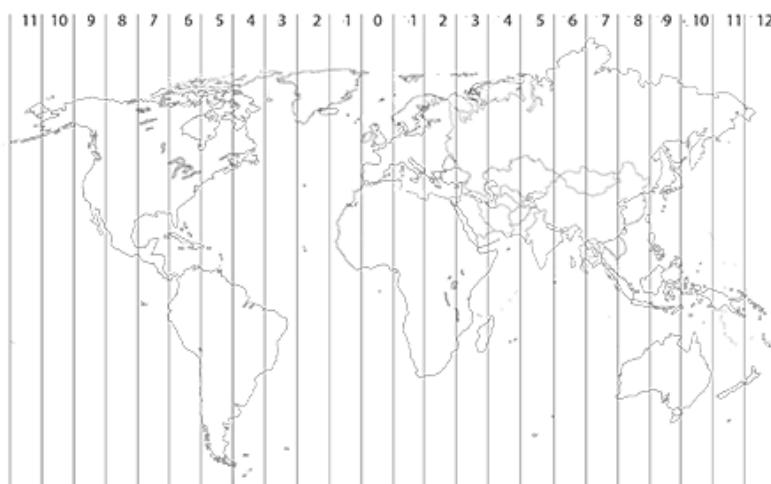
Sample Questions:

1. When crossing the International Date Line from east to west, would you be gaining a day? What would your answer be if you had travelled from west to east?
2. We add and subtract an hour when crossing the International Date Line. Justify the given statement.
3. Add a positive or a negative sign in the given map to show the World's Time Zones.

Time Zones



Use this as a reference for time zones all over the world.



Projects, Assignments and Activity:

- Work Sheet and handouts will be provided.
- Multimedia presentation to develop students' understanding about latitudes and longitudes.
- Map of latitude and longitudes

Surf I.T

<http://www.kidsgeo.com/geography-for-kids/0015-longitude.php>

<http://www.kidsgeo.com/geography-games/latitude-longitude-map-game.php>

March:

Topic: Agriculture

- **What is Agriculture?** Agriculture is growing of crops for raising animals, for food and raw materials for industries.
- **Types of Farming:** Arable Farming (growing of crops), Pastoral Farming (raising of animals)
- **The Different Purposes of Agriculture:** Subsistence agriculture refers to growing crops or keeping animals for their own use or to feed their own families while commercial farming refers to growing crops or keeping animals for selling purposes.
- **Importance of Agriculture:** Source of food supply, Employment of Labor, Foreign Exchange earner, Solution for poverty and hunger.
- **High Technology agriculture:** Scientists have discovered new farming technologies to feed the growing population and increasing demand for food such as Greenhouse technology, Hydroponics, Aeroponic. These methods do not require soil; however, these methods are expensive.

Reference Books:

- ✓ Leong, Goh Cheng, (2001) *Excel in Geography 1*, Federal Publication, Singapore.
- ✓ Crawford, Doreen. (2013). *Geography Today 1*. Revised Edition, Peak Publishing Ltd, UK.

Key Words: Agriculture, Arable farming, Pastoral farming, Plantation agriculture, Shift Cultivation, Hydroponics, Aeroponics. (Refer to Glossary, given on page 129)

Sample Questions:

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



Projects, Assignments and Activity:

- Worksheet will be given.
- Do the activity given on page # 127.

Surf I.T

- <http://www.neok12.com/Agriculture.htm>
- <http://www.kidsgardening.org/node/3760>
- <https://www.towergarden.com/what-is-tower-garden/how-it-works/aeroponics>

April:

Revision

May:

Final Examination 2018