**8TH JUNE 2020-06-01 JESUS AND MARY SCHOOL MODULE – 3**

**CLASS-V SOCIAL STUDIES**

**Our Environment**

**Text book**

Life is possible on Earth because it has an environment which is suitable for humans, animals, plants. Environment is the basis of life on Earth. The word environment has been derived from the French word environner which means ‘to surround'. Environment is the sum total of our surrounding including the physical landscape, Iiving organisms, the atmosphere, and the man-made structures. The air we breathe, the water we drink and the food we eat, all come from our environment. The natural environment comprises land, water, air, plants, and animals. The natural environment comprises two main components-biotic and abiotic.

Biotic means related to life. Biotic component includes the world of living organisms For e.g- plants, animals, fungi or bacteria.

Abiotic means not alive. Abiotic component includes non-living factors that affect living Organisms. Abiotic component includes environmental factors such as land and water dind elements of weather such as temperature, cloud cover, rain and snow. The Four Spheres of the Environment The environment is made up of four spheres which are known by the following terms- lithosphere (land), hydrosphere (water), atmosphere (air), and biosphere (living organisms) These terms have been derived from Greek words-lithos (stone), atmos (air), hydor (water), and bios (life).

Lithosphere: The lithosphere is the solid, rocky surface which covers the entire Earth. This upper layer of the Earth is made up of layers of rocks and minerals. It also has a thin cover of soil. The layer of soil contains nutrients which help the plants to grow. All the natural resources of the Earth are found in the lithosphere. This makes lithosphere the most important sphere of the Earth. Lithosphere covers the entire surface of the Earth from the top of Mount Everest (highest point on Earth) to the bottom of the Mariana Trench (deepest point on Earth). The lithosphere is uneven and irregular since it comprises various landforms like mountains, plateaus, plains, deserts, valleys, etc. The lithosphere includes landforms that are above the ground as well as those under the water.

There are two parts of the lithosphere:

Continental lithosphere- the part associated with continents

Oceanic lithosphere - the part which exists in the ocean basins

Layers of the Earth: Earth is made up three layers-crust, mantle, and core. Crust is the outermost layer made up of soil and hard rocks. It is the thinnest layer. Lithosphere is also known as crust. Below the crust is the mantle which is the middle layer. It is thicker than the crust but thinner than the third layer which is known as core. The core has two parts-outer core and inner core. The outer core is liquid and the inner core is solid. The Earth gets hotter and hotter as we go deeper from the crust towards the core.

Hydrosphere: The hydrosphere is the sphere of water on Earth. It is essential for all forms of life on Earth. About 71 per cent of the Earth's surface is covered with water and 29 per cent of it is land. Because of its large water surface, our Earth is known as the "Blue Planet' or the 'Watery Planet. The five major oceans of the world make up the largest part of the hydrosphere. Ocean and sea water is saline and not fit for consumption by living organisms. Freshwater on Earth is less than 1 per cent. Only freshwater is suitable for human beings and other living organisms. Freshwater is found in the form of ice sheets, rivers, lakes, ponds, and underground water. Rain is an important source of freshwater.

The Unique Water Cycle on Earth: The Earth's water is always in motion-it is always changing states, from liquid to vapour, Water Composition of land and water on Earth to ice, and back again to liquid. The heat of the Sun causes water to evaporate from the water bodies, into the atmosphere. Plant and animals also release water vapour into the atmosphere as they breathe. The continuous process by which water is circulated throughout the earth and the atmosphere- through evaporation, condensation precipitation and transpiration, by changing from one form to the other is known as water cycle. It is also Called hydrologic cycle. Water has been recycled in different forms as ice liquid, or vapour, for billions of years. We need Water for various purposes in our daily life, for cultivation or crops, and for waterways and transportation. All marine life depends on water for their survival. Ocean currents influence climate. All life on Earth depends on this unique water cycle

Atmosphere:

The atmosphere is a thin layer of colourless and odourless gases in the air, which surrounds our planet. Most of our atmosphere is located close to the Earth's surface. The atmosphere extends up to a height of about 1,600 km. Air consists of 78 per cent nitrogen, 2 per cent Oxygen; the remaining 1 per cent is composed of carbon dioxide, argon, neon, hydrogen, helium, ozone, methane, etc. in very small traces.

The atmosphere is essential for life on Earth. Oxygen is the most important gas for the survival of humans and animals. Carbon dioxide is essential for plants for making their food. The ozone layer absorbs most of the Sun's ultraviolet radiation and protects us from its harmful effects, such as skin cancer. In addition to the gases, the atmosphere also consists of dust particles and water vapour. The water vapour in the atmosphere helps in controlling the temperature of a place and helps in the formation of rainfall. Life would be impossible without the atmosphere.

Biosphere: The biosphere includes all the three components- land, Water and air-where the living organisms are found. Biosphere is composed or plants, animals and all forms of life on the land, in air or water, from the minutest bacteria to the largest living creatures. From the polar ice caps to the Equator, every part or the planet supports life of some kind. Each living organism has its natural home or specific environment in which it exists. This is called its habitat. All living beings in a particular area plants, animals, and other living organisms, which function together as a unit in the environment form an ecosystem. Biosphere makes life possible on Earth. Therefore, it is also called the 'Zone of life on Earth'.

**Explanation-**

Environment- The complex of physical chemical, and biotic factors (such as climate, soil, living

things) that act upon an organism or an ecological community and ultimately determine its form and survival. Environment is the basis of life on Earth. The word environment has been derived from the French word environner which means ‘to surround'. The natural environment comprises land, water, air, plants, and animals. The natural environment comprises two main components-biotic and abiotic.

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**WORKSHEET – 3**

NOTE:Do the following exercises in your copy/ Note book

**Exercise-1 word/meaning**

1. **Surround**  : near by
2. **Threats** : danger
3. **Reducing** : decreasing
4. **Conservation** : protection
5. **Survival** : living
6. **Freshwater** : water that does not contain salt.
7. **Decompose** : decay
8. **Dumped** : unload

**Exercise-2 Short type Ques/Ans**.

Q1. *What is environment?*

Ans. Environment is the surrounding around us. It is made up of both living and Non living things

Q2. *What are the four sphere of the environment?*

Ans. The four sphere of the environment are

1. Lithosphere
2. Hydrosphere
3. Atmosphere
4. Biosphere

Q3. *Define atmosphere.*

Ans. Atmosphere is the thin layer of colourless and odourless gases in the air which surround our planet.

Q4. *Why is biosphere known as zone of life on earth?*

Ans. Biosphere makes life possible on earth. Therefore it is known as zone of life on earth.

**Exercise-3 Long type Ques/Ans**.

Q1. *What is the importance of lithosphere?*

Ans. The lithosphere is the solid rocky surface which covers the entire earth. This upper layer of the earth is made up layer of rocks and minerals. It also has a thin cover of soil. All the natural resources of earth are found in the lithosphere.

**Exercise-4 Fill in the blanks.**

1. Life is possible on earth because it has *environment.*
2. The environment consists of *four* spheres.
3. Continental lithosphere is associated with *ocean.*
4. Earth is called the *blue* planet.

**Exercise-5 True / False.**

1. Biotic means related to life. (True)
2. Atmosphere contains only oxygen. ( False)
3. Ozone layer protects us from the sun. (True)
4. There is a large amount of freshwater on Earth. (False)

**Exercise-6 Match the following.**

1. The sphere of water on Earth (a) hydrosphere
2. The sphere of land on Earth (b) lithosphere
3. A thin layer of gases surrounding the Earth (c) atmosphere
4. The natural environment of a living organism (d) habitat

**Exercise -7 tick the correct answer.**

1. Lithosphere is also known as the

(a) mantle (b) core (c) crust [√]

1. The most important gas for plants to make their food is

(a) helium (b) carbon dioxide [√] (c) oxygen

1. The protective layer in the atmosphere is made up of

(a) methane (b) argon (c) ozone [√]

1. About 71 percent of the Earth’s surface is covered with

(a) land (b) water [√] (c)forests