PRIMARY FIVE SCIENCE SCHEME OF WORK

WAKISO CLASSIC SCHOOL

TERM II

@ WACS

2023

PRIMARY FIVE SCIENCE SCHEME OF WORK TERM II 2023

TOPICAL BREAK DOWN

THEME: THE ENVIRONMENT
TOPIC 1: SOIL

- Definition of soil
- Terms used in soil
- Soil
- Soil texture
- Soil structure
- Soil erosion
- Soil profile
- Leaching
- Soil sampling
- Soil fertility
- Weathering
- Soil drainage
- Soil exhaustion
- Soil capillarity
- **Types of soil**
- Loam soil
- Characteristics of loam soil
- Uses of loam soil
- Clay soil
- Uses of clay soil
- Characteristics of clay soil
- Sandy soil
- Characteristics of sandy soil
- Uses of sand soil

- **Soil formation**
- **Weathering**
- **Decomposition of organic matter**
- **Components of soil**
- Organic components
- Humus (organic matter)
- Living organisms (bacteria and fungi)
- Inorganic components
- Rock particles
- Air
- Water
- Uses of each component of soil
- Importance f soil
- **To plants**
- Provides nutrients
- Plant growth
- Holding plant roots
- **Uses of soil to people**
- Construction
- Pottery
- painting
- Painting houses
- Mining
- **Uses of soil to animal**
- Animal habitat
- Soil erosion
- Meaning of soil erosion
- Causes of erosion
- Deforestation
- Bush burning
- Over grazing

- Over stocking
- Mono cropping
- Agents of soil erosion
- Types of soil erosion
- Effects of soil erosion
- Prevent ion & control of soil erosion
- Effects of harmful materials in soil
- Definition of soil conversation
- Methods of conserving soil
- Soil fertility
- Ways of improving soil fertility.
- Use of artificial fertilizers
- State examples of artificial fertilizers
- Natural fertilizers (organic)
- Examples of natural fertilizers
- Compost, manure, farm yard, green
- Advantages of artificial fertilizers.
- Disadvantages of using artificial fertilizers
- **Making compost manure**
- Steps taken for making compost manure.
- Advantages of compost manure.
- Disadvantages of compost manure

THEME: MATTER AND ENERGY

TOPIC 2: HEAT AND ENERGY

- Definition of energy
- Form of energy
- Heat
- Electric
- Sound
- Light
- Chemical

- solar energy
- Mechanical
- kinetic
- Potential
- **Heat energy**
- Sources of heat energy
- Uses of heat energy
- Effects of heat on matter
- Expansion(experiment)
- Contraction (experiment)
- Matter
- Matter is anything that has weight and occupies space.
- Weight is the gravitational force acting on matter.
- Mass is the quantity of matter containing in matter in an object.
- Properties of matter
- Matter has weight
- Matter occupies space
- Matter exerts pressure
- States of matter
- The three states of matter are:
- Solids
- Liquids
- Gases
- Their properties
- Change of state e.g. Melting, evaporation, freezing, condensation and sublimation
- Solutes
- Solvent
- Solution
- Solutes are substances that dissolve in a solvent e.g. Salt, sugar, tablets etc.
- Solvent are substances that dissolve a solute e.g. Water, source.
- Solution is a mixture of a solute and a solvent.

- How to make solutions sugar, salt, water
- **Heat transfer**
- Heat travels in three ways:-
- Conduction is the process by which heat travels through solids.
- Convection is the process by which heat travels through liquids and gases.
- Radiation is the process by which heat travel through space and vacuum
- Thermos flask
- Uses of different methods of heat transfer in our surrounding.
- Parts of a thermos flask
- Functions of each part of a thermos flask
- Uses of a thermos flask.
- Why thermos flasks are not common
- **Temperature**
- **Thermometer**
- **Types of thermometer**
- There are four types of thermometer.
- Ordinary thermometer
- Scientific thermometer
- Industrial thermometer
- Six's maximum and minimum
- Thermometer Structure of a clinical
- Thermometer
- Six's thermometer
- Maximum and minimum thermometer.
- Use of a six's thermometer parts of the six's thermometer
- **Changing degrees centigrade to Fahrenheit**
- **Changing from Fahrenheit to Celsius**
- Burning
- Burning is a chemical change.
- The gas that supports burning is oxygen.
- Experiment to show that oxygen supports burning.

- Ways of extinguishing fire.
- Carbon dioxide gas is used in fire extinguishers
- Rusting
- Rusting is a chemical change.
- Conditions needed for rusting oxygen and water.
- Experiment to show that water and oxygen are needed for rusting.
- Disadvantages of rusting.
- Ways of preventing rusting
- Painting, oiling, greasing, galvanizing

THEME: **SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS**

TOPIC 3: GROWING CROPS

- Common tuber crops.
- Root tubers
- Meaning of root tubers crops.
- Examples of tuber crops, cassava, sweet potatoes, carrots & turnips.
- Stem tubers
- Meaning of stem tubers.
- Examples of stem tubers, irish potatoes, yam.
- Parts of an irish potato
- Functions of each part
- Growing and caring for tuber crops.
- Ways of planting tuber crops.
- Ways of caring for tuber crops.
- Pruning -
- Weeding
- Thinning
- Spraying with pesticides
- Common pests
- Meaning of pests
- Examples of tuber pests (rats, eel worms, mole rats.
- Characteristics of common tuber crops pests
- Controlling pests of root crops

- Crop rotation
- Trapping
- Spraying with pesticides
- Diseases of root crops
- Wilt, cassava mosaic, potato blight.
- Effects of crop pests and diseases on root crops.
- Rotting of tubers
- Leaf curling
- Leaf yellowing
- Poor growth
- Poor quality yields
- Holes on tubers
- Harvesting root crops
- Meaning of harvesting
- Harvesting cassava
- Harvesting sweet potatoes keeping and using farm records
- Meaning of farm records
- Types of farm records
- Marketing records
- Inventory records uses of farm records
- To budget for the farm
- To know whether the farm is making profits or losses
- The young farmers club school projects
- Learning
- How to grow crops
- Care for crops
- Ways of growing and harvesting
- Science clubs
- The young farmers club school projects
- Learning
- How to grow crops

- Care for crops
- Ways of growing and harvesting

THEME: THE WORLD OF LIVING THINGS

TOPIC 4: BACTERIA AND FUNGI

- Bacteria
- Are tiny microscopic living organisms made up of one cell.
- Where bacteria are found
- Water soil
- Inside living thing
- On the body of living organisms
- In animal wastes
- In latrines, air Bacteriology –the study of bacteria
- Bacteriologist-a person who studies bacteriology.
- Tics of bacteria
- Exist as single cells
- Do not have uniform shape
- Can only be seen with a microscope
- Breeding of bacteria
- Breeding meaning
- The multiplying of living things.
- Conditions which encourage breeding of bacteria.
- Presence of food
- Presence of warmth Bacteria breed or reproduce by binary fusion
- Types of bacteria
- There are four types of bacteria
  - Spherical shaped bacteria E.g. Cocci
- Rod shaped bacteria e.g. Bacilli
- Spiral shaped bacteria e.g spirilae
- Coma shaped e.g vibrio Drawing the types of bacteria
- Nature of bacteria.
- Useful bacteria(harmless bacteria)
- Harmful bacteria

- Importance of harmful bacteria
- Help in rotting of dead plants and animals to form humus.
- Break down faeces and urine.
- Use to make vaccines
- Harmful bacteria
- Cause diseases
- Cause contamination of food.
- Cause decay/spoilage of food.
- Cause food poisoning
- Disease caused by bacteria to:
- People-tuberculosis- diphtheria
- Dysentery-syphillis typhoid-gonorrhoea cholera-meningitise
- Animals –foot rot, mastitis, fowl typhoid, etc
- Plants-tomato blight, potato blight, five blight, crowing gall
- **Prevention and control of bacterial diseases**
- Through immunisation
- Eating clean fresh food
- Drinking safe water
- Using latrines and toilets well
- Washing hands with soap and clean water
- Washing fruits and vegetables before eating
- Fungi
- Fungi are simple unicellular or multicellular living organisms.
- Characteristics of fungi
- Feed saprophytically or parasitically.
- Have nuclei in their cells.
- Have no chlorophyll. Examples f fungi Moulds- toad stools Mushrooms-yeast
- Mushrooms
- Parts of a mushroom
- Functions of each part Cap-to contain the gills. Gills-produce and stores spores
- Mycelium-absorb food from dead decaying matter.
- Where mushrooms grow. On pieces of wood Around cow dung

- Mushrooms feed saprophytically
- Groups of fungi
- Useful and harmful fungi Useful fungi
- Decomposition of matter
- For medicine
- Fermenting alcohol e.g. Yeast
- Baking bread and cakes
- Harmful fungi
- Prevention and control of fungal diseases.
- Boiling
- Drying foods
- Salting, pickling, smoking food
- Using chemicals to spray against fungal diseases on plants.
- Reheating food before eating.
- Personal hygiene
- Facts about bacteria and fungi
- Similarities between fungi and bacteria.
- Both take in oxygen and out carbon dioxide
- They feed on both living as dead organic matter.
- Differences between fungi & bacteria
- Bacteria reproduce faster the fungi.
- Bacteria are microscopic while some fungi can be seen

WK	PD	THEME	TOPIC	S/TOPIC	CONTENT	COMPETENCES		METHODS	INDICATORS OF L/SKILLS & VALUES	ACT	IMS	REF	REM
						SUBJECT	LANGUAGE						
1	1	**THE ENVIRONMENT**	**SOIL**	**Meaning of terms**	Define the following. Soil, soil texture, soil structure, leaching, soil sampling, soil fertility, weathering, soil drainage, soil exhaustion.	The learner: - defines the following terms. - soil - soil texture - soil structure - leaching - soil fertility - weathering	The learner: - spells new words - reads and writes words correctly.	explanation discussion brain storming	critical thinking -analysing statements effective communication -audibility	Define different terms in the soil		P.5 curr pg 30 Mk science book 5 page 148	
1	2 & 3	**THE ENVIRONMENT**	SOIL	**Types of soil**	**Loam soil** - x-tics of loam soil - uses of loam soil - clay soil - uses of clay soil - x-tics of clay soil -Sandy soil - x-tics, uses of sandy soil.	The learner: - identifies the types of soil. - states the x-tics of soil	The learner; - talks about the types of soil.	guided discussion explanation guided discovery group work	self awareness -expressing likes & dislikes effective communication -fluency appreciation	Observing types of soil.	Soil loam sand clay	P.5 curr pg 30 Fountain integrated science pg 131 Mk science bk 5 pg 150	
1	4		SOIL	**Soil formation**	Weathering of rocks. Decomposition of matter Definition of terms	The learner: - mentions the ways of forming soil. - weathering - decomposition	The learner - spells new words correctly. - reads and writes sentences about soil formation.	explanation guided discussion question & answer	critical thinking -analysing statements -responding to qns. - sharing	State the ways of forming		P.5 curr pg 30 Comp primary science book 6	

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1	5 & 6	**THE ENVIRONMENT**	SOIL	**Components of soil**	**Components of soil** a) Organic components - Humus (organic matter) - Living organisms (bacteria and fungi) b) Inorganic components - Rock particles - Air - Water - Uses of each component of soil	The learner: - identifies the components of soil - states the uses of each soil component.	The learner - spells words correctly. - pronounces new words correctly	guided discussion observation market stall	critical thinking -analysing statements creative thinking -logical thinking effective communication fluency appreciation	States the components of soil	Sample of soil water bucket	P.5 curr pg 30 Mk integrated science book page 152	
2	1	**THE ENVIRONMENT**	SOIL	**Importance of soil**	Importance f soil a) **to plants** - provides nutrients - plant growth - holding plant roots b) **to people** - construction - pottery - painting - painting houses - mining **To animal** - Animal habitat	The learner: - states the importance of soil to plants animals people	The learner - reads and pronounces words correctly.	observation guided discussion brain storming think pair share	effective communication -verbal -confidence creative thinking -initiating new ideas fluency	States the importance of soil to: Plants People Animals	Soil	P.5 curr pg 31 Mk integrated science book 5 155 Fountain Int. science bk 5 pg 134	
2	2 &			**Soil erosion**	- Meaning - Causes of erosion	The learner: - defines soil	The learner - reads and	observation explanation	critical thinking -responding to questions	Answer questions about soil erosion	Gulley rills outside the	P.5 curr pg 31 Comprehensive	

	3			- Deforestation - Bush burning -Over grazing, over stocking, mono cropping etc..	erosion. - states the causes of soil erosion	pronounces new words correctly. - spells new words correctly.		correctly.		school compo und	primary science bk 6 157	

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2	3			Agents of soil erosion	**Agents of soil** erosion i.e. wind. Running water, animal etc. pollutants	The learner: - mentions the agents of soil erosion	- write short sentences about soil erosion	discussion jig-saw	effective communication fluency			Fountain int. sci bk 5 134	
2	4 & 5	THE ENVIRONMENT	SOIL	**Types of soil erosion**	Types of soil erosion. - sheet erosion - rill erosion - gulley erosion - rain drop erosion **Effects of soil erosion** - leads to soil exhaustion - silting	The learner: - mentions the types of soil erosion. gulley, rill, sheet, rain drop - explains each type of soil erosion.	The learner - spells new words correctly. - pronounces them correctly. - reads and writes sentences about each type.	observation explanation guided discovery field trip	self awareness expressing likes & dislikes critical thinking analysing statements problem solving taking a decision	Answering questions Going for a field trip	Field trip	P.5 curr pg 31 Mk integrated science book 5 page 160-161 Fountain int. 137-138	
2	6		SOIL	**Prevention & control of soil erosion**	a) on gentle slopes b) on hilly areas c) on flat areas general - constructing terraces on steep slopes - applying mulches - maintaining good vegetation cover - keeping the right number of a animals	The learner: - states the ways of preventing and controlling soil erosion.	The learner - spells new words - pronounces words correctly.	observation discussion explanation brain storming market stall	critical thinking creativity self awareness making choice fluency effective communication, caring, concern	Answering questions Observations	Grass in the school compound Trees	P.5 curr pg 31 Mk integrated science book 5 pg 162 Fountain int. sci book 5 pg 139	
3	1		SOIL	**Effects of harmful material**	Effects of harmful materials on soil. - industrial waste - farm chemicals	The learner: - mentions different pollutants.	The learner - spells names of harmful materials.	guided discussion and	self awareness care	Answer questions at the end	Polythene papers	P.5 curr pg 31 Mk integrate	

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3	1	THE ENVIRONMENT	SOIL	**s on soil**	- plastics, polythenes, oils, broken glasses/tins other ways of pollution	- states the effects of the materials to the soil	- reads and writes words correctly.	observation brain storming	critical thinking giving reasons for action taken	of the lesson Problem solving Assertiveness	Glasses	d science book 5 164 Fountain Int. sci book 5 page 144	
3	2		SOIL	**Soil conservation**	Definition of soil conversation - Methods of conserving soil e.g. planting grass, afforestation, mulching etc..	The learner: - defines soil conservation - mentions the methods of conversing soil.	The learner -Gives the meaning of soil conservation - reads words correctly. - spells and pronounces words correctly.	guided discussion and explanation market stall group work	taking right decisions problem solving creative thinking logical thinking	Identify the ways of conserving soil	Compound and it's grass & trees	P.5 curr pg 31 Comprehensive book 5 164 Fountain Int. science book 5 page 166 P.5 curr pg 32	
3	3 & 4		SOIL	**Soil fertility**	Soil fertility is the ability of the soil to sustain plant growth. Ways of improving soil fertility. - use of artificial fertilizers - state examples of artificial fertilizers - natural fertilizers (organic) Examples of natural fertilizers i.e. Compost, manure, farm yard, green	The learner: - defines soil fertility - states ways of improving soil fertility - gives examples of natural and artificial manures	The learner - spells the new words correctly. - reads and writes short sentences about soil fertility	explanation guided discussion question	critical thinking taking decision appreciation effective communication fluency	Naming different ways of improving soil fertility	Cow dung Cut grass	P.5 curr pg 32 Fountain int. science bk 5 pg 146 Mk book 5 page 167	

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3	5 & 6	THE ENVIRONMENT	SOIL	**Advantages and disadvantages**	Advantages of artificial fertilizers. Disadvantages of using artificial fertilizers	The learner: - states the advantages of artificial fertilizers - identifies the disadv. of artificial fertilizers	The learner - reads the advantages and disadvantages of artificial fertilizer. - pronounces words correctly.	explanation guided discussion question and answer	critical thinking responding to questions appropriately appreciating	States the advantages of artificial fertilizers	Chalk board illustration	P.5 curr pg 32 Fountain Int. scie book 5 pg 147-148 Mk int. sci book 5 page 168	
4	1		SOIL	**Making compost manure**	Steps taken for making compost manure. Adv of compost manure. - increases the number of living. - reduces soil fertility and reduces habitants for crop pests. - Disadvantages of compost manure - requires a lot of time. - it is bulky to handle.	The learner: - states the steps of making compost manure - identifies the advantages and disadvantages	The learner - reads and pronounces words correctly. - writes steps used in making compost manure	guided discussion explanation project work	self awareness making choices creative thinking creativity critical thinking analyzing statements	Identifying the steps for making compost manure	Peelings Water Rubbish	P.5 curr pg 32 Fountain int. science book 5 page 148	
EXPECTED LEARNING OUTCOME: The learner is able to use basic scientific knowledge on the effects of heat on things in the environment and demonstrate skills of investigating effects of heat on matter													
4	2	**MATTER AND ENERGY**	**Energy**	**Energy**	Energy is the ability to do work. Form of energy - heat, electric, sound, light, chemical, solar energy, mechanical kinetic potential	The learner: - defines energy - mentions the different forms of energy - defines kinetic energy	The learner - spells new words correctly. - reads and writes short sentences about forms of energy.	guided discussion explanation question & answer guided discovery	critical thinking analysing statements problem solving evaluating facts appreciation self esteem	Answer the questions about the topic	Sun lamp	P.5 curr pg 33 Comprehensive primary book 5 page Fountain int. science	

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						- defines potential energy			self expression			book 5 page 82	
4	3	MATTER AND ENERGY	HEAT ENERGY	**Heat energy**	Heat is a form of energy that causes increase in temperature. Sources of heat:-sun, electricity, burning wood. - uses of heat	The learner: - defines heat - mentions the sources of heat. - states the uses of heat	The learner - spells new words - tells stories about heat energy.	guided discussio n explanati on think, share pair	critical thinking selecting & evaluating information self awareness effective communica tion fluency	Answer the questions that follow	Sun, lamp	P.5 curr pg 33 Compreh ensive primary book 5 page 89 P.5 curr pg 33	
4	4 & 5			**Effects of heat on matter**	Effects of heat on matter include: - temperature rise - change in size/length - change of state. Expansion(experiment) contraction (experiment)	The learner: - states the effects of matter - carries out an experiment on expansion	The learner - reads, spells pronounces given words. - uses the words given to construct sentences	experime ntation explanati on	critical thinking analyzing self awareness appreciatio n problem solving fluency evaluating facts	Answer the questions that follow	Nails Store Tins	P.5 curr pg 33 Compreh ensive book 5 Mk book 5 page 97	

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4	6	**MATTER AND ENERGY**	**HEAT ENERGY**	**Matter**	Matter is anything that has weight and occupies space. Weight is the gravitational force acting on matter. Mass is the quantity of matter containing in matter in an object. Properties of matter - matter has weight - matter occupies space - matter exerts pressure	The learner: - defines: matter weight mass properties of matter	The learner - gives the meaning of matter, weight, mass. - spells new words correctly. - reads and writes notes about matter.	question and answer discovery guided discussio n	critical thinking appreciatio n creative thinking logical thinking	Descried matter, weight and mass. Identify the property of matter	C/ illustration Matter e.g desk, papa, trees, pens, chalk	P.5 curr pg 33 Understanding integrated science book 5 page 39 Fountain int. sci book 5 page 78	
5	1			**States of matter**	The three states of matter are: - solids - liquids - gases Their properties	The learner: - identifies the states of matter - gives the properties of each state	The learner mentions the states of matter. gives the properties of each state	guided discussio n observati on guided discovery	self awareness appreciatio n evaluating facts	Answer the questions about it.	Water Stone Pieces of wood	P.5 curr pg 34 Fountain int. science bk 5 page 78-79	
5	3 & 4	**MATTER AND ENERGY**	**HEAT ENERGY**	**Change of state**	Change of state e.g. melting, evaporation, freezing, condensation and sublimation	The learner: - defines different changes of states of matter, melting, freezing. Evaporation	The learner - spells new words correctly.	guided discussio n explanati on experime ntation	critical thinking appreciatio n creative thinking creativity	Answer the questions about the topic	Ghee Water Stove Kimbo Ice blocks	P.5 curr pg 34 Comprehensive primary science book 5 Fountain book 5 page 83	
5	5			**Solutes, solvents and**	Solutes are substances that dissolve in a solvent e.g salt, sugar, tablets etc..	The learner: - defines: solutes solvent solution	The learner gives the meaning of solutes,	guided discussio n	critical thinking analysing statements	Answer the questions about the topic	Water Salt	P.5 curr pg 34	

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	5	**MATTER AND ENERGY**	**HEAT ENERGY**	**solutions**	Solvent are substances that dissolve a solute e.g. water, source. Solution is a mixture of a solute and a solvent. How to make solutions sugar, salt, water	- states examples of each	solvents and solutions. states examples of each	explanation			Sugar	Fountain book 5	
5	6			**Heat transfer**	Heat travels in three ways:- i) conduction is the process by which heat travels through solids. ii) convection is the process by which heat travels through liquids and gases. iii) radiation is the process by which heat travel through space and vacuum	The learner: - mentions the ways in which heat travels. - defines: conduction convection radiation	The learner - spells terms correctly. - pronounces new words correctly. - share life experience about heat transfer	guided discussio n explanati on question & answer brain storming	critical thinking appreciatio n self awareness self reliance	Answering questions about the topic	Sun space	P.5 curr pg 35 Compreh ensive primary science book 5 78 Fountain int. sci book 5 page 93-94	
6	1 & 2		**HEAT ENERGY**	**The thermos flask**	Uses of different methods of heat transfer in our surrounding. Parts of a thermos flask - functions of each part. - uses of a thermos flask. Why thermos flasks are not common	The learner: - draws and name the parts of a thermos flask. - states the uses of each part	The learner - spells names of parts of a flask. - pronounces new words correctly.	guided discussio n explanati on question & answer	self awareness effective communica tion fluency critical thinking evaluating information	Answer the question about the topic	Flask	P.5 curr pg 35 Compreh ensive primary science book 5 85	
6	3			**Temperature**	Temperature is the degree of hotness or coldness of a place or an objects. Units-degree	The learner: - defines temperature	The learner - spells new terms correctly.	guided discussio n	critical thinking analysing statements	Answer the questions that follow.	Therm omete rs	P.5 curr pg 35 Fountain integrate	

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6	4	**MATTER AND ENERGY**	**HEAT ENERGY**		Instrument-thermometer Liquids used in thermometer are alcohol, mercury. Advantages of mercury over alcohol	- gives the instrument used to measure temperature - states the liquids used in thermometers	- reads sentences about temperature. - writes short notes about temperature.	explanation discovery	effective communication fluency articulation		Chart Picture in text books	d science page 85-86 Comp. science book 5 page 91	
6	5 & 6			**Types of thermometer**	There are four types of thermometer. - ordinary thermometer - scientific thermometer - industrial thermometer - six's maximum and minimum thermometer Structure of a clinical thermometer	The learner: - mentions the types of thermometers - draws and name the parts of a clinical thermometer	The learner - states the types of thermometers - spells names of thermometer	guided discussion	appreciation assertiveness being open effective communication audibility	Draw and name the structure of a clinical thermometer	Real objects	P.5 curr pg 35 Fountain science book 5page 87	
7	1		**HEAT ENERGY**	**Six's thermometer**	Maximum and minimum thermometer. Use of a six's thermometer parts of the six's thermometer	The learner: - mentions the use of a minimum and maximum thermometer - draws and names the parts.	The learner identifies the uses of maximum and minimum thermometer	explanation guided discussion	critical thinking evaluating information self esteem appreciation	Draw and name the parts of a maximum and minimum thermometer	Alcohol	P.5 curr pg 35 Fountain int. science book 5 page 89. Mk science book 5 page 104	
7	2 & 3			**Changing degrees centigrade to**	Use the formulae. $F = {}^{9}/_{5}$ x c + 32 Example Convert 75^{0}c to ^{0}F ^{0}F = $^{9}/_{5}$ x c + 32 F = $^{9}/_{5}$x5 + 32 F = 135 + 32	The learner: - changes from degrees celsius to fahrenheit	The learner - changes from degrees Celsius to Fahrenheit - spells and pronounces	jig-saw	effective communication fluency	Do an exercise Converting temperature	Chalk board illustration	P.5 curr pg 35 Mk integrated page 106.	

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7	3		HEAT ENERGY	**Fahrenheit**	$_0F = 167_0$ $75_0C = 167_0$		new words correctly. - writes steps used in conversion		critical thinking accuracy			Fountain int. sci. nook 5 page 91	
7	4 & 5	MATTER AND ENERGY		**Changing from Fahrenheit to Celsius**	Use the formula. $C = 5/9 (F-32)$ Convert 212_0F to $_0C$ $C = 5/9 x(F-32)$ $C=5/9x (212-32)$ $C=5/9 x180$ $C=5x20$ $C=100_0$	The learner: - changes degrees celsius to Fahrenheit	The learner: - calculates from $_0F$ to $_0C$	guided discussion jig-saw	critical thinking accuracy	Do an exercise	Chalk board illustration	P.5 curr pg 35 Mk integrated science bk 5 Fountain int. scie book 5 page 91	
7	6		HEAT ENERGY	**Burning**	Burning is a chemical change. The gas that supports burning is oxygen. Experiment to show that oxygen supports burning. Ways of extinguishing fire. Carbon dioxide gas is used in fire extinguishers	The learner: - defines burning - names the gas that supports burning.	The learner: - gives the meaning of burning. - states ways of extinguishing fire.	explanation observation experimentation	fluency critical thinking problem solving evaluating facts	They will answer the questions that follow	Glass Match boxes Candles	P.5 curr pg 35 Comprehensive primary science bk 5 Fountain int. science book 5 page 37-38	
8	1			**Rusting**	Rusting is a chemical change. Conditions needed for rusting oxygen and water. Experiment to show that water and oxygen are needed for rusting. Disadv. Of rusting. Ways of preventing rusting	The learner: - defines rusting - states the disadvantages of rusting.	The learner: - gives the meaning of rusting. - states the condition	guided discussion explanation	self awareness care concern critical thinking	They will answer the questions	Grease Oil Metals Water	P.5 curr pg 35 Comprehensive book 5	

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8	1				Painting, oiling, greasing, galvanizing	- gives ways of preventing rusting	needed for rusting	experimentation	analysing facts		Nails	Fountain int. science book 5 page 38	
Expected learning outcome: The learner is able to show knowledge about common tuber crops demonstrate growing tuber crops and appreciate the importance of harvesting, processing and storing tuber crops properly.													
8	3 & 4	**SCIENCE IN HUMAN ACTIVITIES AND OCCUPATION**	**CROP GROWING**	**Common tuber crops**	Common tuber crops . a) Root tubers - meaning of root tubers crops. - examples of tuber crops, cassava, sweet potatoes, carrots & turnips. b) stem tubers - meaning of stem tubers. - examples of stem tubers, irish potatoes, yam. - parts of an irish potato - functions of each part	The learner: - identifies the x-tics of common tuber crops. - defines root tubers and give examples. - describes stem tubers examples. - gives example of stem tubers - draws and labels parts of an irish.	The learner: - names common tuber crops. - spells given words (new words) - writes short sentences about tuber crops	guided discovery guided discussion explanation think, pair share	effective communication confidence critical thinking responding to questions appropriately. self awareness	Identifying and naming different tubers. Drawing and naming	Sweet potatoes and other tuber crops	P.5 curr pg 37 Fountain integrated science book 5 page 182	
8	5			**Growing and caring for tuber crops**	Growing and caring for tuber crops. - ways of planting tuber crops. - ways of caring for tuber crops. - pruning - weeding - thinning - spraying with pesticides	The learner: - identifies ways of growing tuber crops and caring for them	The learner: - writes ways of caring of tuber crops	guided discussion explanation round robin system	self awareness creative thinking	Describing ways of growing tuber crops and caring for them	Chalk board illustration	P.5 curr pg 37 Fountain integrated science bk 5 183 Und. Int. science bk 5	

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8	6	**SCIENCE IN HUMAN ACTIVITIES AND OCCUPATION**	**CROP GROWING**	**Common pests and diseases of tuber crops**	Common pests - meaning of pests - examples of tuber pests (Rats, eel worms, mole rats. - x-tics of common tuber crops pests - controlling pests of root crops - crop rotation - trapping - spraying with pesticides	The learner: - defines pests - gives examples of root/tuber crop pest & their x-tics - identifies ways of controlling common pests	The learner: - spells new words names common tuber crop pests	guided discussion question & answer explanation think pair share	self awareness expressing likes & dislikes critical thinking taking decision effective communication fluency	Listing down examples of common tuber crop pest. Identifying control measures	Chalk board illustration	P.5 curr pg 37 Understanding int. science book 5 page 106 Fountain int. science book 5 page 185	
9	1			**Diseases of tuber crops**	Diseases of root crops Wilt, cassava mosaic, potato blight. Effects of crop pests and diseases on root crops. - rotting of tubers - leaf curling - leaf yellowing - poor growth - poor quality yields - holes on tubers	The learner: - identifies common diseases of tuber crops - states the effects of pests and diseases on tuber crops	The learner: - writes words, sentences and stories about diseases of root crops and effects of pests and diseases on root crops	guided discussion explanation questions and answer	critical thinking responding to qns correctly self awareness effective communication articulation	Writing notes Spelling new words	Chalk board illustration	P.5 curr pg 37 Understanding integrated science book 5 page 107	
9	2			**Harvesting root crops**	Harvesting root crops - meaning of harvesting - harvesting cassava - harvesting sweet potatoes Keeping and using farm records - meaning of farm records - types of farm records - marketing records	The learner: - describes ways and methods of harvesting root crops	The learner: - reads words, sentences and stories about harvesting	guided discussion explanation	critical thinking taking decision decision making acceptance refusal	Describing ways of harvesting root crops	Chalk board illustration	P.5 curr pg 38 Fountain integrated science book 5 page 189-190	

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9			**CROP GROWING**	Records	- inventory records Uses of farm records - to budget for the farm -to know whether the farm is making profits or losses			question and answer	care love				
	3			Science clubs	The young farmers club School projects - learning - how to grow crops - care for crops - ways of growing and harvesting	The learner: - identifies roles of young farmers club	The learner: - reads words and stories about young farmers club	guided discovery explanation	self awareness self expression critical thinking	Describing activities of the YFC	Chalk board Project work	P.5 curr pg 38 Fountain integrated science bk 5 page 191	
Expected learning outcome: the learner is able to use scientific knowledge and skills about bacteria and fungi as disease agents and show how they can be used to solve problems of everyday experiences.													
9	4	**THE WORLD OF LIVING THINGS**	**BACTERIA AND FUNGI**	**Bacteria**	Bacteria Are tiny microscopic living organisms made up of one cell. Where bacteria are found - Water soil - Inside living thing - On the body of living organisms - In animal wastes - In latrines, air Bacteriology –the study of bacteria Bacteriologist-a person who studies bacteriology. x-tics of bacteria - exist as single cells - do not have uniform shape - can only be seen with a microscope	The learner: - defines bacteria - states where bacteria are found. - identifies the characteristic of bacteria	The learner: - describes bacteria, where they are found and their characteristic - reads stories about bacteria	guided discovery guided discussion	self awareness self expression critical thinking analysing facts co- operation concern	Visiting places where bacteria are found	Areas around the school	P.5 curr pg 39 Understanding integrated science book 5 page 119 Mk int. science book 5 page 232	

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9	5	THE WORLD OF LIVING THINGS	BACTERIA AND FUNGI	**Breeding of bacteria**	Breeding - the multiplying of living things. Conditions which encourage breeding of bacteria. - presence of food - presence of warmth Bacteria breed or reproduce by binary fusion	The learner: - defines breeding - identifies places/conditi ons that farrow breeding of bacteria	The learner: - reads words, sentences about the breeding of bacteria	guided discovery observati on explanatio n	self awareness creative thinking logical reasoning sharing	Observing how bacteria reproduce	Audio visual about breedi ng of bacteri a	P.5 curr pg 39 Fountain integrate d science bk 5 page 204-205 Mk int. sci bk 5 page 233	
9	6			**Types of bacteria**	There are four types of bacteria - spherical shaped bacteria e.g. cocci - rod shaped bacteria e.g. bacilli - spiral shaped bacteria e.g spirilae - coma shaped e.g vibrio Drawing the types of bacteria	The learner: - identifies the types of bacteria - draws the different types of bacteria	The learner: - spells new words - names types of bacteria	guided discussio n explanatio n	critical thinking evaluating information self awareness confidence problem solving finding differed things	Identifying the types of bacteria. Drawing and naming different types of bacteria	Chalk board illustra tion	P.5 curr pg 39 Fountain integrate d science book 5 page 205-206 Mk int. sci book 5 page 233-234	
10	1			**Nature of bacteria**	Nature of bacteria. - useful bacteria(harmless bacteria) - harmful bacteria Importance of harmful bacteria - help in rotting of dead plants and animals to form humus. - break down faeces and urine. - use to make vaccines - Harmful bacteria	The learner: - identifies the nature of bacteria - states the effects of harmless (useful) and harmful bacteria	The learner: - reads and spells new words used. - reads shine about harmful and harmless	guided discovery guided discussion	self awareness talking about oneself critical thinking responding to qns correctly.	Identifying the effects of bacteria Writing	Chalk board illustra tion	P.5 curr pg 39 Fountain integrate d science book 5 page 207 Understa nding	

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10		**THE WORLD OF LIVING THINGS**	**BACTERIA AND FUNGI**	Harmful bacteria	- cause diseases - cause contamination of food. - cause decay/spoilage of food. - cause food poisoning		(useful) bacteria	brain storming	effective communication fluency accuracy appreciation			integrated science book 5 page 120 Mk int. science book 5 page 235	
10	2			**Diseases caused by bacteria**	Disease caused by bacteria to: a) people-tuberculosis-diphtheria dysentery-syphillis typhoid-gonorrhoea cholera-meningitise b) Animals –foot rot, mastitis, fowl typhoid, etc c) Plants-tomato blight, potato blight, five blight, crowing gall	The learner: - identifies the diseases caused by bacteria	The learner: - names bacterial diseases - tells stories about bacterial diseases	guided discussion guided discovery explanation	critical thinking responding to questions self awareness self confidence sharing care	Identifying bacterial diseases in people, plants and animals. Spelling Reading	Chalk board illustration	P.5 curr pg 39 Fountain integrated science book 5 page 208 Mk book 5 page 235	
	3			**Prevention and control of bacterial diseases**	- Through immunisation - eating clean fresh food - drinking safe water - using latrines and toilets well - washing hands with soap and clean water - washing fruits and vegetables before eating	The learner: - suggests ways of preventing and controlling bacterial disease	The learner: - tells ways of preventing of preventing bacterial diseases.	guided discussion brain storming	self awareness appreciation self control decision making telling consequences of decisions made	Explaining ways of preventing bacterial diseases.	Chalk board illustration Demonstration	P.5 curr pg 39 Fountain integrated science book 5 page 208-9 Mk int. sci book 5 page 235-6	
	4			**Fungi**	Fungi Fungi are simple unicellular or multicellular living organisms.	The learner: - describes fungi	The learner: - names fungi	explanation	critical thinking	Fungi e.g. moulds,	Identifying fungi	P.5 curr pg 39	

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10	4	THE WORLD OF LIVING THINGS	BACTERIA AND FUNGI	Fungi	xi- tics of fungi -feed saprophytically or parasitically. - have nuclei in their cells. - have no chlorophyll. Examples f fungi Moulds- toad stools Mushrooms-yeast	- states the x- tics of fungi - gives examples of fungi	- spells new words - reads and writes stories about fungi	guided discussio n question and answer		mushroom etc. Chalkboard illustration	in the enviro nment	Fountain integrate d science book 5 page 210-211 Mk int. sci book 5 pg 239	
10	5 & 6			**Mushroom**	Parts of a mushroom  Functions of each part Cap-to contain the gills. Gills-produce and stores spores Mycelium-absorb food from dead decaying matter. Where mushrooms grow. On pieces of wood Around cow dung Mushrooms feed saprophytically	The learner: - draws and labels parts of a mushroom - states functions of each part - mentions where mushrooms grow	The learner: - names part of a mushroom. - spells new words	guided discussio n explanatio n guided discovery	drawing and naming parts of a mushroom	A chart A mushroom	Self aware ness Critica l thinkin g Effecti ve comm unicati on	P.5 curr pg 39 Fountain integrate d science book 5 page 211 Mk book 5 page 239	
11	1			**Groups of fungi**	Useful and harmful fungi Useful fungi - decomposition of matter - for medicine - fermenting alcohol e.g. yeast - baking bread and cakes - Harmful fungi	The learner: - states the groups of fungi	The learner: - reads words, sentences and stories about useful and harmful fungi	guided discovery	identifying effects of harmful and useful fungi	Critical thinking Selecting & evaluating information Self awareness	Chalk board illustra tion	P.5 curr pg 40 Fountain integrate d science book 5 page 213-214	

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11	2			Harmful fungi	- cause decay and spoilage of food, milk and juices - cause human diseases e.g. ring worms, athletes foot. - cause plant diseases e.g. root rot in tea, coffee berry diseases etc..	- states the importance of useful fungi - gives the effects of harmful fungi		guided discussio n explanatio n		Caring for oneself Concern		Mk science book 5 page 241	
11	3			Preventi on and control of fungal disease s	Prevention and control of fungal diseases. - boiling - drying foods - salting, pickling, smoking food - using chemicals to spray against fungal diseases on plants. - reheating food before eating. - personal hygiene	The learner: - suggests ways of controlling fungal diseases	The learner: - tells ways of controlling fungal diseases	guided discussio n explanatio n	stating the ways of controlling fungal diseases	Self awareness Making choices Critical thinking	Chalk board illustra tion	P.5 curr pg 40 Fountain integrate d science book 5 page 216 Mk int. sci bk 5 pg 242	
11	4 & 5			**Facts about fungi and bacteria**	Similarities between fungi and bacteria. - both take in oxygen and out carbon dioxide - they feed on both living as dead organic matter. Differences btn fungi & bacteria Bacteria reproduce faster the fungi. - bacteria are microscopic while some fungi can be seen	The learner: - gives the similarities and differences between fungi and bacteria	The learner: - uses sentences to describe the similarities and differences btn bacteria & fungi	guided discussion explanation question and answer brain storming	comparing fungi and bacteria	Making choices Critical thinking Responding to qns appropriately. Effective communication Fluency Concern	Chalk board illustra tion	P.5 curr pg 40 Fountain integrate d science book 5 page 217	
12		TOPICAL TESTS AND END OF TERM II EXAMINATIONS											