



CDT Materials

Class – IV

Subject – EVS & GK



1. ORGAN SYSTEM & SENSE ORGANS: Our body is a living machine. It is made of various parts or organs which carry out a particular function. A group of organs which perform a definite task is an organ system. The major organ systems are as follows:

- A. **The Nervous System:** It consists of Brain, Spinal Cord & Nerves. It controls all functions of our body.
- B. **The Skeletal System:** It consists of bones. It protects soft organs of our body & gives shape to our body & help us to move.
- C. **The Digestive system:** It consists of mouth, food pipe, stomach, small intestine, large intestine, liver, and pancreas. It helps in digestion of food so as to get energy from food.
- D. **The Circulatory system:** It consists of central pumping organ Heart, Arteries & Veins. It acts as transporting system in our body carrying nutrients, respiratory gases, wastes for their removal etc.
- E. **The Excretory System:** it consists of kidneys, ureter and urinary bladder to remove nitrogenous wastes out of the body.

SENSE ORGANS: These organs inform us regarding our surroundings. Eyes provide sensation of sight, nose of smell, ears to hear, tongue of taste & skin of touch.

2. SAFETY: Accidents may occur anytime. We can prevent accidents by following safety rules & by being alert both indoors & outdoors.

- **Safety At Home:** Knives should be used carefully. Children should not play with matchsticks & matchbox. They should not light a stove or try to stir food on stove. One must wear well-fitted cotton clothes as loose, synthetic clothes may catch fire.
- **Safety on road:**
 1. One must walk on the footpath or pavement.
 2. Cross road at zebra crossing.
 3. Cycle riders should use bicycle lane.

3. SCALE: The scale of a map is ratio between actual distance and distance shown on map. Suppose 1cm on map=100km actual distance, then an actual distance of 200 km will be shown as 2cm.

Map: Maps can be drawn to show the whole world, a single continent, a country, a city, your neighbourhood or your house. They vary in size. Bigger maps are drawn to show more details. Types of maps: **Political Maps:** show boundaries of states, districts, countries.

Physical Maps: show natural features as mountains, plains, rivers etc.

Climatic Maps: show climatic conditions as rainfall, temperature etc.

Transport maps: show roads, railway & airline routes.

4. AIR & WATER : Air is a natural resource. An envelope of air surrounding earth is atmosphere.

A. LAYERS OF ATMOSPHERE: 1. TROPOSPHERE: First layer closest to earth. It consists of gases which we breathe in.

2. STRATOSPHERE: Second layer containing ozone which protects us from harmful UV rays of the sun.

3. MESOSPHERE: Meteoroids burn in this layer so does not reach earth.

3. THERMOSPHERE: Space shuttles orbit in this layer.

4. EXOSPHERE: From here atmosphere merges into the outer space.

B. WATER: It exists in three states, ice (solid), water (liquid) & water vapour (gaseous). Water changes to its vapour state on heating, a process called evaporation. Water vapour changes to water on cooling, a process called condensation. Because of these processes water cycle exists in nature.

5. EARTH: Our earth is made of living & non living things. Eg: land, air, water, plants, and animals all dependant on each other. There are three layers of earth. Crust, Mantle, Core. The deeper we move inside the hotter it becomes. Inner core remains solid due to immense pressure exerted by upper layers. Crust forms the surface on which we live, made of hard rocks. The Earth is moving constantly. Rotation refers to spinning of Earth on its own axis. It causes day & night. The movement of Earth around the sun is called Revolution which along with earth's tilt cause seasons. The period of rotation is 24 hours & revolution is 1yr & 6 hrs.

6. Beyond Earth: A **dwarf planet** is a small round body which orbits the sun. At the time of its formation it could not pull in all other objects near its orbit. So it is not considered planet. Eg: Pluto, Eris etc. A heavenly object which revolves round a planet is called **satellite**. It is of two types: **Natural & Artificial Satellite**. A rocket takes an artificial satellite in space which is later put into orbit. Artificial satellites are used in communication, navigation, weather predictions, observing earth etc. Nowadays space shuttles are used to launch satellites and recover damaged satellites, return them to Earth. Aryabhata, IRS-1B, INSAT-2A, Apple, and Rohini are a few Indian satellites. Moon is earth's natural satellite. The moon does not have its own light, it reflects sun's light. When Moon passes between Sun & Earth, sunlight falls on the part turned away from us so moon is not visible. It happens on new moon night. Every night illuminated part grows in size till we see full moon fortnightly. The shapes of sunlit half of different parts of the moon are called **phases of moon**.

A group of stars which seem to form a pattern is called constellation e.g. Orion, Scorpius, Great Bear etc. A galaxy is a group of stars and other celestial bodies bound together by gravitational force e.g. Milky way. Ancient Romans called it "*Via Galactica*" or 'road of milk'.

7. Nutrition: Obtaining, absorbing & utilising food for various body functions as growth, development, maintenance of living things is nutrition. Nutrients refer to type of food which meets body's requirements. It includes. **Energy Foods:** Food rich in **carbohydrates & fats** e.g. cereals, sugar, butter etc.

ii. **Body Building Foods:** They are **protein** rich foods. Useful for body growth, repair, bones & teeth e.g. pulses, milk, fish, meat etc.

iii. **Protective Foods:** They are rich in **vitamins & minerals** e.g. fruits, vegetables, milk. They are required in small quantities by the body.

8. Living, Nonliving & animals around us:

LIVING THINGS

NON LIVING THINGS

<ol style="list-style-type: none">1. All living things are made of cells.2. Need food to get energy.3. Excrete i.e., throw out waste from the body. E.g. Earthworms give out waste which makes soil fertile.4. Respond to stimuli i.e., changes occurring around us are stimuli & reaction to them are response. E.g., we withdraw our hand when we touch something hot. Heat is stimulus & withdrawing is response.5. Reproduce their own kind.6. Show growth. i.e. Seed grows to seedling when conditions are favourable like optimum temperature, moisture etc. It is called germination.7. Show movement & locomotion.8. Breathe.	<ol style="list-style-type: none">1. Non living things do not have cells2. Do not need food.3. Do not excrete.4. Do not respond to stimuli.5. Do not reproduce.6. Do not grow.7. Do & not show movement & locomotion.8. Do not breathe.
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But there are some tiny organisms which show both living & non living characters depending on conditions available. Viruses are between living & non living. They need a cell (tiny parts of which living beings are made of) to carry their life processes as growth, response etc.

9. Map Of India :

- States and Capitals.
- States and their neighbouring states.

10. Important Abbreviations:

- Academic Institutions and Exams of National Importance.
- Important Organizations at World Level.

11. Our India:

- Important constitutional posts and their present post holders.
- Renowned persons from our country and their contributions.