

PRIMARY ONE

SECTION 1

DIVERSITY OF MATTER

General Objectives : The pupil will:

1. recognise the great variety of living and non-living things and their interconnectedness in nature.
2. show awareness that materials as well as organisms can be grouped based on their properties or characteristics
3. classify living things into broad groups according to common observable characteristics based on similarities and differences.
4. appreciate the importance of measurement in everyday life.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 LIVING AND NON-LIVING THINGS	The pupils will be able to:		Let pupils:	
	1.1.1 group materials into living and non-living things.	Living and Non-living things	Go round the school compound (<i>Nature Walk</i>) and collect different materials and bring them to class. Group the materials into living and non-living things. Note: Real objects or cut-out pictures can be used for the grouping.	Sort pictures of the following into living and non-living things: Insects, lizard, toad, pebbles, beads, glass, plastic cups and trees.
	1.1.2 state the characteristics of living things.	Characteristics of living things: ➤ Need air, water, light and food to survive ➤ Grow, move by themselves, reproduce and die	Discuss the characteristics of living things. Support discussions with activities.	List two (2) differences between plants and animals.
	1.1.3 group living things into plants and animals.	Plants and Animals	Observe and sort out living things into plants and animals.	
1.1.4 describe some external appearance of plants.	External appearance of plants: - Size (tall, short, small, big) - Colour of leaves.	Collect plants of different sizes and colour from the surroundings or home and bring them to school. Group them according to sizes (tall, short, small, and big) and colour of leaves.		

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 2 MEASUREMENT OF VOLUME, MASS, LENGTH AND TIME	The pupils will be able to:		Let pupils:	
	1.1.5 describe the external appearance of animals	External appearance of animals: small, big, tall, short	Use chart, pictures and models to group animals according to their sizes, big, small, tall, short.	Explain how living things are different from non living things
	1.1.6 identify some common non-living materials around us	Non-living materials around us	Name different kinds of materials, such as plastics, rubber, paper, metals, glass, textile, wood and stone. Give examples of things made from these materials.	
	1.2.1 measure and compare length of objects using the feet hand span and arm span.	Measuring Length	Measure distances or lengths of objects such as tables, writing boards and classroom using their feet, hand span and arm span. Note: Help pupils to infer from the activity that different pupils have different lengths of hand and arm span.	Measure the length of the following materials: a stick a strip of paper a leaf.
	1.2.2 estimate and compare mass of objects using their palm and double pan balance.	Estimating and comparing Masses	Compare the heaviness or lightness of different sizes of the same object such as balls, oranges, stones, wood and pencils. Compare the heaviness or lightness of the same size of different objects such as balls, stones and wood. Note: Show that big size does not necessarily mean heavier mass.	
	1.2.3 estimate volume of substances using the terms 'more' or 'less'.	Estimating volume	Demonstrate that different sizes of containers (milk tin, milo tin, big bottles, and small bottles) can hold different volumes of materials (water and sand). Demonstrate that the same volume of materials (e.g. water, sand, oil) occupies the same space in containers of different sizes.	
1.2.4 recognize the passage of time.	Passage of time: Morning, afternoon, evening and night	Teacher guides pupils to develop awareness of the passage of time or time taken by events e.g. Morning, afternoon, evening and night, sunrise, sunset, breakfast time, school going time and closing time.		

PRIMARY ONE

SECTION 2 CYCLES

General Objectives : The pupil will:

1. recognise that there are repeated patterns of change in nature and understand how these patterns arise.
2. recognise that the Sun is the driving force behind many cyclic events and processes in nature.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 SUN AND EARTH	<p>The pupil will be able to:</p> <p>2.1.1 describe events that occur in cycles.</p> <p>2.1.2 identify the Sun and clouds in the day sky with unaided eyes.</p> <p>2.1.3 identify the Moon and Stars in the night sky with unaided eyes.</p> <p>2.1.4 describe the changes in length and position (direction) of shadows from morning through midday to evening.</p> <p>2.1.5 state that the Earth is round like a football.</p>	<p>Cyclic events: analogue clock, Merry-go-round, circular cards</p> <p>Objects in the day sky: Sun and Clouds</p> <p>Objects in the night sky: Moon and Stars</p> <p>Changes in length and position (direction) of shadows during the day</p> <p>Shape of the Earth</p>	<p>Let pupils:</p> <p>Demonstrate cyclic movement using the second hand of an analogue clock, of merry-go-round and circular cards.</p> <p>Note: Explain to pupils that the appearance of the Sun, Moon and stars follow a cyclic pattern.</p> <p>Observe the Sun and clouds in the sky during the day with unaided eyes.</p> <p>Observe the Moon and Stars in the sky at night</p> <p>Compare day and night sky along these lines: brightness, darkness, objects in sky.</p> <p>Observe the length and position of shadows in relation to the position of the Sun in the sky.</p> <p>Caution: Pupils should not look at the Sun directly.</p> <p>Observe the globe and relate it to the shape of Earth.</p> <p>Go outside to observe the horizon and relate it to the roundness of the Earth.</p>	<p>Mention names of three (3) objects found in the sky.</p>

PRIMARY ONE

SECTION 3

SYSTEMS

General Objectives : The pupil will:

1. recognise that a system is a whole consisting of parts that work together to perform a function
2. recognise the human body as a system which has different parts to carry out different functions

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 THE HUMAN BODY	The pupil will be able to: 3.1.1 identify the different parts of the human body. 3.1.2 identify the functions of the different parts of the human body. 3.1.3 predict what happens when one loses a part of the human body.	Parts of the human body: Head, neck, hands, chest, abdomen, ears, mouth, eyes, nose and legs. Functions of the parts of the human body Effect of losing part of the human body	Let pupils: Identify and name the parts of the human body as listed in the content through games, songs, models and dolls. Teacher to assist pupils understand that, the stomach is found in the abdomen. It cannot be seen from outside. Draw and match the human body parts to their functions. Do a miming and tell the parts of the human body involved in the activity. Discuss the effect of losing part of the human body.	Name parts of the human body that is in pairs. State a function each of the following parts of the human body: Neck, head, legs and hands.

PRIMARY ONE

SECTION 4 ENERGY

General Objectives: The pupil will:

1. recognise that energy has a source, can be transferred and can be transformed into various forms.
2. recognise that the Sun is the primary source of light energy
3. recognise that an electronic circuit consists of an energy source and other circuit components to form an electronic system
4. recognise the importance of safe use of electricity

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 SUNLIGHT	<p>The pupil will be able to:</p> <p>4.1.1 state the importance of sunlight.</p> <p>4.1.2 show that light from the Sun is a basic source of energy for all plants.</p>	<p>Sunlight as a source of energy</p> <p>Sunlight as a basic source of energy for plants.</p>	<p>Let pupils:</p> <p>Demonstrate that sunlight helps us to see clearly. Demonstrate that sunlight helps things to dry.</p> <p>Demonstrate that sunlight can make things warm.</p> <p>Demonstrate that sunlight helps plants to grow well.</p>	<p>List three (3) uses of sunlight.</p> <p>What happens to smaller plants that grow in shady areas under bigger trees?</p>
UNIT 2 BASIC ELECTRONICS	<p>4.2.1 tell that batteries make electronic gadgets (toys) work.</p>	<p>Batteries as sources of energy</p>	<p>Gather different battery-operated electronic toys. Operate the electronic toys using different batteries. Group the toys according to how they work: Identify what the batteries make the toys do e.g.</p> <ol style="list-style-type: none"> 1. movement 2. making sound 3. producing light 4. playing music <p>Draw different types of batteries.</p> <p>Note: Assist pupils to realise that a battery is a source of energy that make electronic gadgets work.</p>	<p>Tell what batteries do in electronic toys.</p>

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 3 ELECTRICITY	<p>The pupil will be able to:</p> <p>4.3.1 identify appliances in the home which use electricity to work.</p> <p>4.3.2 recognise that safety is important when using electricity.</p>	<p>Appliances in the home which use electricity</p> <p>Safety in the use of electricity</p>	<p>Let pupils:</p> <p>List the different types of appliances in their homes which use electricity to work.</p> <p>Discuss safety measures to be observed when using electricity</p>	<p>Name two (2) appliances in the home that use electricity.</p>

PRIMARY ONE

SECTION 5 INTERACTIONS OF MATTER

General Objectives: The pupil will:

1. appreciate that interaction between and within matter helps humans to better understand the environment and their role in it.
2. develop positive attitude towards personal hygiene and environmental sanitation.
3. appreciate the role of machines as a tool for making work easier and faster.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 PERSONAL HYGIENE	The pupil will be able to: 5.1.1 explain the need for hand washing. 5.1.2 explain the need for cleaning the teeth. 5.1.3 explain the need for bathing.	Importance hand washing Importance of cleaning the teeth. Importance of bathing	Let pupils: Demonstrate how they wash their hands using soap and running water and give their comment on the demonstration. Teacher to explain the need for hand washing and demonstrate the right way of hand washing using running water. Discuss the need for brushing the teeth. Demonstrate the proper way to brush the teeth. Discuss the need for bathing. Demonstrate the proper way of bathing using dolls.	Why do you wash your hands before you eat? Describe how to wash hands and brush the teeth

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 PERSONAL HYGIENE (cont)	<p>The pupil will be able to:</p> <p>5.1.4 explain the need for keeping the finger nails short and clean.</p> <p>5.1.5 explain the need for taking good care of the hair.</p> <p>5.1.6 explain the need for washing clothes and underwear.</p>	<p>Keeping the finger nails short and clean.</p> <p>Taking good care of the hair</p> <p>Care for clothing.</p>	<p>Let pupils:</p> <p>Demonstrate ways for keeping the finger nails short and clean.</p> <p>Demonstrate the proper way to keep the finger nails clean.</p> <p>Discuss the need for taking good care of the hair.</p> <p>Demonstrate the proper way for taking good care of the hair.</p> <p>Discuss the need for washing clothes and underwear. Demonstrate the proper way of washing clothes and underwear.</p>	<p>Name the parts of the body that must be clean.</p> <p>Why do you wash your cloths?</p>
UNIT 2 SIMPLE MACHINES	<p>5.2.1 name some simple devices used for making work easier.</p> <p>5.2.2 use appropriate machines to do specific work.</p>	<p>Simple devices for doing work: Bottle opener, scissors, screw driver, hammer, and knife.</p> <p>Uses of simple machines</p>	<p>Name some simple devices that make work easier to do.</p> <p>Choose appropriate simple machines and practice how to use them in the following activities:</p> <ul style="list-style-type: none"> - Opening a firmly secured bottle top. - Cutting a piece of cloth. 	<p>What will you use to open a bottle of soft drink easily?</p>

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 2 SIMPLE MACHINES (cont)	<p>The pupil will be able to:</p> <p>5.2.3 infer that devices that help to make work easier are called machines.</p> <p>5.2.4 develop skills for using simple machines.</p>	<p>Machines</p> <p>Skills for using simple machines</p>	<p>Let pupils:</p> <ul style="list-style-type: none"> ➤ Cutting through a piece of cloth. ➤ Removal of a screw stuck in wood. ➤ Driving a nail into wood. <p>Attempt to perform the above activities using bare hands.</p> <p>Compare their experiences to when using the tools and when using their bare hands.</p> <p>Discuss and bring out the meaning of the term machine.</p> <p>Teacher assists pupils to handle and use tools efficiently as they go through the above activities.</p> <p>Note: Teacher should design more activities involving the use of simple machines for pupils to practice.</p>	<p>Why do we use machines to work?</p>

PRIMARY TWO

SECTION 1

DIVERSITY OF MATTER

General Objectives: The pupil will:

1. recognise the great variety of living and non-living things and their interconnectedness in nature.
2. recognize reproduction in living things as the basis for the sustainability of life.
3. be aware that water, air and rocks are substances that sustain life.
4. appreciate the importance of measurement in everyday life.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 PLANTS	The pupil will be able to:		Let pupils:	
	1.1.1 describe various kinds of plants.	Kinds of Plants: Erect, Creeping and Climbing	Go on a nature walk. Observe and describe different kinds of plants e.g. Erect, creeping and climbing. Note: Build stock of the different varieties of plants.	
	1.1.2 group plants according to the characteristics of their leaves.	Characteristics of leaves: broad, narrow, thin, thick and coloured	In groups, collect different kinds of leaves. Each group should put their leaves together and sort them into broad, narrow, thin, thick and coloured	
	1.1.3 mention ways by which plants produce baby plants (seedling).	Reproduction in Plants	Bring planting materials to school (seeds, cassava sticks, sugar cane and ginger). Examine the planting materials and predict the part that grows into a young plant. Draw some of the plant materials.	
	1.1.4 demonstrate ways by which baby(young) plants are produced from seeds and cutting.	Producing baby (young) plants from seeds and cuttings.	Sow the seeds in transparent containers filled with wet cotton wool/saw dust/ soil. Plant the cassava sticks/sugar cane/ginger in soil and observe daily to see where the baby plant emerges from. Watch a video/digitized clip on seed germination and talk about it.	List two (2) ways by which plants produce their young ones.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 2 ANIMALS	<p>The pupil will be able to:</p> <p>1.2.1 group animals into birds, insects, fish, reptiles and mammals.</p> <p>1.2.2 group animals according to the way they move.</p> <p>1.2.3 group animals into how they produce their young ones.</p>	<p>Groups of animals: birds, insects, fish, reptiles and mammals.</p> <p>Movement of animals Walking, swimming, flying, crawling, running and galloping.</p> <p>Reproduction in animals: ✓ Laying of eggs ✓ Giving birth to young ones alive</p>	<p>Let pupils:</p> <p>Go on a nature walk to observe and record the different kinds of animals found in the community. Group animals into birds, insects, fish, reptiles and mammals. Draw a fish, butterfly, bird and a snake.</p> <p>Demonstrate how some animals move, e.g. walking, swimming, flying, crawling, running ,galloping and hopping</p> <p>Give one example each of an animal to match with the different types of movement. Observe the type of movement and report on what you see.</p> <p>Watch a digitized content/video tape on how different animals move. Visit a fish pond to watch how fish moves.</p> <p>Observe and discuss a wall chart showing animals and their babies (young ones).</p> <p>Prepare a chart by cutting and pasting/drawings of animals and their babies.</p> <p>Identify and mention names of animals that produce babies by birth.</p> <p>Identify and mention names of animals that produce babies by laying eggs.</p>	<p>Name two (2) animals that produce babies by birth.</p>

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 3 WATER.	The pupil will be able to:		Let pupils:	Where can water be collected for use in your area?
	1.3.1 name sources of water	Sources of Water	Mention sources of water.	
	1.3.2 state the uses of water.	Uses of water.	Mention some uses of water in the home and at school.	
	1.3.3 identify good drinking water	Qualities of good drinking water: ✓ Tasteless ✓ Free from solid particles ✓ Odourless (should not smell)	Discuss qualities of good drinking water.	
1.3.4 identify water from other liquids.	Differences between water and other liquids: ✓ Colour ✓ Smell ✓ Taste	Assemble different types of liquids in clean and transparent containers. Identify water from other liquids using smell, taste and colour. Note: Pupils should not taste any liquid unless instructed by teacher.		
UNIT 4 AIR	1.4.1 demonstrate the presence of air.	Presence of air	Use activities to demonstrate the presence of air, e.g. wave a piece of paper across the face and discuss their observation	
	1.4.2 mention some uses of air.	Some uses of air: ✓ Breathing ✓ Burning ✓ Flying	Mention some uses of air, e.g. filling balloons, parachuting, and pumping tyres.	

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 5 ROCKS	The pupil will be able to: 1.5.1 describe types of rocks. 1.5.2 state some uses of rocks.	Types of rocks: Rough, smooth, big and small rocks Some uses of rocks: Carving, roofing, decoration, building houses, bridges, roads, dams, ports and harbours, making water closets and sinks and beads Rocks as a storehouse for water beneath the Earth	Let pupils: Collect stones from the surroundings and group them as small, big, smooth and rough as discussed in the content. Note: Explain to pupils that stones are forms of rocks. Discuss uses of rocks. Make small rock gardens. Use rocks to make patterns. Teacher to show pupils pictures of things made from rocks. Pick some stones from the school compound or environment. Make small holes or cavities in the stones and pour some water into them. Keep the stones in a cool place and observe what happens for a day or two.	State four(4) uses of rocks.
	UNIT 6 MEASUREMENT OF LENGTH, MASS, VOLUME AND TIME	1.6.1 measure the length of objects using pace and sticks. 1.6.2 measure the mass of objects using a balance.	Measuring length Measuring mass, Using a sling/bathroom scale and kitchen scale	

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
	<p>The pupil will be able to:</p> <p>1.6.3 predict the quantity of small containers that will be needed to fill a big container.</p> <p>1.6.4 demonstrate how to determine the volume of their fist using the displace method.</p> <p>1.6.5 tell the time on both digital and analogue clocks.</p> <p>1.6.6 design and make an analogue clock from cardboard.</p>	<p>Measuring Volume</p> <p>Measuring Volume of the fist</p> <p>Reading the time.</p> <p>Making an analogue clock.</p>	<p>Let pupils:</p> <p>Build stock of containers of different sizes. Guess the quantity of small containers that will fill a bigger container. Measure to find out if their guess is correct.</p> <p>Fill a displacement can to the brim and place it in a bowl. Curl the thumb and fingers together to form a fist and insert into the displacement can up to the wrist. Measure the volume of water displaced by the fist.</p> <p>Repeat the above exercise using the open hand. Compare the two volumes.</p> <p>Mention some devices for measuring time. In pairs, pupils tell time from preset analogue and digital clocks.</p> <p>Design and make analogue clocks from cardboards.</p>	

PRIMARY TWO

SECTION 2

CYCLES

General Objectives: The pupils will:

1. recognise that there are repeated patterns of change in nature and understand how these patterns arise.
2. recognize that weather conditions vary and can be predicted and measured

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 WEATHER CONDITIONS	The pupil will be able to:		Let pupils:	
	2.1.1 list conditions that describe the weather.	Conditions that describe the weather: Sunshine, rain, clouds, wind, dust and fog.	Discuss the conditions that give the weather its appearance in a day. Discuss the effects of different weather conditions on human activities	List three(3) weather conditions you will find on a : a. rainy day b. hamattan day
	2.1.2 forecast the weather for the day.	Weather forecasting.	Observe the weather conditions and predict what will happen in the day. Report on whether their forecast came true. Record the weather conditions daily for two weeks. Project Study the weather conditions daily for two weeks. Record your observation in the form of a weather chart.	
2.1.3 prepare a weather chart for one month.	Weather Chart	Use different colours to mark the different weather conditions: red for sunny, ash for cloudy, blue for rainy, brown for windy. Plot a block graph of weather condition against number of times it occurred.		

PRIMARY TWO

SECTION 3

SYSTEMS

General Objectives : The pupils will:

1. recognise that a system is a whole made up of parts that work together to perform a function.
2. recognise the plant as a system which has different parts to carry out different functions.
- 3.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 PARTS OF A PLANT	The pupil will be able to: 3.1.1 identify leaves, stem, roots and flower of a plant and state their functions. 3.1.2 draw and label a plant.	Parts of a plant and their functions Root, stem, leaves and flower Drawing a plant.	Let pupils: Uproot baby (young) plants from the school compound or surroundings. Uproot also a herbaceous plant with a flower on it Observe, identify and give functions of the leaves, stem, roots and flower of a plant. Draw and label the parts of a plant.	Which part of the plant is in the soil?

PRIMARY TWO

SECTION 4

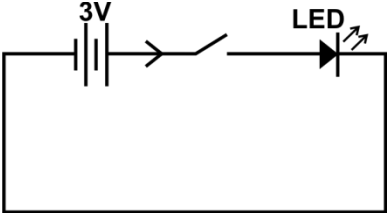
ENERGY

General Objectives : The pupil will:

1. recognise that energy has a source, can be transferred and can be transformed into various forms.
2. be aware of the sources of energy that make things warmer or cooler.
3. recognise the effects of high sound energy levels on the ear which serves as receiver of sound
4. recognise the characteristics of sound energy.
5. recognize that the brightness of an LED in an electronic circuit depends on how much current flows through it.
6. recognize that current can only flow through a closed circuit.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 HOT AND COLD	The pupil will be able to:		Let pupils:	
	4.1.1 differentiate between cold and hot in relation to food, water, the human body and the weather.	Differences between cold and hot in terms of food, water, the human body and the weather. Hot substances: ✓ Melting candle wax ✓ Soup on fire ✓ Steam ✓ Fire Cold substances: ✓ Ice ✓ Ice cream	Use their sense of touch to determine and describe whether, the body of a person, food and water is hot or cold. Name substances that are hot or cold.	What will you do to make your food hot? What will you do to make your food cold? Use hot or cold to describe the condition in which the following substances can be used. I. Pressing iron II. Ice cream III. Tea
	4.1.2 identify sources of energy that make things warmer or cooler.	Substances that make things cold or hot.	Mention names of substances that can make things hot or cold e.g. stove, and refrigerator.	
4.1.3 demonstrate ways of keeping liquids and solids hot or cold.	Ways of keeping liquids and solids hot or cold	Explore ways of keeping liquids and solids hot or cold.		

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 2 SOUND	The pupil will be able to:		Let pupils:	
	4.1.4 demonstrate that the nature of some substances change when they become hot or cold.	Change of nature of substances	Place a container of shea butter in the Sun during the day and observe what happens. Pupils to discuss their observations	
	4.1.5 state some effects of hotness or coldness on substances.	Effects of hotness or coldness on substances	Put some sachets of water in a freezer for a day and discuss what happens.	
	4.2.1 identify sounds and their sources.	Sources of Sound: Thunder, school bells/drums, church bells, musical instruments, animals, vehicles, machines, sea waves, waterfalls, alarm/siren	Imitate sounds produced from different sources Discuss sources of sound. Group sound as coming from natural or artificial sources. Differentiate between sounds according to loudness and discuss the effects of loud sound on the ear.	How would you make the following material produce sound? 1. Bell 2. Drum 3. Guitar 4. Flute
	4.2.2 demonstrate that sound comes from vibrating objects.	Vibrating objects produce sound By hitting, plucking, or beating	Demonstrate ways of producing to loudness. Teacher helps pupils understand that loud sounds affect the ear. Demonstrate how changes in length, tension, and thickness of vibrating objects affect the sound produced.	
	4.2.3 interpret sound according to the message it carries.	Sound carries messages of: Warning, danger, emergency, joy, sadness	Group sound according to the message they carry.	
4.2.4 explain that sound carries energy and can do work.	Sound carries energy	Find out what happens to pieces of light materials e.g. paper when placed near loud speakers/drums producing sound.	Why does a paper placed near a working loud speaker shake?	

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 3 BASIC ELECTRONICS	The pupil will be able to: 4.3.1 tell the uses of the parts of a simple electronic circuit.	Parts of an electronic circuit ✓ Battery(two or more cells) ✓ Switch ✓ LED(light emitting diode) ✓ Connecting insulated wires	Let pupils: Connect up a simple electronic series circuit (shown below) in using the following components: Battery, switch, LED(light emitting diode) and connecting insulated wires Close the switch and observe what happens to the LED. Open the switch and observe what happens Add one battery at a time to the same circuit to the LED. Tell what happens. Compare what happens with that of the 3V battery. <div style="text-align: center; margin-top: 20px;">  <p>The diagram shows a rectangular circuit loop. On the left vertical wire, there is a battery symbol labeled '3V'. On the top horizontal wire, there is a switch symbol. On the right vertical wire, there is an LED symbol labeled 'LED' with two short lines radiating from it to indicate light emission. The bottom horizontal wire is a simple connecting line.</p> </div>	What does an LED do in electronic circuit? What is the importance of a switch in an electronic circuit? How can you make the LED in an electronic circuit?

PRIMARY TWO

SECTION 5

INTERACTIONS OF MATTER

General Objectives : The pupil will:

1. appreciate that interaction between and within matter helps humans to better understand the environment and their role in it.
2. develop positive attitude for a healthy living through personal hygiene and environmental cleanliness
3. be aware that machines are essential for productivity and development.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 SANITATION	The pupil will be able to: 5.1.1 explain the need for keeping the compound clean. 5.1.2 demonstrate ways of keeping the compound clean.	Keeping the compound clean. Ways of keeping the compound clean: ✓ Sweeping ✓ Hoovering ✓ Mopping/ scrubbing ✓ Cleaning gutters ✓ Weeding ✓ Cleaning toilet facilities	Let pupils: Brainstorm on the need to keep the compound clean. Pupils practice different ways of keeping their compounds clean.	How would you keep your compound clean?

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 2 SIMPLE MACHINES	<p>The pupil will be able to:</p> <p>5.2.1 name some simple devices used for making work easier.</p> <p>5.2.2 use appropriate machines to do specific work.</p> <p>5.2.3 infer that devices that help to make work easier are called machines.</p> <p>5.2.4 develop skills for using simple machines.</p>	<p>Simple devices for doing work: Pincers, crowbar, pliers, shears, wheel barrow, spanner, broom</p> <p>Uses of simple machines</p> <p>Machines</p> <p>Skills for using simple machines</p>	<p>Let pupils:</p> <p>Name some simple devices that make work easier to do.</p> <p>Choose appropriate simple machines and practice how to use them in the following activities:</p> <ul style="list-style-type: none"> ✓ Removing nails stuck in wood ✓ Lifting objects ✓ Cutting wires, screwing and unscrewing bolts. ✓ Removal of a screw stuck in wood. ✓ Loosening tightened bolts ✓ Carrying a load from one place to another. <p>Attempt to perform the above activities using bare hands. Compare their experiences to when using the tools and when using their bare hands.</p> <p>Discuss and bring out the meaning of the term 'machine.'</p> <p>Teacher assists pupils to handle and use tools efficiently as they go through the above activities.</p>	<p>What will you use to loosen a tight bolt?</p>

PRIMARY THREE

SECTION 1

DIVERSITY OF MATTER

General Objectives : The pupils will:

1. recognise the great variety of living and non-living things and their interconnectedness in nature.
2. show knowledge of the composition and uses of soil.
3. acquire positive attitude towards the use of time.
4. appreciate that plants and animals can be grouped based on their unique characteristics.
5. recognise that material can change form and state.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 GROUPS OF PLANTS	<p>The pupil will be able to:</p> <p>1.1.1 sort plants into flowering and non-flowering.</p> <p>1.1.2 group plants according to their root system.</p> <p>1.1.3 classify plants according to the characteristics of the stem.</p> <p>1.1.4 list some uses of plants.</p>	<p>Plants: Flowering and non-flowering</p> <p>Root systems of plants: ➤ Taproot system ➤ Fibrous root system.</p> <p>Characteristics of the stem: long, short, hard, soft</p> <p>Uses of Plants</p>	<p>Let pupils:</p> <p>Go on a nature walk and observe different plants that have flowers and those that do not have flowers.</p> <p>Sort plants into taproot and fibrous root system.</p> <p>Sort plants according to the length of stem(long/short) and hardness(hard/soft).</p> <p>Discuss uses of plants.</p>	<p>List three(3) ways in which plants can be grouped.</p> <p>How is the root of maize different from that of a mango?</p> <p>Mention four(4) uses of plants to humans.</p>

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 2 GROUPS OF ANIMALS	<p>The pupil will be able to:</p> <p>1.2.1 group animals according to their living places.</p> <p>1.2.2 group animals according their body covering.</p> <p>1.2.3 state the uses of some animals</p> <p>1.2.4 explain the meaning of pet</p> <p>1.2.5 state the uses of pets.</p> <p>1.2.6 take good care of pets.</p>	<p>Classification of animals based on their living places: - Air, Water and Land.</p> <p>Body coverings of Animals:</p> <ul style="list-style-type: none"> ➤ Scales ➤ Fur ➤ Feathers ➤ Shells ➤ Cuticle <p>Uses of some Animals:</p> <ul style="list-style-type: none"> ➤ Pets ➤ Food ➤ Security ➤ Games ➤ Transportation ➤ Research <p>Meaning of pet</p> <p>Uses of pets</p> <p>Care of pets</p> <ul style="list-style-type: none"> ➤ good diet ➤ clean water ➤ training ➤ good living place. ➤ healthcare by qualified veterinary staff. 	<p>Let pupils:</p> <p>Go on nature walk to observe animals that live in Air, water and land.</p> <p>Go on nature walk to observe animals with scales, fur, feathers, shells and cuticle.</p> <p>Discuss uses of body covering to animals.</p> <p>Build an album of pictures of animals with different body covering.</p> <p>Project: Pupils use questionnaire to extract information from the community on the uses of animals. Pupils present a report on their project.</p> <p>Brainstorm to come out with the meaning of the term pet.</p> <p>Discuss and list some uses of pets.</p> <p>Discuss how to care for pets.</p>	<p>List three(3) animals and indicate where they live</p> <p>List two(2) animals each that have the following body covering:</p> <ol style="list-style-type: none"> 1. Scales 2. Feathers 3. Shells 4. Cuticle

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 3 SOIL	The pupil will be able to: 1.3.1 explain what soil is 1.3.2 describe types of soil. 1.3.3 describe the composition of soil 1.3.4 state uses of soil.	Soil Types of soil: Sandy, Loamy, Clayey Composition of soil: Air Water Rock (fine sand, gravel and stones) Dead plant and animal remains Uses of soil	Let pupils: Brainstorm to bring out the meaning of soil. Collect the different types of soil into containers and describe each type. Fill a transparent container with water. Dig some soil from the school compound and pour it into the water, shake and allow it to stand. Observe the different layers of soil particles formed. Discuss their observation. Mention some uses of soil, e.g. supporting plant growth, building houses, pottery and road construction.	How does soil support plant growth?
UNIT 4 STATES OF MATTER	1.4.1 Explain the term matter. 1.4.2 state that materials exist in the form of solid, liquid and gas. 1.4.3 list some examples of substances that exist separately as solid, liquid or gas. 1.4.4 demonstrate that the three forms of substances coexist in many materials.	Meaning of matter States of Matter: Solid, Liquid, Gas Examples of solid, liquid and gas. Solid – stone Liquid –water Gas -air Coexistence of solid, liquid and gas.	Brainstorm to come out with the meaning of the term matter. Go on a nature walk to observe and identify examples of substances in the form of solid, liquid and gas. Group materials into solid, liquid and gas. List materials with different combinations of solid, liquid and gas. Discuss the coexistence of solid, liquid and gas in the human body, soil, coconut and river water.	State the different forms in which matter can exist. Give three (3) examples of materials that contain in which solid, liquid and gas coexist.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 5 MEASUREMENT OF TIME	<p>The pupil will be able to:</p> <p>1.5.1 tell the names of devices used to tell the time.</p> <p>1.5.2 design and make a clock using suitable electronic components.</p> <p>1.5.3 time events with stop watches</p>	<p>Devices for telling the time.</p> <p>Making Clocks</p> <p>Timing an event</p>	<p>Let pupils:</p> <p>Mention some devices we use to tell the time.</p> <p>Predict that one event will take longer or shorter time than others. For example;</p> <ol style="list-style-type: none"> 1. Walking from home to school. 2. Coming to school on a bicycle. 3. Riding to school in a car. <p>Project Design and make clocks from suitable electronic components /materials.</p> <p>Teacher designs suitable activities for pupils to time with stop watches.</p> <p>Teacher to assist pupils develop the skill for manipulating stop watches.</p>	<p>Which of the following can better be used to measure the time of event: stop watch/clock or ordinary watch/clock?</p>

PRIMARY THREE

SECTION 2

CYCLES

General Objectives : The pupils will:

1. recognise that there are repeated patterns of change in nature and understand how these patterns arise.
2. understand the cyclic nature of seasons and its effects on human activities.
3. show awareness of the cyclic nature of day and night.
4. be aware that rainbow is a natural phenomenon and it shows the colours of light.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 DAY AND NIGHT	The pupil will be able to:		Let pupils:	
	2.1.1 demonstrate that the Sun does not move but the Earth turns round.	The Sun is at a fixed position. The Earth turns round.	Use a fixed light preferably a flashlight to demonstrate that the Sun does not move.	What will happen when sunlight is blocked by dark clouds?
	2.1.2 demonstrate day and night.	Day and Night	Use the globe and a fixed source of light to demonstrate day and night. Discuss the occurrence where some places have day light on Earth while others have night.	Why do people at some places receive day light while others are in darkness?
UNIT 2 SEASONS	2.1.3 explain how day and night influence human activities.	Effect of day and night cycle on human activities.	Discuss how day and night affect human activities. Teacher to assist pupils to understand that, it is dark when there is no light	
	2.2.1 describe a season.	Seasons	Discuss the meaning of the term season.	What is a season?
	2.2.2 list the seasons in Ghana.	Seasons in Ghana: Wet and Dry seasons	Using a chart, discuss months of wet and dry seasons of Ghana.	What is the name of the dry season in Ghana?
	2.2.3 describe the characteristics of Dry and Wet seasons.	Characteristics of Dry and Wet seasons.	Discuss the characteristics of dry and wet season. Note: Teacher to stress on the cyclic nature of seasons.	

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
	<p>The pupil will be able to:</p> <p>2.2.4 describe the effects of dry and wet seasons on some human activities.</p> <p>2.2.5 name the colours in the rainbow.</p>	<p>Effects of dry and wet seasons on some human activities.</p> <p>Colours in rainbow and their names.</p>	<p>Let pupils:</p> <p>Discuss the effects of dry and wet seasons on some human activities.</p> <p>Discuss and name of the colours in rainbow</p> <p>Draw the rainbow.</p>	<p>Which colours form the rainbow?</p>

PRIMARY THREE

SECTION 3

SYSTEMS

General Objectives: The pupils will:

1. recognize that a system is a whole made up of parts that work together to perform a function
2. realise that organisms use their senses to interact with their environment
3. recognize that the loss of one of the five senses affects human's interactions within the environment

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 SENSE ORGANS	The pupil will be able to:		Let pupils:	Name the sense organs of the human body and state their functions.
	3.1.1 demonstrate that the sense organ for sight is the eye.	The Eye: sense organ for sight Light and sight	Discuss why a blindfolded pupil cannot reach a set target. Demonstrate that one's ability to see depends on both the eye and light.	
	3.1.2 demonstrate that the sense organ for taste is the tongue.	The Tongue: sense organ for taste	Demonstrate an activity to show how important the tongue is to the sense of taste. Discuss the sensation they get when they taste sugar, common salt and lemon juice.	
3.1.3 demonstrate that the sense organ for smell is the nose.	The Nose: sense organ for smell	Show how the sense of smell depends on the nose. Teacher to spray some perfume into cotton wool and leave in one corner of the classroom. After a few minutes teacher asks pupils whether they could smell something. Name the organ which helped to smell the perfume. Draw the human head and show the eye, ear and nose.		

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 SENSE ORGANS (Cont.)	<p>The pupil will be able to:</p> <p>3.1.4 demonstrate that the sense organ for feeling/touch is the skin.</p> <p>3.1.5 demonstrate that the sense organ for hearing is the ear.</p> <p>3.1.6 identify the organs that support each other.</p>	<p>The Skin: sense organ for touch/feel</p> <p>The Ear: sense organ for hearing</p> <p>Co-functioning of sense organs</p>	<p>Let pupils:</p> <p>Demonstrate an experiment to show that the skin is the sense organ for feel and touch.</p> <p>Use their sense of touch to identify objects they cannot see. (the feelie game).</p> <p>Discuss the sense organ for touch/feel.</p> <p>Play a game of responding to touch by a cold object, warm object and rough surface.</p> <p>Demonstrate an activity to show how important the ear is to hearing.</p> <p>Carry out simple activities which allow them to explore how their senses help them make sense of their surroundings e.g. finding out whether we can tell from where a sound is coming by using hearing only.</p> <p>Explore the interdependence of sense organs e.g. nose and the tongue. Discuss how the loss of one of the five senses affects human's interaction with the environment.</p>	

PRIMARY THREE

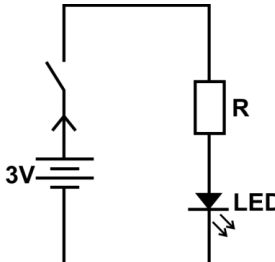
SECTION 4

ENERGY

General Objectives : The pupils will:

1. recognise that energy has a source, can be transferred and can be transformed into various forms.
2. appreciate that humans derive energy from food.
3. be aware of waves as a basic conveyer of energy for effective communication.
4. understand the behaviour of resistors in an electronic circuit.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 FOOD	The pupil will be able to:		Let pupils:	Name the type of food that gives the following: 1. Energy 2. Make us grow 3. Protect our bodies against disease.
	4.1.1 Identify food as a source of energy	Food as a source of energy.	Discuss the uses of food to humans. Mention food they have eaten for the past three days. Explain what they get from eating food.	
	4.1.2 classify foods according to how the human body uses them.	Kinds of Food: <ul style="list-style-type: none"> • Energy giving food • Food for growth • Protective food 	Bring rice, beans, maize, fish, meat, vegetable oil, orange, tomato, millet, cassava, cocoyam, yam, pepper, potato, salt, milk, pawpaw, pineapple, banana, garden eggs, cooked eggs etc. to school. Group food items brought to school into: Food that gives energy to the body. Food which promotes growth. Food that protects the body from diseases Make exhibition of the three kinds of food on cardboards . Draw as many food items as they can. Teacher to invite a health worker or nutritionist to talk about healthy diet for children	

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 2 WAVES	<p>The pupil will be able to:</p> <p>4.2.1 Explain that waves are caused by creating a disturbance in an object.</p> <p>4.2.2 explain that waves carry energy.</p>	<p>Creating Waves</p> <p>Waves carry energy</p>	<p>Let pupils</p> <p>Create waves by dropping stones in pool of water and observe what happens. Pour some chalk particles on a drum and beat it. Observe and describe the patterns made by the vibrating particles.</p> <p>Hold a rope. Fix one end to a point. Move the end in hand up and down and observe what happens</p> <p>Use experiment to demonstrate that wave carries energy. For example, a cork or a paper boat on a disturbed pool of water</p>	
UNIT 3 BASIC ELECTRONICS	<p>4.3.1 investigate the behaviour of a resistor in an electronic circuit.</p>	<p>Resistors</p>	<p>Observe different types of colour-coded resistors of various resistances (low and high). Connect up a simple circuit comprising a 3V battery, a switch and an LED.</p> <div style="text-align: center;">  <p>Low resistor, $R = 330 \Omega$</p> <p>High resistor, $R = 2200\Omega$</p> </div> <p>Close the switch and observe the effect on the LED. Open the switch. Connect a low resistor R (330Ω) in between the switch and the LED as shown in the above circuit. Close the switch and observe the effect on the LED. Replace the resistor with a high resistor R (2200Ω). Close the switch. Observe the effect on the LED.</p> <p>Connect a 9V in series with the switch, a 330Ω resistor and an LED. Close the switch and observe what happens to the LED. Open the switch and remove the resistor from circuit. Complete the circuit and close the switch. Observe what happens to the LED. Explain what the resistor does to the LED</p> <p style="text-align: center;">PROJECT</p> <p>Design and build a flash light using four or more LEDs.</p>	<p>What does a resistor do in an electronic circuit?</p>

PRIMARY THREE

SECTION 5

INTERACTIONS OF MATTER

General Objectives : The pupils will:

1. appreciate that interaction between and within matter helps humans to better understand the environment and their role in it.
2. Recognise that personal hygiene protects us from diseases
3. recognize that pollution is a diversion from natural harmony that exist in the environment.
4. acquire skills to reverse the effects of pollution on water bodies and living things.
5. appreciate the role of machines as tool for making work easier and faster

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 1 PERSONAL HYGIENE.	<p>The pupil will be able to:</p> <p>5.1.1 make a list of the parts of the body that usually give odour.</p> <p>5.1.2 explain the causes of body odour</p> <p>5.1.3 demonstrate how to remove body odour</p> <p>5.1.4 recognize the dangers associated with sharing personal effects with others.</p>	<p>Parts of the body that usually give odour: Armpit, Anus, Mouth, In-between toes</p> <p>Causes of body odour.</p> <p>Removing body odour.</p> <p>Dangers associated with sharing personal effects with others</p>	<p>Let pupils:</p> <p>Discuss the parts of the body that usually give odour.</p> <p>Discuss the causes of body odour.</p> <p>Demonstrate ways by which body odour can be removed, e.g. bathing, use of deodorant (lime, perfume) and clean clothes.</p> <p>Discuss the dangers associated with sharing personal belonging with others, e.g. Spoon, towel, tooth brush, sponge, blade, comb, nail clipper and handkerchief.</p>	<p>List three(3) causes of body odour.</p> <p>How would you remove odour from the following parts of the human body: Armpit, mouth, in-between toes.</p> <p>What will happen to your body if you do not bath regularly?</p> <p>Why is it not good to use another person's towel, sponge, tooth brush and blade?</p>

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<p>UNIT 2 WATER POLLUTION</p>	<p>The pupils will be able to:</p> <p>5.2.1 identify ways water is made unsafe for use</p>	<p>Causes of water pollution: Dumping of waste Sewage Washing Swimming Chemicals for fishing</p>	<p>Let pupils:</p> <p>Discuss different ways by which water is made unsafe for use: dumping of waste, sewage, washing, swimming, chemicals for fishing and mining</p> <p>Note: Assist pupils to understand that when water is made unsafe for use, it is polluted.</p>	
<p>UNIT 3 WATER PURIFICATION</p>	<p>5.3.1 demonstrate how to make unclean water clean.</p>	<p>Making water clean: Filtration of water. Addition of alum Boiling the water</p>	<p>Use filter paper/white calico/cotton wool to make dirty water clean. Compare the filtered and the unfiltered water. Discuss their observation.</p> <p>Add some alum to dirty water and stir. Wait for some time and filter. Comment on their observation.</p> <p>Boil dirty water and allow settling for some time and decanting it.</p> <p>Note: Camphor/naphthalene balls should not be substituted for alum.</p> <p>Caution: Clean water is not always safe to drink.</p>	<p>List two(2) ways that water can be made clean.</p> <p>Describe how unclean water can be filtered.</p>

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 4 SIMPLE MACHINES	The pupil will be able to: 5.4.1 demonstrate the uses of inclined plane and pulley to lift load.	Inclined planes and pulleys.	Let pupils: Lift a load (collection of books) onto the teacher's table with their bare hands. Lift the same load onto the teacher's table using inclined plane and compare their experiences. Lift a gallon full of water from the ground onto the top of their desks. Lift the same load onto the top of their desks using inclined plane and compare their experiences. Design and construct pulleys. Demonstrate how they are used to class. Mention some applications of inclined planes in everyday life. Give examples of everyday uses of pulleys and inclined planes.	Describe how you will construct a pulley.

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