Easy Science 4 Answer Key



Characteristics and Life Processes of Living Organisms

1. Choose the best answers.

- i. Carbon dioxide
- ii. Oxygen
- iii. Death
- iv. Seeds
- v. Communicate

- i. Living things need different life processes to stay alive and healthy:
 - Helps animals find food, escape danger, and explore their environment.
 - Brings oxygen into the body, which is needed for energy, and removes carbon dioxide.
 - Eating provides energy and nutrients for growth and repair.
 - Gets rid of waste products from the body to keep it clean and healthy.
 - Helps living things get bigger and stronger, allowing them to develop and reproduce.
 - Allows living things to make new offspring, ensuring their species continues.
 - Death is part of the natural cycle, making space for new life and helping ecosystems stay balanced.
- ii. Animals get energy by eating plants or other animals. This energy helps them to do work and grow.
- iii. If living things stop taking food, they won't get the energy and nutrients they need to grow and stay healthy. Eventually, they would become weak and could die because their bodies can't function properly without food.
- iv. Differences between Animals and Plants.

Characteristics and Life Processes of Living Organisms

Animals	Plants
Communicate with one another.	Do not communicate.
Cannot make food like plants.	Use sunlight, air, and water to make their own food.
Move quickly and go from place to place.	Move very slowly, but do not go from place to place.
Stop growing when they are adults.	Continue growing.
Have well developed senses and react quickly.	Respond to outside changes, such as light and touch, but very slowly.
They reproduce by laying eggs orby having babies.	Mostly reproduce by seeds.
Examples; Humans, Lions, Crabs, fish etc.	Examples; Rose, sunflower, beetroot etc.

v. Animals need oxygen to live. They take in (inhale) oxygen from the environment and give out (exhale) carbon dioxide. This is called breathing. Plants also take in oxygen and release carbon dioxide during respiration. They do this through a structure called stomata found in the leaves.

3. Draw and name what plants need to make their own food.



Plants - Classification, Structure and Functions

1. Fill in the blanks.

- i. Flowers
- ii. Anchor
- iii. Leaves
- iv. Phosphorus
- v. Stomata

2. Answer the following questions.

i. Features of two main groups of plants.

Flowering Plants	Non-flowering Plants
Have flowers as reproductive organs.	Do not have flowers.
Seeds are inside fruits.	Seeds are open with no covering.
Mostly reproduce with flowers and seeds.	Reproduce using spores or open seeds (Conifers).
Most plants have fruits.	Do not produce fruits.
Examples are rose plant, apple tree etc.	Examples are moss, ferns etc.

- ii. Examples of non-flowering plants and flowering plants;
- 1. Non-Flowering Plants;
 - Ferns
 - Mosses
- 2. Flowering Plants
 - Roses
 - Sunflowers
- ii. Flowers are important parts of plants because:
 - Flowers help plants make seeds, which grow into new plants.
 - Bright colors and sweet smells attract bees, butterflies, and other pollinators that help move pollen from one flower to another.

Plants - Classification, Structure and Functions

- After pollination, flowers can turn into fruits that contain seeds.
- Flowers help plants reproduce and make new plants, ensuring the species continues to grow.
- iii. Plants need certain necessary things to live and have a healthy growth.
 - Air
 - Light
 - Water
 - Nutrients from soil
- iv. Plants have tiny tubes to transport water and food throughout the plant body. Some tubes, called xylem, are responsible for transporting water. This process is called water transportation. Other tubes called phloem, transport food in a process known as food transportation. The plant transportation system consists of three main parts: stem, leaf, and root.
 - Root: They absorb water and nutrients from the soil that are carried by xylem.
 - Stem: It carries water and nutrients from the roots to the leaves and other parts of the plant through xylem.
 - Leaf: They use sunlight, water, and carbon dioxide to make food through photosynthesis. Then phloem distributes the food in plant.

3. Label the given diagram.



Chapter 3 Plants - Life Cycle and Importance

1. Choose the best answer.

- i. Germination
- ii. Pollination
- iii. Dispersal
- iv. Carpel
- v. Ovary

- i. Different parts of a flower and their functions;
 - Sepals are the green, leaf-like parts found at the base of the flower. They protect the flower bud before it opens.
 - Petals are often brightly colored and attract pollinators like bees, butterflies, and birds. They also protect the reproductive parts and help attract insects.
 - Stamens are the male reproductive part. The stamen produces pollen, which contains the male reproductive cells. It has an upper broader part called the anther, which produces and releases pollen, and a stalk called filament, which supports the top part.
 - Carpel is female reproductive part. It receives pollen, and the ovary produces seeds after fertilization. It consists of stigma, style, and ovary.
 - The sticky top part of the pistil that catches pollen is called stigma.
 - The stalk that connects the stigma to the ovary is called the style.
 - The enlarged base is called ovary. The structures inside the ovary that develop into seeds after fertilization are called ovules.
- ii. Plants play a vital role in sustaining life on the Earth.
 - Plants provide food for many living things, including humans. We eat plants directly or consume animals that rely on plants.

Plants - Life Cycle and Importance

- Plants release oxygen during photosynthesis. This oxygen is essential for us to breathe and survive.
- Plants absorb carbon dioxide from the air, which helps maintain a healthy atmosphere.
- Trees and plants are homes for various animals, from insects to birds and reptiles.
- Plants keep us alive and support the lives of all living things on the Earth.
- iii. Seed dispersal is when the plant needs to spread or disperse its seeds away from the parent plant so that new plants can grow in different places. Seeds can be dispersed in many ways, such as by wind, water, or animals.
- iv. Definition of germination and pollination.
 - Germination is when a seed starts to grow into a new plant. It happens when the seed gets enough water, the right temperature, and air.
 - Pollination is when pollen from the male part of a flower (anther) is moved to the female part (stigma). This helps the flower make seeds, which can grow into new plants.
- v. Following are some professions which are related to study and care of plants.
 - Gardner plant and take care of plants in gardens and parks.
 - Botanists are scientists who study plants. Their work is important as they study plants to make new medicines. They also search for new plants and find out the ideal conditions for plants to grow.
 - Farmers grow plants and take care of animals for people to get meat, milk and eggs. They grow vegetables such as onions, tomatoes, and more. They also grow grains such as wheat and crops such as cotton.
 - A florist works with various kinds of fresh, dried, and artificial flowers to make beautiful flower arrangements. They use flowers as decorations for special events.

Answer Key

Chapter 3 Plants - Life Cycle and Importance

1. Draw and explain the life cycle of a flowering plant in your notebook.



Chapter 4 Animals and Classification

1. Fill in the blanks.

- i. Vulture
- ii. Snail
- iii. Mammal
- iv. Fish
- v. Reptile

2. Answer the following questions.

i. Draw a flow chart to explain the features of different groups of vertebrates and invertebrates.



- ii. Jellyfish are not classified as fish because of the following reasons;
 - Fish have bones, but jellyfish do not. They are made mostly of water and a jelly-like substance.
 - Fish have fins, scales, and gills, while jellyfish have a soft, bellshaped body and tentacles.
 - Fish use gills to breathe underwater, but jellyfish absorb oxygen directly through their skin.
- iii. Definition of cold-blooded animals and warm-blooded animals

Cold-blooded animals can't control their body temperature. It changes with the environment. Examples include: Fish, Reptiles etc.

Chapter 4 Animals and Classification

Warm-blooded animals can keep their body temperature the same, no matter the environment. Examples include: Birds, Mammals etc.

iv. Difference between vertebrates and invertebrates

Vertebrates	Invertebrates
Vertebrates have a backbone.	Invertebrates lack a backbone.
They have an internal skeleton (endoskeleton).	Many have an external skeleton (exoskeleton).
Vertebrates have highly developed organ systems.	They have simpler organ systems compared to vertebrates.
Examples: mammals, birds, reptiles, amphibians, and fish.	Examples: insects, corals, earthworms, snails, jellyfish, and sponges.

v. Both groups have some similar features such as they cannot make their own food like plants. They can also move and reproduce.

3. Classify the following animals into their respective groups.

Animal	Mammals	Amphibians	Reptiles	Fish	Birds
Human	\checkmark				
Parrot					\checkmark
Lizard			\checkmark		
Turtle			\checkmark		
Toad		\checkmark			
Cod				\checkmark	

Human Skeleton and Digestive System

1. Choose the correct answer.

- i. Endoskeleton
- ii. Crown
- iii. Incisors
- iv. Mouth
- v. Muscles

- i. An exoskeleton is a hard, external covering that provides support and protection to some animals. Unlike an internal skeleton (endoskeleton) found in humans and other vertebrates, in some animals, an exoskeleton is found on the outer surface of the body.
- The skeleton is a framework of bones that supports our body. Bones are living material. They need oxygen and energy just like the rest of our body.
- iii. Without a skeleton, our body would have no shape or support. We wouldn't be able to stand, move, or protect our organs.
- iv. The digestive system breaks down food into small particles and simpler substances that our body can use. This process is called digestion. The digestive system helps our body get the nutrients it needs from the food we eat.
 - Mouth: Digestion begins here. Teeth chew up the food so we can swallow it.
 - Stomach: Food is broken into even smaller pieces by special chemicals called enzymes.
 - Small Intestine, Liver, and Pancreas: These organs work together to finish digesting food so it can pass into the blood.
 - Large Intestine: Absorbs remaining water and some nutrients from undigested food. The rest passes out of our body.
- v. Many vertebrates have a digestive system that is like humans. For example, cows and dogs have mouth with teeth, an oesophagus, a stomach, and intestines. Birds have a digestive system that is also like humans, but they also have a gizzard, an organ for breakdown of food.

Answer Key

Chapter 5 Human Skeleton and Digestive System

3. Label different types of teeth below.









- i. Canine
- ii. Premolar
- iii. Incisor
- iv. Molar



Ecosystem

1. Choose the correct answer.

- i. Deserts
- ii. Urbanization
- iii. All of the above
- iv. Three quarters
- v. Lakes

2. Answer the following questions.

- i. Plants found in the desert face a harsh environment as deserts are really hot and dry places with very little rainfall. Plants like cactus, have thick fleshy stems so that they can store larger amounts of water. They also have a waxy coating to prevent water loss. These adaptations help them to survive even on a small amount of water.
- ii. Harmful chemicals from pollution affect the food chain by entering plants and animals. When humans consume plants and animals, these harmful substances enter human bodies, making them sick.
- iii. Definition of hibernation and migration.

Hibernation: Some animals, such as bears and groundhogs, move slowly, or sleep during the winter months to save energy and avoid extreme cold temperatures.

Migration: Many birds, such as geese and swans, migrate to warmer climates during the winter to avoid cold temperatures and lack of food. Some species of whales and dolphins also migrate to different areas to feed or mate. Insects like the monarch butterfly migrate to warmer climates to lay eggs.

Terrestrial Ecosystems	Aquatic Ecosystems
On land.	In water.
Plants, animals, insects that live on land.	Fish, plants, animals, insects that live in water.
Forests, grasslands, deserts, jungles.	Oceans, lakes, rivers, ponds.

iv. Difference between terrestrial and aquatic ecosystems

Ecosystem

Lots of air for breathing and to get oxygen.	Animals get oxygen from the water.
Rain, rivers, lakes on land.	Water all around.
Soil or ground for plants to grow.	Water or sand/mud at the bottom.
Lots of sunlight.	Sunlight at the top, less at the bottom.
Animals walk, run, fly	Animals swim, float

v. Animals and plants interact in ways that keep ecosystems balanced. Plants produce oxygen for animals, and animals produce carbon dioxide for plants. Pollinators like bees help plants reproduce, and animals like birds spread seeds. These interactions support biodiversity and climate regulation. Disrupting them can lead to ecosystem collapse and environmental damage, showing the importance of preserving these relationships.

3. Make a food chain from given organisms.

- i. Grass Deer Lion
- ii. Wheat \longrightarrow Insects \longrightarrow Frog \longrightarrow Eagle
- iii. Leaves \longrightarrow Caterpillar \longrightarrow Bird
- iv. Grass \longrightarrow Rabbit \longrightarrow Fox \longrightarrow Wolf

Human Health

1. Choose the correct answer.

- i. Energy
- ii. Balanced
- iii. Tuberculosis
- iv. Fibers
- v. Hepatitis

- i. A balanced diet is one that provides all the essential nutrients, vitamins, and minerals that the body needs to function correctly. It includes a variety of foods in the right amounts to maintain health, energy levels, and overall well-being.
- ii. We get carbohydrates from grains, fruits, vegetables, and legumes. Proteins are found in meat, fish, eggs, dairy products, legumes, nuts, and seeds. Fats are found in oils, butter, nuts, and fatty fish.
- iii. Different nutrients help our bodies in different ways. Carbohydrates give us energy to play and learn. Proteins help build our muscles. Fats give us extra energy and keep us warm. Vitamins and minerals keep our bodies working well and help us grow. Water keeps us hydrated and helps our bodies work properly. Fiber helps our digestion and keeps our tummy happy.
- iv. Contagious diseases can spread from one person to another, like the flu or chickenpox. Non-contagious diseases cannot spread between people, like asthma or diabetes.
- v. Some contagious diseases such as cholera, polio, and chickenpox can be prevented with the help of vaccines. They can also be controlled by preventing the spread of germs from one person to another. Following are the best ways to stop germs.
 - Use a tissue when you cough or sneeze.
 - Wash your hands before you eat.
 - Keep cuts clean andW wear a bandage.
 - Wash your hands after you visit the toilet.
 - Wear a mask.

Human Health

3. Plan a balanced diet to make yourself healthy and strong.

- i. Breakfast: Start your day with a bowl of oatmeal topped with fruits like bananas or berries. Drink a glass of milk.
- ii. Lunch: Have a sandwich with whole grain bread, lean meat or cheese, and lots of veggies like lettuce and tomatoes. Add a side of carrot sticks and an apple.
- iii. Dinner: Eat a plate of grilled chicken or fish, with a side of brown rice and steamed vegetables like broccoli and carrots.

Chapter 8 Matter and Its Characteristics

1. Choose the correct answer.

- i. All of the above
- ii. Mass
- iii. Conductors
- iv. Melting

- i. There are three common states of matter that are described below.
 - Solids: These have a fixed shape and volume. Think of a toy, a book, or an ice cube. They do not change shape unless we do something to them, like cutting or melting.
 - Liquids: These have a fixed volume but can change shape. Imagine a glass of water. The water takes the shape of the glass, but the amount of water stays the same (fixed volume).
 - Gases: These do not have a fixed shape or volume. They spread out to fill all the empty space. Think of the air we breathe or the bubbles in a soda.
- ii. Metals can conduct electricity and heat, that is why they are used to make cooking utensils, and metals have a shiny appearance and have different colors, that is why they are ideal for making jewelry.
- iii. Definition of freezing, melting, boiling, malleable and ductile.
 - Freezing: When a liquid is cooled, its particles lose energy and slow down, causing them to stick together. This turns the liquid into a solid. This process is known as freezing.
 - Melting: When a solid is heated, it absorbs energy, causing its particles to move faster. They begin to move more freely, which results in the formation of a liquid. This process is known as melting.
 - Boiling: When a liquid is heated, its particles gain energy and move more rapidly. When the particles have enough energy to break free from the surface of the liquid, a gas is formed. This process is known as boiling.

Chapter 8 Matter and Its Characteristics

- Ductile: If something can be stretched into thin wires without breaking, it's called ductile. For example, copper is ductile because we can make it into wires.
- Malleable: If something can be hammered or pressed into different shapes without breaking, it's called malleable. For example, gold is malleable because we can shape it into jewelry.
- iv. We use metals for electrical wires because they are ductile and can be stretched into thin wires without breaking.
- v. When a solid changes into a liquid, it's called melting. This happens when the solid gets warm enough, like ice turning into water when it gets hot. The heat makes the solid particles move faster and break apart, turning into a liquid.

3. Put a tick in front of the correct property.

Property	Solid	Liquid	Gas
Fixed Volume	\checkmark	\checkmark	
Fixed Mass	\checkmark	\checkmark	\checkmark
Fixed Shape	\checkmark		
Takes the shape of container		\checkmark	\checkmark

Forms of Energy and Energy Transfer

1. Choose the correct answer.

- i. Electrical
- ii. In all directions
- iii. Mercury thermometer
- iv. Source of electric current

- i. Following are the basic forms of energy.
 - Light Energy: It is the energy carried by light. Sunlight is essential for photosynthesis in plants and for powering solar panels to generate electricity.
 - Sound Energy: Produced by vibrating objects, sound energy travels through mediums such as air or water. It can cause motion, such as making a drumhead vibrate or shattering glass at high volumes.
 - Heat Energy (Thermal Energy): This is the energy that comes from the movement of atoms and molecules in a substance. It can cause changes like melting ice into water or enabling engines run.
 - Electrical Energy: This is the energy from the flow of electric charge. It powers our homes, runs appliances, and can cause motion in electric motors.
 - Magnetic Energy: This is the energy within magnetic fields. Magnetic materials can attract many metals. They can cause motion, such as moving a compass needle or operating a maglev train.
- ii. A rainbow happens when sunlight shines through tiny drops of water in the sky after it rains. The light bends and splits into different colors when it enters the water drop. The bending and bouncing make the colors spread out and form a rainbow.

Forms of Energy and Energy Transfer

- iii. Warm water has more heat energy thats why it has higher temperature while cold water has lower temperature because it has less heat energy. When hot objects come close to cold objects, the heat energy is transferred from hot to cold. That is why the temperature of cold water increased as it gained heat energy.
- iv. Temperature is a measure of how hot or cold something is. It indicates how much heat energy an object or place has. There are two main scales for measuring temperature, Celsius and Fahrenheit. Most countries around the world, including Pakistan, use the Celsius scale.
- v. Energy transformation is the process of changing energy from one form to another. Here are some common examples:
 - Electrical energy to light energy: Flashlight converts chemical energy stored in batteries into electrical energy, which is then converted into light energy.
 - Sound energy to mechanical energy: In a speaker, sound energy can cause physical vibrations, which can create motion and produce sound.
 - Heat energy to electrical energy: In a thermo-electric generator (TEG), heat energy is converted into electrical energy.
 - Magnetic energy to electrical energy: In a generator, magnetic energy is converted into electrical energy.
 - Light energy to electrical energy: In a solar panel, light energy is converted into electrical energy. Photovoltaic cells absorb sunlight and generate an electric current.

3. Match the column.

Description	Energy Type
Produced by burning wood, coal or other fuels.	Heat energy
Used in photosynthesis.	Light energy
Used to run appliances.	Electrical energy
Produced by vibrations.	Sound energy
Used in compasses.	Magnetic energy

Chapter 10 Forces and Motion

1. Choose the correct answer.

- i. Twice the original force
- ii. Lever
- iii. Wheels
- iv. Friction
- iv. Polishing

2. Answer the following questions

- i. Friction is a resistance force which means it acts in the direction opposite to the movement of an object.
- ii. Friction may not always be useful. If a machine is running for a long time, some parts can become overheated due to friction. They may stop working. Friction can create problems when moving objects on the floor. Friction can also cause problems in certain sports, for example in ice skating. A skater may not perform well if there is too much friction.

Here are some effective methods to reduce friction.

- **Lubrication:** Applying oils, greases, or other lubricants between surfaces reduces friction by creating a slippery layer.
- **Polishing:** Smoothing surfaces through polishing reduces roughness, decreasing friction.
- Using rollers or wheels: Replacing sliding surfaces with rollers or wheels can greatly reduce friction.
- Many machines reduce the amount of force needed to do a job. In science, doing work means using force to move an object. Here are some types of simple machines;
 - Levers: A lever is a bar that rotates on a point called a fulcrum. Lever reduces the amount of force needed to move an object. For instance, using a lever can make lifting a heavy object easier.

Chapter 10 Forces and Motion

- **Pulleys:** A pulley is a wheel with a rope that can change the direction of the applied force making tasks easier. For example, pulling down on a rope of pulley to lift a load is often easier than lifting it directly.
- **Gears**; Gears are wheels with teeth that fit and work together to change the speed or direction of motion. Gears can make an object move farther with less effort. Pedaling a bike turns the gears, which moves the wheels and covers more distance.
- **Ramps (inclined planes):** A ramp is a slanted surface that makes it easier to lift or lower heavy objects. Rolling a barrel or a drum up a ramp is easier than lifting straight up.
- iv. Forces can be categorized into many types.
 - **Muscular forces:** It is the force applied with the help of body parts such as pushing something using our hands and arm muscles.
 - **Gravitational force:** This force pulls two objects closer, e.g. the Earth attracts all the objects towards itself, such as when a ball falls due to gravitational force.
 - Magnetic force: It is the force that magnets possess, which is used to attract magnetic objects such as iron.
 - **Electric force:** The force that exists between two charged objects is known as electric force. The electricity in a circuit flows due to the movement of charged.
- v. If forces act in opposite directions on an object, the total force is the difference between them. If the forces are equal, the total force is zero, and the object stays still or moves at a constant speed. If the forces are different, the total force is in the direction of the stronger force. For example, if two children pull a rope equally hard in opposite directions, the rope stays still. If one pulls harder, the rope moves toward the stronger pull.

Forces and Motion

3. Draw and collect pictures of simple machines around you and write their uses in your notebook.

SIMPLE MACHINES





Wedge



- i. Pulley: We use pulleys on flagpoles to raise flags and in blinds to lift them up and down. They help us lift heavy things with less effort by changing the direction of force.
- ii. Lever: We use levers to open paint cans with a screwdriver and to crack nuts with a nutcracker. They help us multiply force to lift or pry things.
- Wheel and Axle: We use wheel and axles on doorknobs to open doors iii. and on bicycles to travel faster. They help us move things more easily over distances.
- Wedge: We use wedges in axes to chop wood and in nails to hold things iv. together. They help us split or fasten objects by driving them into place.
- Inclined Plane: We use inclined planes on ramps to move heavy objects ۷. into trucks and on slides to have fun at the playground. They help us move things up or down with less force over a longer distance.

Chapter 11 Earth and Its Resources

- 1. Choose the best answers.
 - i. Hill
 - ii. Oxygen
 - iii. Air
 - iv. Factories
 - v. They warm the Earth

- i. Natural resources are materials from the Earth that are used to fulfill our needs. These include the wind, water, soil, and forests. These also include the minerals, oil, and natural gas that we use in our daily life.
- ii. They are the preserved remains or traces of plants and animals that lived millions of years ago. We can find these fossils in rocks, soil, and even under the sea. For example, dinosaur bones might be discovered in rocky cliffs.
- iii. Evaporation is when water turns into vapor and rises into the air. It's important for the water cycle because it helps move water from lakes, rivers, and oceans into the atmosphere, where it can form clouds and eventually fall back as rain.
- Sources of fresh water include rivers, lakes, and underground wells. Without water, living things like plants, animals, and humans cannot survive because water is essential for drinking, growing food, and staying healthy
- V. Glaciers are important because they store a lot of fresh water.
 When they melt, they provide water to rivers and lakes, which we use for drinking, farming, and keeping plants and animals alive.
 Without glaciers, we would have less fresh water to use.

Chapter 11 Earth and Its Resources

3. Draw a labeled diagram of the water cycle in your notebook.



Chapter 12 Earth's Weather and Climates

1. Choose the best answers.

- i. Cold days
- ii. Extremely dry conditions
- iii. Furniture
- iv. Umbrella
- v. Hot and dry

2. Answer the following questions.

i. Difference between climate and weather.

Weather	Climate
What's happening right now or over a short time (like today or this week).	The usual weather over a long time (like many years).
Changes very quickly!	Changes very slowly.
"It's sunny today!" or "It's raining this week."	"Deserts are usually hot and dry." or "Rainforests are usually wet."

- ii. Places close to the equator, like some parts of Africa and South America, usually have warm weather all year round.
- iii. In winter, the weather is usually cold. You might see snow or ice, and sometimes it gets windy. People wear warm clothes like jackets, hats, and gloves to stay cozy.
- iv. Difference between weather of places near the poles and equator.
 - Near the equator: Places close to the equator, like some parts of Africa and South America, usually have warm weather all year round.
 - Near the poles: Places near the North and South Poles, like Antarctica, are very cold and can have lots of snow and ice.

Earth's Weather and Climates

- v. The ideal climate to live in is usually mild and comfortable, not too hot or too cold. It has sunny days with some rain to keep plants and animals happy.
- 3. Explain the weather of the following areas.

Weather	Climate
Desert	Deserts, like the Sahara, are very dry and can be extremely hot during the day but cold at night.
Coastal Area	Places near the ocean, like coastal cities, often have milder weather with more humidity and sometimes more rain.
Mountain	High up in the mountains, it can be colder and windier than in the valleys below.

Chapter 13 Earth in the Solar System

1. Choose the best answers.

- i. 27.3
- ii. Mars
- iii. New Moon
- iv. The Earth
- v. Lunar eclipse

- i. A solar eclipse happens when the moon moves between the sun and the Earth, blocking the sun's light. A lunar eclipse happens when the Earth moves between the sun and the moon, casting a shadow on the moon. So, in a solar eclipse, the sun gets covered, and in a lunar eclipse, the moon gets covered.
- ii. The Earth's spinning, or rotation, causes day and night. When one side of the Earth faces the sun, it's daytime there. When it turns away from the sun, it's nighttime. We can see this by watching the sunrise in the morning and the sunset in the evening.
- iii. A comet is made of ice, dust, and gas and often has a bright tail when it gets close to the sun and an asteroid is a rocky object that orbits the sun and doesn't have a tail.
- iv. List of planets from closest to farthest from the Sun;
 - Mercury: It is the smallest planet in our solar system and the nearest to the Sun.
 - Venus: It is the second planet from the sun and the Earth's closest planetary neighbor.
 - Earth: It is the third planet from the Sun and fifth largest planet.
 - Mars: It is the red planet, which is fourth from the Sun, and appears faintly reddish in the night sky. It is a dusty, cold desert world with a very thin atmosphere.
 - Jupiter: It is the largest planet in the solar system. If hollow, it can hold one thousand the Earths.

Chapter 13 Earth in the Solar System

- Saturn: It is the second largest planet in our solar system.
- Uranus: It is the seventh planet from the Sun and has the third largest diameter of planets in our solar system.
- Neptune: It is the eighth and most distant planet in our solar system.
- v. Seasons on the Earth are caused by its tilt and revolution around the Sun. Because of the tilt, different parts of the Earth get different amounts of sunlight throughout the year. As the Earth orbits the Sun, the tilt causes different hemispheres to receive more direct sunlight at different times of the year.
 - Northern Hemisphere: When the North Pole is tilted toward the Sun (around June), the Northern Hemisphere gets more direct sunlight, making it summer there. When the North Pole is tilted away from the Sun (around December), the Northern Hemisphere gets less direct sunlight, making it winter.

Southern Hemisphere: When the South Pole is tilted toward the Sun (around December), the Southern Hemisphere experiences summer. When the South Pole is tilted away from the Sun (around June), the Southern Hemisphere experiences winter.

3. Label the phases of Moon.



Chapter 14 Technology in Everyday Life

1. Choose the best answers.

- i. Time
- ii. All of the above
- iii. Mass

- i. Normal blood pressure for a human is around 120/80 mm Hg
- ii. A thermometer takes a person's body temperature.
- iii. A first aid kit contains items such as bandages, wipes, ointment, band aids, tweezers, scissors, a thermometer, and other medical products.
- iv. Using scientific instruments helps us monitor health, measure ingredients, and manage time. Here are some ways you use scientific instruments in your everyday life;
 - Blood Pressure Apparatus: Wrap the cuff around your arm, inflate, and listen for heartbeats.
 - Digital Blood Pressure Monitor: Wrap the cuff, press start, and read the display.
 - Digital Balance: Place an empty container, press tare, add the item, and read the measurement.
 - Stopwatch: Press start to time, stop to end, and reset to clear.
 - Calculator: Turn on, input numbers, and use operation buttons to get results.
- v. Mobile phone applications are very useful as they help us communicate with friends and family through calls and messages. We can learn new things by using educational apps and watching videos. Apps also let us play games and have fun. They help us stay organized with calendars and reminders, and we can find information quickly using search engines. Overall, apps make our lives easier and more enjoyable!

Chapter 14 Technology in Everyday Life

3. Make a first aid box for your home. Design your first aid box to sell in your school's science fair.

