IMPORTANT CHAPTERS FROM SOCIAL SCIENCE AND SCIENCE (FROM NCERT CLASS 6TH & 7TH)

CONTENTS

CLASS-VI-SOCIAL STUDIES, THE EARTH OUR HABITAT-CHAPTER-8 INDIA: CLIMATE, VEGETATION AND WILDLIFE

The major seasons recognised in India are:

• Cold Weather Season (Winter) December to February

• Hot Weather Season (summer) March to May

• Southwest Monsoon Season (Rainy) June to September

• Season of Retreating Monsoon (Autumn) October and November

COLD WEATHER SEASON OR WINTER

- During the winter season, the sun rays do not fall directly in the region.
- the temperatures are quite low in northern India.

HOT WEATHER SEASON OR SUMMER

- In the hot weather season sun rays more or less directly fall in this region.
- Temperature becomes very high.
- Hot and dry winds called loo, blow during the day

SOUTHWEST MONSOON SEASON OR RAINY SEASON

- marked by the onset and advance of monsoon.
- winds blow from Arabian Sea and Bay of Bengal towards the land.
- carry moisture with them. When these winds strike the mountain barriers, rainfall occurs.

SEASON OF RETREATING MONSOONS OR AUTUMN

- Winds move back from the mainland to the Bay of Bengal.
- the season of the retreating monsoons.
- The southern parts of India, particularly Tamil Nadu and Andhra Pradesh receive rainfall in this season.
- However, the climate is about the average weather condition, which have been measured over many years.

The climate of India has broadly been described as

Monsoon type.

- Monsoon is taken from the Arabic word ‗mausim', which means seasons.
- Due to India's location in the tropical region, most of the rain is brought by monsoon winds.
- Agriculture in India is dependent on rains.
- Good monsoons mean adequate rain and a bountiful crop.

NATURAL VEGETATION

- Vegetation of India can be divided into five types – Tropical evergreen forest, Tropical deciduous forest, Thorny bushes, Mountain vegetation and Mangrove Forests

TROPICAL RAIN FOREST

- occur in the areas which receive heavy rainfall.
- so dense that sunlight doesn't reach the ground.
- Many species of trees are found in these forests, which shed their leaves at different times
- appear green and are called evergreen forest
- Important trees found in these forests are mahogany, ebony and rosewood.
- Andaman and Nicobar Islands, parts of North-Eastern states and a narrow strip of the Western slope of the Western Ghats are home of these forests.

TROPICAL DECIDUOUS FORESTS

- large part of our country we have this type of forest.

- also called monsoon forests.
- less dense.
- shed their leaves at a particular time of the year.
- Important trees of these forests are sal, teak, peepal, neem and shisham.
- found in Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh, Odisha, and in parts of Maharashtra.

THORNY BUSHES

- found in dry areas of the country.
- The leaves are in the form of spines to reduce the loss of water. Cactus, khair, babool, keekar are important
- found in the states of Rajasthan, Punjab, Haryana, Eastern slopes of Western Ghats and Gujarat.

MOUNTAIN VEGETATION

- A wide range of species is found in the mountains according to the variation in height.
- With increase in height, the temperature falls.
- At a height between 1500metres and 2500 metres most of the trees are conical in shape.
- trees are called coniferous trees.
- Chir, Pine and Deodarare important trees of these forests.

MANGROVE FORESTS

- These forests can survive in saline water. They are found mainly in Sunderbans in West Bengal and in the Andaman and Nicobar Islands. Sundari is a well-known species of trees in mangrove forests after which Sunderbans have been named

WILDLIFE

- thousands of species of animals and a large variety of reptiles, amphibians, mammals, birds, insects and worms which dwell in the forest.

Migratory Birds

- Some birds such as the Pelican, Siberian Crane, Stork, Flamingo, Pintail Duck and Curlew migrate to our country in the winter season every year.
- Siberian Cranes migrate from Siberia.
- They arrive in December and stay till early March.

CLASS-VI-CHAPTER-7-GETTING TO KNOW PLANTS

- Plants with green and tender stems are called herbs.
- usually short and may not have many branches
- Some plants have the stem branching out near the base.
- The stem is hard but not very thick. Such plants are called shrubs
- Plants with weak stems that cannot stand upright and spread on the ground are called creepers,
- while those that take support on neighbouring structures and climb up are called climbers
- The part of a leaf by which it is attached to the stem is called petiole.
- The broad, green part of the leaf is called lamina
- Water comes out of leaves in the form of vapour by a process called transpiration. Plants release a lot of water into the air through this process.
- leaves prepared their food in the presence of sunlight and a green coloured substance present in them. they use water and carbon dioxide from air. This process is called photosynthesis.

- Oxygen is given out in this process.
- The roots help in holding the plant firmly in the soil. They are said to anchor the plant to the soil.
- the main root is called tap root and the smaller roots are called lateral roots.
- The innermost part of a flower is called the pistil.

CLASS-6TH-9TH CHAPTER-LIVING ORGANISMS AND THEIR SURROUNDINGS

- The presence of specific features or certain habits, which enable a plant or an animal to live in its surroundings, is called adaptation.
- The surroundings where organisms live are called a habitat.
- The plants and animals that live on land are said to live in terrestrial habitats.
- Some examples of terrestrial habitats are forests, grasslands, deserts, coastal and mountain regions.
- the habitats of plants and animals that live in water are called aquatic habitats.
- The living things such as plants and animals, in a habitat, are its biotic components.
- Various non-living things such as rocks, soil, air and water in the habitat constitute its abiotic components.
- Sunlight and heat also form abiotic components of the habitat

Some Terrestrial Habitats

Deserts-

- plants lose very little water through transpiration
- Photosynthesis in these plants is usually carried out by the stems.

Mountain regions-

- normally very cold and windy.
- In some areas, snowfall may take place in winters Grasslands-Deers, Lions (Prey-Animals to Eat)

Aquatic Habitats

- Oceans, Ponds and lakes Breathing is part of a process called respiration.
- In respiration, some of the oxygen of the air we breathe in is used by the living body.
- We breathe out the carbon dioxide produced in this process.
- Changes in our surroundings that makes us respond to them, are called stimuli.
- The process of getting rid of these wastes by the living organisms is known as excretion

CLASS-6TH-CHAPTER-16TH-GARBAGE IN GARBAGE OUT

Landfill-Open are for garbage

VERMICOMPOSTING-

- Earthworm called redworm is used for composting.
- Method of preparing compost with the help of redworms is called vermicomposting.
- Redworms do not have teeth.
- They have a structure called _gizzard', which helps them in grinding their food. Powdered egg shells or sea shells could be mixed with the wastes help redworms in grinding their food.
- A redworm can eat food equal to its own weight, in a day,
- Redworms do not survive in very hot or very cold surroundings.
- They also need moisture around them.

Class- 7th & Chapter 7th
Weather, Climate and adaptations of Animals to Climate

- The day to-day condition of the atmosphere at a place with respect to the temperature, humidity, rainfall, wind speed, etc., is called the weather at that place.
- The temperature, humidity, and other factors are called the elements of the weather.
- The average weather pattern taken over a long time, say 25 years is called the climate of the place.
- The mean temperature for a given month is found in two steps.
- First we find the average of the temperatures recorded during the month. Second, we calculate the average of such average temperatures over many years.

The polar regions-

- Covered with snow and it is very cold for most part of the year.
- For six months the sun does not set at the poles while for the other six months the sun does not rise.
- In winters, the temperature can be as low as –37°C.
- Polar bears have white fur so that they are not easily visible in the snowy white background.
- Penguins & Other animals living in the polar regions are many types of fishes, musk oxen, reindeers, foxes, seals, whales, and birds.

The tropical rainforests-

- Generally a hot climate because of its location around the equator.
- Even in the coldest month the temperature is generally higher than about 15°C.
- During hot summers, the temperature may cross 40°C.
- Days and nights are almost equal in length throughout the year.
- regions get plenty of rainfall.
- An important feature of this region is the tropical rainforests.
- Tropical rainforests are found in Western Ghats and Assam in India, Southeast Asia, Central America and Central Africa.
- Because of continuous warmth and rain, this region supports wide variety of plants and animals.
- The major types of animals living in the rainforests are monkeys, apes, gorillas, tigers, elephants, leopards, lizards, snakes, birds and insects.
- **Red-eyed frog** has developed sticky pads on its feet to help it climb trees on which it lives.
- monkeys have long tails for grasping branches to help them live on the trees.
- **Bird Toucan** possesses a long, large beak.
- This helps a toucan to reach the fruits on branches which are otherwise too weak to support its weight.
- Many tropical animals have sensitive hearing, sharp eyesight, thick skin and a skin colour which helps them to camouflage by blending with the surroundings to protect them from predators.
- **The lion-tailed macaque** (also called Beard ape) lives in the rainforests of Western Ghats.
- outstanding feature is the silver-white mane, which surrounds the head from the cheeks down to its chin.
- a good climber and spends a major part of its life on the tree.
- feeds mainly on fruits and eats seeds, young leaves, stems, flowers and buds

Class -7th & Chapter- 9th

SOIL

SOILPROFILE

- Each layer differs in feel (texture), colour, depth and chemical composition. These layers are referred to as horizons
- The uppermost horizon is generally dark in colour as it is rich in humus and minerals.
- The humus makes the soil fertile and provides nutrients to growing plants. This layer is generally soft, porous and can retain more water. It is called the top soil or the A-horizon
- The roots of small plants are embedded entirely in the topsoil.
- The next layer has a lesser amount of humus but more of minerals. This layer is generally harder and more compact and is called the B-horizon the middle layer.
- The third layer is the C-horizon, which is made up of small lumps of rocks with cracks and crevices. this layer is the bedrock, which is hard and difficult to dig with a spade.

SOIL TYPES

- The mixture of rock particles and humus is called the soil.
- If soil contains greater proportion of big particles it is called sandy soil.
- If the proportion of fine particles is relatively higher, then it is called clayey soil.
- If the amount of large and fine particles is about the same, then the soil is called loamy.

Sand particles

- are quite large, cannot fit closely together, large spaces between them which are filled with air. the sand is well aerated.
- Water can drain quickly through the spaces between the sand particles.
- sandy soils tend to be light, well aerated and rather dry.

Clay particles,

- being much smaller, pack tightly together, leaving little space for air.
- have little air.
- they are heavy as they hold more water than the sandy soils.
- The best topsoil for growing plants is loam.
- Loamy soil is a mixture of sand, clay and another type of soil particle known as silt.
- Silt occurs as a deposit in river beds.
- The size of the silt particles is between those of sand and clay.
- The loamy soil also has humus in it.
- It has the right water holding capacity for the growth of plants.
- Clayey and loamy soils are both suitable for growing cereals like wheat, and gram.
- For paddy, soils rich in clay and organic matter and having a good capacity to retain water are ideal.
- For lentils (masoor)and other pulses, loamy soils, which drain water easily, are required.
- For cotton, sandyloam or loam, which drain water easily and can hold plenty of air, are more suitable.
- Crops such as wheat are grown in the fine clayey soils, because they are rich in humus and are very fertile.
- The rotting dead matter in the soil is called humus.
- The soil is formed by the breaking down of rocks by the action of wind, water and climate. This process is called weathering.

CLASS-7TH-SCIENCE-16TH CHAPTER-WATER

- 22 March is celebrated as the world water day.
- water cycle it can be found in all the three forms, i.e., solid, liquid and gas —at any given time somewhere on the earth.
- The solid form, snow and ice, is present as ice caps at the poles of the earth, snow-covered mountains and glaciers.
- Liquid water is present in oceans, lakes, rivers, and even underground.
- The gaseous form is the water vapour present in the air around us.
- The process of seeping of water into the ground is called infiltration.
- The rainwater can be used to recharge the groundwater. This is referred to as water harvesting or rainwater harvesting
- Bawri as the traditional way of collecting water.
- Drip irrigation is a technique of watering plants by making use of narrow tubings which deliver water directly at the base of the plant.

CLASS-7TH-CHAPTER-17TH-SCIENCE-FORESTS

- Branchy part of a tree above the stem is known as the crown , the branches of the tall trees look like a roof over the other plants in the forest. He told them that this is called a canopy
- food chain- Grass→insects→frog→snake→eagle.
- tiny insects, millipedes, ants and beetle several organisms and micro-organisms that live in the soil they feed upon the dead plant and animal tissues and convert them into a dark coloured substance called humus.
- The micro-organisms which convert the dead plants and animals to humus are known as decomposers.
- maintain the balance of oxygen and carbon dioxide in the atmosphere.
- forests are called lungs. Larger number of herbivores means increased availability of food for a variety of carnivores.

CLASS-7TH-CHAPTER-18TH-SCIENCE-WASTE WATER STORY

WASTE WATER

- Rich in lather, mixed with oil, black– brown water that goes down the drains from sinks, showers, toilets, laundries is dirty.
- Cleaning of water is a process of removing pollutants before it enters a water body or is reused.
- This process of wastewater treatment is commonly known as —Sewage Treatment‖.
- Sewage is a liquid waste.
- Most of it is water, which has dissolved and suspended impurities.
- These impurities are called contaminants.
- sewage is a complex mixture containing suspended solids, organic and inorganic impurities, nutrients, saprotrophic and disease causing bacteria and other microbes.
- Solids like faeces settle at the bottom and are removed with a scraper. This is the sludge.
- Some organisations offer hygienic on-site human waste disposal technology. These toilets do not require scavenging.
- Excreta from the toilet seats flow through covered drains into a biogas plant.
- The biogas produced is used as a source of energy.