

**Chapter 1 : Ncert Solutions Pdf: Class 9 Science Notes Chapter 14 Natural Resources**

*Natural Resources: Chapter Notes Notes for natural resources chapter of class 9 science. Dronstudy provides free comprehensive chapterwise class 9 Science notes with proper images & diagram.*

Making strong embankments along the river banks. Chipko Movement It was a movement started to conserve forests. The movement was led by Shri. Sunder Lal Bahuguna in Garhwal Himalayas. Biogeochemical cycles A constant interaction between biotic and abiotic components of the biosphere makes a system and these flow of components form a cycle called biogeochemical cycle. Some prominent cycles in nature are described below: Water cycle The whole process in which water evaporates and falls on the land as rain and later flows back into the sea via rivers is known as the water-cycle. Main steps involved in water cycles are: Plants absorb water through the roots and then give off excess water in the form of vapor through pores in their leaves. It is a process in living organisms involving the production of energy, with the intake of oxygen and the release of carbon dioxide along with water vapour. It is the process of condensation of water vapour in atmosphere into liquid which fall down in the form of rain, snow, sleet or hail. Some of the precipitation soaks into the ground to reach the underground water, some on land gets absorbed by the plants, crops and trees to grow and the rest downhill as runoff to reach the seas to complete the whole water cycle. Nitrogen cycle The sequence in which nitrogen passes from the atmosphere to the soil and organisms, and then is eventually released back into the atmosphere, is called nitrogen cycle. Nitrogen cycle involves following processes: Nitrogen Fixation It is a processes by which atmospheric nitrogen is converted into the form which can be easily absorbed the organisms on earth. Nitrogen Fixation is carried out by following ways: When lightning occurs, the hightemperature and pressure convert nitrogen and water into nitrates and nitrites which get dissolved in water and are readily used by aquatic plants and animals. By bacteria- Molecular nitrogen is converted into nitrates and nitrites by free living bacteria or the bacteria like Rhizobium present in the root nodules of legumes. Some bacteria convert the nitrogen gas  $N_2$  to ammonia  $NH_3$  which plants can use. It is the process by which ammonia is converted into nitrites and nitrates. It is the process by which soil bacteria decompose dead organic matter and release ammonia into soil. It is the process by which nitrates are converted into atmospheric nitrogen back to complete the cycle. Carbon cycle The carbon cycle is the process by which carbon moves from the atmosphere into the Earth and its organisms and then back again. Carbon cycle involves the following processes: In this process plants form their food by absorbing the atmospheric carbon in the form of carbondioxide gas and release oxygen gas. In this process plants and animals respire resulting in breakdown of glucose stored in the plants and animals to release  $CO_2$ , water and energy. In this process dead plants and animals get decomposed to release carbon into the environment. Burning of fossil fuels releases carbon dioxide gas into the environment as by product. Movement of carbon from the atmosphere to the oceans: The oceans, and other water bodies, soak up about a quarter of the carbon dioxide to form carbonates. Oxygen cycle involves the following processes: All living organisms take in simple sugars glucose and oxygen and release carbon dioxide, water and energy. During the processes of combustion or burning , oxygen reacts with carbon to form carbon dioxide gas. Carbondioxide gas from atmosphere is absorbed by green plants in the presence of sunlight to form carbohydrates and oxygen. Thus, oxygen is liberated in atmosphere. This keeps the Earth warm and the phenomenon is known greenhouse effect. Three molecules of oxygen combine to form ozone which forms a layer in stratosphere. It acts as a protective shield as it prevents harmful ultraviolet radiations to reach the earth. Compounds like CFCs Chloro fluorocarbons reacts with ozone releasing molecular oxygen resulting in breakdown of ozone, which is termed as ozone depletion. Try the following questions: Why is the nitrogen cycle supposed to be an ideal cycle in the biosphere? State various steps and processes involved in the nitrogen cycle in nature. What are CFCs and how are they harmful? Mention three ways by which atmosphere regulates the average temperature on earth? List three human activities responsible for the pollution of water bodies? Name the various organisms involved in nitrogen cycle. What does the presence of smog in an area indicate? Explain the following terms: List any three human activities which would lead to an increase in the carbon dioxide content of air.

### Chapter 2 : Soil | Class 9, Natural resources

*Natural Resources* are the resources available on the earth and the energy from the sun are necessary to meet the basic requirements of all life forms on the earth. The stocks of nature which are useful to mankind are known as natural resources.

This leads to a certain balance between the various components of the biosphere. It is also found underground. These comprise the hydrosphere. Air, water and soil. So it is called breath of life. It keeps the average temperature of the earth constant during the day and even during the course of the whole year. The Movement of Air: This is because the air above the land gets heated faster and starts rising. This is because at night, both land and sea start to cool. Air pollution can cause: Respiratory and renal problems, high blood pressure, eye irritation, cancer. Its molecule is made up of three oxygen atoms. Molecular formula is  $O_3$ . It provides the support for many plants and animals. At night these rocks cool down and contract. These rocks rub against other rocks and the resultant abrasion causes the rocks to wear down into smaller particles. While growing, they release certain substances that cause the rock surface to powder down and form a thin layer of soil. This water vapour rises up and goes into the atmosphere. During winter, the water falls down in the form of dew or snow. Some of it seeps into the soil and becomes part of the underground reservoir of fresh water. This oxygen is again used by human beings and animals. Carbon is found in various forms on the earth. When the plants and animals die, fungi and bacteria decompose the dead remains. This releases the carbon in the remains as carbon dioxide. Some of the dead plants and animals which get buried under the earth under certain temperature and pressure get transformed into fossil fuels like coal and petroleum. When lightning occurs, the high temperature and pressure convert nitrogen and water into nitrates and nitrites. It is the process by which soil bacteria decompose dead organic matter and release ammonia into soil. It is the process by which ammonia is converted into nitrites and nitrates. It is the process by which nitrates are converted into atmospheric nitrogen.

**Chapter 3 : Natural Resources , Chapter Notes, Class 9, Science | EduRev Notes**

*Science Class 9 Notes - Natural Resources. 1. Life on planet earth is dependent on many factors like resources available on Earth, energy from the Sun etc.*

This life-supporting zone of the Earth where the atmosphere, the hydrosphere and the lithosphere interact and make life possible, is known as the biosphere. It accommodates several types of living organisms which remain dependent on natural resources. The biosphere ranges between 6km, above sea level and 10kms below the sea. How is our atmosphere different from the atmosphere on Venus and Mars? How does the atmosphere act as a blanket? The atmosphere acts as a blank due to its following functions: It plays an important role in temperature control. It maintains the average temperature of the earth fairly constant during the course of the whole year. It prevents the sudden increase in temperature during the daylight hours. During the night, it slows down the escape of heat into outer space. On heating up the air rises up creating a low-pressure region. Air travels from high-pressure region to low-pressure region forming winds. In addition, the rotation of the Earth and the presence of mountain ranges in the paths of the wind also influence to winds. How are clouds formed? Due to various weather phenomena e. Water vapours which are also present in the air due to evaporation also rise up. Since air cools down on rising, it leads to condensation of water vapours present in it. Thus vapours condense onto tiny salt particles called condensation nuclei which form clouds. These clouds carry thick precipitation or rains. These clouds form a foggy, grey and dull weather look. These are high-level clouds seen during fair weather. Which gets heated faster land or water? Short Answer Q Answer: An increase in the content of these harmful substances in the air is called air pollution. List any three human activities that you think would lead to air pollution. Three human activities leading to air pollution are: Rapid urbanization and industrialization. Burning of fuels like coal and petroleum. Burning of coal in thermal power plants. Name two diseases caused due to an increased content of pollutants in the air produced due to the burning of fossil fuels. Bronchitis, asthma, lung cancer. The presence of unburnt hydrocarbons in the air, when mixed with condensed water vapours, forms a thick layer called smog. It lowers the visibility during the winter season and is an indication of air pollution. How do fossil fuel cause air pollution? The fossil fuels like coal and petroleum contain traces of nitrogen and sulphur. When these fuels are burnt, nitrogen and sulphur too are burnt and this produces different oxides of nitrogen and sulphur. These oxides of nitrogen and sulphur are poisonous and can cause respiratory problems. These oxides when mix with rainwater give rise to acid water due to the formation of nitric and sulphuric acids. Meenakshi saw a reduction in the greenish layer of lichens at the bark of trees at the biology garden of the school. The garden was few metres away from diesel generator placed for electricity back up. She immediately informed the school authorities to check the pollution level of diesel and kerosene used in the generator. Diesel and Kerosene contain traces of nitrogen and sulphur which for deadly oxides when mixed in the air. They should also replace the generator with a better which does not pollute the environment. The generator should be placed away from the school premises to avoid inhalation of smoke from it. Why do organisms need water? Why is water essential for life? Justify this statement by giving any two reasons. Water is an essential part of living organisms: Most of the biochemical processes involve water e. The major component of blood is water plasma which helps in the transportation of food and excretory substances. Water is used as part of food as a source of energy. Water in sweat cools down the body temperature. Similarly, water as transpiration loss in plants controls the temperature of the plant as well as it helps in the ascent of sap. Water is used in many activities like drinking, food preparation, irrigation, power generation and industries. Water is an essential medium for aquatic life. Amphibians also need water to carry out reproduction. Water is a universal solvent hence it is used in medicines and a many chemical reaction takes place when dissolved in water. What are the effects of acid rain? Effects of acid rain are: Acidification of soil reduces the fertility of the soil. Destroys aquatic life and pollutes water resources. Causes irritation to eyes and skins of human beings and cattle. Causes corrosion to buildings, bridges, statues etc. What are biogeochemical cycles? Biogeochemical cycles are the cyclic pathways through which chemical substances move through the biotic environment biosphere and abiotic environment lithosphere, atmosphere and

hydrosphere components of the earth. A few examples of biogeochemical cycles are:

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*Science Class 9 Notes - Natural Resources Download in Pdf. 1. Life on planet earth is dependent on many factors like resources available on Earth, energy from the Sun etc.*

Natural Resources class 9 Notes Science Chapter 14 are also available for download in mycbseguide website. Breath of air 2. Composition of Air 3. Role of atmosphere in climate control: Since atmosphere is a bad conductor of heat, it keeps the average temperature of the earth constant. At night, it slows down the escape of heat into outer space. The movement of air: As a result of heating, convection currents are set up in the air. Since land gets heated faster than water, the air over land gets heated faster than air above water bodies. In coastal regions, during the day, the air above the land gets heated faster and starts rising. So a region of low pressure is created and air over sea moves into this area of low pressure. The movement of air from one region to the other region causes Wind. During the day, the direction of wind would be from the sea to the land and at night, both land and sea starts to cool. Since water cools down slower than the land, the air above water would be warmer than air above land, thus the direction of wind would be from the land to the sea. It is caused due to an increase in the content of harmful substances pollutant such as oxides of nitrogen and sulphur, etc. Harmful effect of air pollution: It affects the respiratory system causing breathing difficulties eg; bronchitis, asthma, lung cancer, tuberculosis, etc. Burning of fossil fuels like coal and petroleum releases oxides of nitrogen and sulphur. Inhalation of these gases is dangerous. Combustion of fossil fuel also increases the amount of suspended particles in air. The presence of high levels of all these pollutants, reduce visibility in cold weather where water also condenses out of air forming smog. Acid rain formed from the gases like sulphur dioxide and nitrogen oxides present in polluted air. It causes damage to living and non- living thing. Water flows through rocks containing soluble minerals, some of them get dissolved in the water. Thus the rivers carry many nutrients from the land to sea and these are used by the marine organisms. It ranges from 5 cm to cm of rain fall in a year in ourcountry. In large parts of India, rains are mostly brought by the south-west or north-east monsoons. Depressions in the Bay of Bengal may also cause rains in some areas. The dissolved Oxygen is being used by the animals and plants that live in water, would adversely affect the aquatic organisms. The change in temperature would be dangerous for the eggs and larvae of the various animals particularly susceptible to temperature changes. During lightning, the molecular nitrogen is converted into oxides of nitrogen and dissolves in water to give nitric and nitrous acids and fall on lands along with rains. These are then utilized by various life forms. The molecular nitrogen is converted into nitrates and nitrites, by free living bacteria or the bacteria present in the root nodules of legumes. Plants generally covert them into amino acids. Thereby nitrates and nitrites are converted into molecular or elemental nitrogen in the nature. Carbon occurs in the elemental form as diamonds and graphite in earth. Carbon is essential for the synthesis of proteins, carbohydrates, fats, nucleic acids and Vitamins in living organisms. Green plants convert Carbon dioxide into glucose in the presence of sunlight through Photosynthesis. The glucose molecules are converted into other biologically important molecules. And many marine animals use carbonates dissolved in sea water to make shells, exoskeletons. The Carbon dioxide in the atmosphere is added by the process of combustion, where fuels are burnt to provide energy for various needs like heating, cooking, transportation, and industrial process. The percentage of Carbon dioxide in the atmosphere is said to have doubled since the industrial revolution when human beings started burning fossil fuels on a very large scale. The Carbon dioxide is a greenhouse gas. The increase in the Carbon dioxide content would cause more heat to be retained by the atmosphere and lead to Global Warming. Oxygen is essential component of proteins, carbohydrates, fats, nucleic acids in living organisms. Oxygen is returned to the atmosphere in only one major process, that is, Photosynthesis, it is called as Oxygen Cycle. The movement of air from one region to the other creates winds, during the day the direction of the wind would be from the sea to land. At night, both land and sea start to cool. The smog is a visible indication of Air Pollution. The pollutants bring respiratory, cardiac problems and allergies. The organisms called Lichens are found on the bark of trees, they are indicators of pollution free environment. Three atoms of Oxygen O<sub>3</sub> is called as Ozone. The Ozone is poisonous but absorbs harmful radiations from

the Sun. The Ozone layer around the earth, if, dwindles further may cause Health hazards including Cancers. Recently discovered the Ozone hole; in the region of Antarctica. CBSE quick revision note for Class 9 Science, Chemistry, Maths, Biology and other subject are very helpful to revise the whole syllabus during exam days. The revision notes covers all important formulas and concepts given in the chapter. Even if you wish to have an overview of a chapter, quick revision notes are here to do if for you. These notes will certainly save your time during stressful exam days.

*Natural Resources. Resources on the Earth. Biosphere: The whole combination of animals, plants and non-living beings which by their interaction make the planet earth a live and vibrant place is called biosphere.*

Natural Resources Resources on the Earth Biosphere: The whole combination of animals, plants and non-living beings which by their interaction make the planet earth a live and vibrant place is called biosphere. Living things constitute the biotic component of the biosphere. The air, the water and the soil form the non-living or a biotic component of the biosphere. The air is called the hyrosphere, the water is hydrosphere and the soil is called lithosphere. Air Air is a mixture of many gases like nitrogen, oxygen, carbon dioxide and water vapour. All living beings need oxygen to break down glucose molecules and get energy for their activities. This results in the production of carbon dioxide. Another process which results in the consumption of oxygen and the concomitant production of carbon dioxide is combustion. This includes not just human activities, which burn fuels to get energy, but also forest fires. Despite this, the percentage of carbon dioxide in our atmosphere is a mere fraction of a percent because of carbon dioxide fixation. Carbon Dioxide Fixation i Green plants convert carbon dioxide into glucose in the presence of Sunlight and ii Many marine animals use carbonates dissolved in sea-water to make their shells. The Role of the Atmosphere in Climate Control: Atmosphere covers the Earth, like a blanket. We know that air is a bad conductor of heat. The atmosphere keeps the average temperature of the Earth fairly steady during the day and even during the course of the whole year. The atmosphere prevents the sudden increase in temperature during the daylight hours. And during the night, it slows down the escape of heat into outer space. WINDS These phenomena are the result of changes that take place in our atmosphere due to the heating of air and the formation of water vapour. Water vapour is formed due to the heating of water bodies and the activities of living organisms. The rise in temperature creates a low pressure zone which attracts cool air from high pressure zone and pushes up the hot air. Thus the atmosphere can be heated from below by the radiation that is reflected back or re-radiated by the land or water bodies. On being heated, convection currents are set up in the air. Pollutants can be in the form of solid particles, liquid droplets, or gases. In addition, they may be natural or man-made. Pollutants can be classified as either primary or secondary. Usually, primary pollutants are substances directly emitted from a process, such as ash from a volcanic eruption, the carbon monoxide gas from a motor vehicle exhaust or sulfur dioxide released from factories. Secondary pollutants are not emitted directly. Rather, they form in the air when primary pollutants react or interact. An important example of a secondary pollutant is ground level ozone - one of the many secondary pollutants that make up photochemical smog. Rain When water bodies are heated during the day, a large amount of water evaporates and goes into the air. Some amount of water vapour also gets into the atmosphere because of various biological activities. This air also gets heated. The hot air rises up carrying the water vapour with it. As the air rises, it expands and cools. This cooling causes the water vapour in the air to condense in the form of tiny droplets. When the drops have grown big and heavy, they fall down in the form of rain. Rainfall patterns are decided by the prevailing wind patterns. In large parts of India, rains are mostly brought by the southwest or north-east monsoons. Some amount of water exists in the form of water vapour in the atmosphere. Fresh water is found frozen in the ice-caps at the two poles and on snow covered mountains. The underground water and the water in rivers, lakes and ponds is also fresh. However, the availability of fresh water varies from place to place. Practically every summer, most places have to face a shortage of water. And in rural areas, where water supply systems have not been installed, people are forced to spend considerable amounts of time in fetching water from faraway sources. All cellular processes take place in a water medium. All the reactions that take place within our body and within the cells occur between substances that are dissolved in water. Substances are also transported from one part of the body to the other in a dissolved form. Hence, organisms need to maintain the level of water within their bodies in order to stay alive. Terrestrial life-forms require fresh water for this because their bodies cannot tolerate or get rid of the high amounts of dissolved salts in saline water. Thus, water sources need to be easily accessible for animals and plants to survive on land. We use the term water-pollution to cover the following effects: The addition of

undesirable substances to water-bodies. These substances could be the fertilizers and pesticides used in farming or they could be poisonous substances, like mercury salts which are used by paper-industries. These could also be disease-causing organisms, like the bacteria which cause cholera. The removal of desirable substances from water-bodies. Dissolved oxygen is used by the animals and plants that live in water. Any change that reduces the amount of this dissolved oxygen would adversely affect these aquatic organisms. A change in temperature. Aquatic organisms are used to a certain range of temperature in the water-body where they live, and a sudden marked change in this temperature would be dangerous for them or affect their breeding. The eggs and larvae of various animals are particularly susceptible to temperature changes.

**Soil** Soil is an important resource that decides the diversity of life in an area. The outermost layer of our Earth is called the crust and the minerals found in this layer supply a variety of nutrients to life-forms. The factors or processes that make soil: The Sun heats up rocks during the day so that they expand. At night, these rocks cool down and contract. Since all parts of the rock do not expand and contract at the same rate, this results in the formation of cracks and ultimately the huge rocks break up into smaller pieces. Water helps in the formation of soil in two ways. One, water could get into the cracks in the rocks formed due to uneven heating by the Sun. If this water later freezes, it would cause the cracks to widen. Two, flowing water wears away even hard rock over long periods of time. Fast flowing water often carries big and small particles of rock downstream. These rocks rub against other rocks and the resultant abrasion causes the rocks to wear down into smaller and smaller particles. The water then takes these particles along with it and deposits it further down its path. Soil is thus found in places far away from its parent rock. In a process similar to the way in which water rubs against rocks and wears them down, strong winds also erode rocks down. The wind also carries sand from one place to the other like water does.

**Biogeochemical Cycles** A constant interaction between the biotic and abiotic components of the biosphere makes it a dynamic, but stable system. These interactions consist of a transfer of matter and energy between the different components of the biosphere. Since the water cycle is truly a "cycle," there is no beginning or end. Water can change states among liquid, vapour and ice at various places in the water cycle. Although the balance of water on Earth remains fairly constant over time, individual water molecules can come and go. The sun, which drives the water cycle, heats water in the oceans. Water evaporates as vapor into the air. Ice and snow can sublime directly into water vapor. Rising air currents take the vapor up into the atmosphere where cooler temperatures cause it to condense into clouds. Air currents move clouds around the globe, cloud particles collide, grow, and fall out of the sky as precipitation. Some precipitation falls as snow and can accumulate as ice caps and glaciers, which can store frozen water for thousands of years. Snow packs can thaw and melt, and the melted water flows overland as snowmelt. Most precipitation falls back into the oceans or onto land, where the precipitation flows over the ground as surface runoff. A portion of runoff enters rivers in valleys in the landscape, with stream flow moving water towards the oceans. Runoff and groundwater, are stored as freshwater in lakes. Not all runoff flows into rivers. Much of it soaks into the ground as infiltration. Some water infiltrates deep into the ground and replenishes aquifers, which store huge amounts of freshwater for long periods of time. Some infiltration stays close to the land surface and can seep back into surface-water bodies and the ocean as groundwater discharge. Some groundwater finds openings in the land surface and emerges as freshwater springs. Over time, the water reenters the ocean, where our water cycle started. It is a cycle which includes gaseous components.

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What are the different states in which water is found during the water cycle? During the water cycle, water is found in solid state snow, ice, etc. Name two biologically important compounds that contain both oxygen and nitrogen. Two biologically important compounds that contain both oxygen and nitrogen are: What is the greenhouse effect? This is called the green house effect. What are the two forms of oxygen found in the atmosphere Answer: The two forms of oxygen found in the atmosphere are: Why is water essential for life? Water is essential for life because of the following reasons: How are living organisms dependent on the soil? Almost all living organisms are dependent on soil. Plants need soil for getting support as well as nutrients to prepare their food. Organisms that live in water are not totally independent of soil as a resource. You have seen weather reports on television and in newspapers. There are various instruments used to measure humidity. Write a note on how forests influence the quality of our air, soil and water resources. Forests influence the quality of our air, soil, and water resources in various ways. Some of them are: Simultaneously, a large amount of oxygen is released. These clouds cause rainfall that recharge water bodies.

**Chapter 7 : CBSE Class 9 Science Chapter 14 - Natural Resources Revision Notes**

*Natural Resources Class 9 Notes aims at increasing your self-confidence and reducing the pressure by offering a simple way to study or revise the chapter. These notes.*

Do you know of any activity which may be polluting this water source? Answer The discharge of waste water from homes, industries, hospitals, etc. How is soil formed? Answer Soil is formed by breaking down of rocks at or near the surface of the Earth through various physical, chemical, and biological processes by various factors such as the sun, water, wind, and living organisms. During day time, the rocks are heated up by solar rays. This causes the rocks to expand. During night time, these rocks cool down and contracts, thus the cracks develop in the rock and they break down. It helps in breaking of rocks in two ways: When this water freezes, its volume increases. As a result, the size of the cracks also increases. This helps in the weathering of rocks. These rocks rub against each other, resulting in breaking down of rocks. These smaller particles are carried away by running water and deposited down its path. Strong winds carry away rocks, which causes rubbing of rocks. This results in the breaking down of rocks into smaller and smaller particles. Some living organisms like lichens help in the formation of soil. Lichens grow on rock surfaces and converts them into powdery form and make soil layer. In the same way, the plants like moss also help in the making of fine soil particles. What is soil erosion? Answer The blowing away or washing away of land surface by wind or water is known as soil erosion. What are the methods of preventing or reducing soil erosion? Answer The methods of preventing or reducing soil erosion are: What are the different states in which water is found during the water cycle? Answer Water is found in three different states during the water cycle: Name two biologically important compounds that contain both oxygen and nitrogen. Answer Two biologically important compounds that contain both oxygen and nitrogen are: List any three human activities which would lead to an increase in the carbon dioxide content of air. This decreases the uptake of carbon dioxide for photosynthesis. Eventually, the content of carbon dioxide increases. What is the greenhouse effect? This increases the average temperature of the Earth. This is called the green house effect. What are the two forms of oxygen found in the atmosphere? Answer The two forms of oxygen found in the atmosphere are: Why is the atmosphere essential for life? Answer The atmosphere is essential for life because it maintains an appropriate climate for the sustenance of life by carrying out the following activities: Why is water essential for life? Answer Water is essential for life because of the following reasons: Thus, all cellular processes need water as a medium to take place. How are living organisms dependent on the soil? Are organisms that live in water totally independent of soil as a resource? Answer Almost all living organisms are dependent on soil. Some depend directly, while some depend indirectly. Plants need soil for getting support as well as nutrients to prepare their food. On the other hand, organisms depend on plants for food and other substances that are essential for life. Herbivores depend directly upon plants, and carnivores depend upon animals, which in turn depend upon plants for food. This makes them depend on soil indirectly. Organisms that live in water are not totally independent of soil as a resource. These organisms depend on aquatic plants for food and other substances. These aquatic plants in turn require minerals for their sustenance. These minerals are carried to water bodies from soil by rivers, rain water, etc. Without the supply of minerals from the soil to the water bodies, it is impossible to imagine aquatic life. You have seen weather reports on television and in newspapers. How do you think we are able to predict the weather? Answer The meteorological department of the government collects data on the elements of weather such as maximum and minimum temperatures, maximum and minimum humidity, rainfall, wind speed, etc. They are able to study these elements using various instruments. The maximum and minimum temperature of a day is measured by a thermometer known as the maximum-minimum thermometer. Rain fall is measured by an instrument known as the rain gauge. Wind speed is measured by anemometers. There are various instruments used to measure humidity. Write a note on how forests influence the quality of our air, soil and water resources. Answer Forests influence the quality of our air, soil, and water resources in various ways. Some of them are: The increasing amount of carbon dioxide caused by human activities is balanced by a larger intake of carbon dioxide by plants during the process of photosynthesis. Simultaneously, a large amount of

oxygen is released. Roots of plants bind the soil tightly in a way that the surface of the soil cannot be eroded away by wind, water, etc. During the process of transpiration, a huge amount of water vapour goes into the air and condenses to form clouds. These clouds cause rainfall that recharge water bodies. We know that many human activities lead to increasing levels of pollution of the air, water-bodies and soil. Do you think that isolating these activities to specific and limited areas would help in reducing pollution? Isolating human activities to specific areas would help in reducing levels of pollution. For example, setting up of industries in isolated regions will control pollution to some extent. The pollution caused by these industries will not contaminate water resources, agriculture land, fertile land, etc.

## Chapter 8 : Natural Resources nine science subject notes

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Life on planet earth is dependent on many factors like resources available on Earth, energy from the Sun etc. The different resources available on the Earth are land, water and air. All of these three things are required for the existence of life forms. The outer crust of the Earth. This water along with underground water comprises the hydrosphere. The air covering of earth is-called atmosphere. The life-supporting zone of the Earth where the atmosphere, hydrosphere and the lithosphere interact and make life possible is known as the biosphere. World Environment Day -5th June Biotic components: The living things constitute the biotic components of the Biosphere. The non-living things air, water and soil form the abiotic components of the Biosphere. The Breath of Life Air is a mixture of many gases like nitrogen, oxygen, carbon dioxide and water vapour. Carbon dioxide is produced in the atmosphere by following activities: Carbon dioxide is fixed in two ways: The role of atmosphere in climate control: Atmosphere keeps the average temperature of the earth steady during the day and whole year. Atmosphere prevents sudden increase in temperature during daytime and fall of temperature during night. The rate of atmosphere in climate control is the movement of Air, Rain, Air pollution, Water 4. The addition of undesirable substances to water and removal of desirable substances from water is called water pollution. Mineral richness in the soil: Soil is formed by weathering of rocks in thousands of years. Following factors are responsible for making soil from rocks. Some organisms like lichen and mosses grow on the surface of rocks and they release certain substances that cause weathering of rocks and a thin layer of soil is formed. The decayed living organisms present in soil is called humus. Humus makes the soil porous and allows water and air to penetrate deep underground. Mosses or Bryophytes are indicator of soil pollution. Roots of plants prevent soil erosion by firmly holding the soil particles. It is a movement related with forest conservation led by Shri. Sunder Lal Bahuguna in Garhwal Himalayas. This keeps the Earth warm and the phenomenon is known greenhouse effect. An increase in these greenhouse gases such as carbon dioxide in the atmosphere would cause more heat to be retained by the atmosphere and leads to global warming. Due to increased temperature the ice-caps would melt, there is rise in the sea-level and it is feared that coastal areas would be destroyed by floods. Uncertain climatic conditions are also the effect of global warming. Three molecules of oxygen combine to form ozone. Ozone layer is found in stratosphere. It acts as a ozone shield and protects. Ozone depletion has been marked in Antarctic region where ozone layer thickness has dropped to 94 DU in from DU. This depletion of ozone layer thick-ness is called ozone hole.

### Chapter 9 : Science Class 9 Notes “ Natural Resources | AglaSem Schools

*Notes of Class 9 Science Natural Resources Class 9 Science Notes and Study Materials Go To Chapters. Which sports has maximum age fraud in India to watch at.*

All the things present in nature which are utilized by the living organisms for their survival and growth are together called natural resources. The concept that natural resources should be kept in the existence state without disturbing their quantity and quality is called absolute conservation. Perpetual resources is that resources which never depletes and never ends. So they are also called unlimited resources. They do not get exhausted due to utilization. Perpetual resources quantity is maintained naturally by the natural phenomenon. Maximum utilization of these resources quantity is maintained naturally by natural phenomenon. Tides, Solar energy etc 4. Renewable resources can be renewed or regenerated again and again its utilization. These types of resources are regenerated due to natural process of formulation in the nature. Plants, fish, fresh air are various biological resources are renewable resources. Non renewable resources are those which cannot be regenerated once finished. These resources are limited in nature. Natural oil and minerals are its examples. The formation of these resources takes millions of years. Water found in the surface of earth is called ground water. Ground water is available in the ocean, sea, rivers, Lake Etc. We have more than rivers and rivulets in Nepal. Some rivers like Koshi, Gandaki, and Karnali are perennial rivers. Examples of non metallic minerals are salt, clay, silicates, sand and gypsum. Minerals are formed and modified as a result of the process taking place over millions of ears in the earth rock cycle. The process of using waste products again and again is known as reuse. A resource can be used over and over again without changing is form. The reuse reduces the consumption of resources. Re-cycling is a method of using the same material by processing it and bringing it back to the same form or other. The articles made of iron and aluminium and other metals can ne recycled again and again.