GRADE 7 SCHEMES OF WORK

INTEGRATED SCIENCE

This scheme of work presents a systematic and organized plan outlining the objectives, content, teaching methods, resources, and assessments for this subject in this grade as designed by Mwalimu Consultancy professionals. It's a roadmap for teachers, offering a detailed overview of what needs to be covered throughout the academic year. This is a component for effective delivery of the CBC curriculum and attainment of educational objectives.

TERM 1-3

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MWALIMU CONSULTANCY

GRADE 7 INTEGRATED SCIENCE SCHEMES OF WORK TERM 1

WEEK	LESSON	STRAND	SUB-STRAND	SPECIFIC LEARNING OUTCOME	LEARNING OUTCOME	KEY INQUIRY QUESTION	LEARNING RESOURCES	ASSESSMENT	REFLECTION
1	1	Scientific Investigation.	Introduction to Integrated Science.	By the end of the lesson, the learner should be able to: **a)** State the meaning of Integrated Science. **b)** Identify the components of Integrated Science as a field of study. **c)** Draw a circle showing the components of integrated science . **d)** appreciate the components of Integrated Science.	In groups,pairs and individually,learners are guided to: find the meaning of integrated and science from dictionary. explain the meaning of Integrated Science. search the internet on components of Integrated Science. identify and discuss the components of Integrated Science.	What is Integrated Science? What are the components of Integrated Science?	Active Integrated Science pg 1-3. Digital device. Charts.	Assessment rubric. Oral questions. Written test.	
	2	Scientific Investigation.	Introduction to Integrated Science.	By the end of the lesson, the learner should be able to: a) relate the knowledge and skills gained in Integrated Science to Career opportunities. b) Identify the careers opportunities related to Integrated Science. c) Use digital devices connected to internet to search for careers opportunities related to integrated science. d) appreciate the career opportunities related to	In groups, pairs, learners guided to; study the pictures in learner's book pg 3 and identify career shown in each picture. search the internet on the careers related to integrated science. discuss the career opportunities related to knowledge and skills gained in integrated science.	Which career opportunities relate to Integrated Science?	Active Integrated Science pg 3-5. Digital device: Tablets.	Assessment rubric. Written test. Checklists. Oral questions.	

				knowledge and skills in integrated science.					
	3	Scientific Investigation.	Introduction to Integrated Science.	By the end of the lesson, the learner should be able to: a) Define the term pathway. b) Identify the pathways related to Integrated Science. c) Describe how Integrated Science is related to the pathways in senior school. d) Draw a table showing the different pathways in senior school. e) appreciate the importance of integrated science in relation to the three pathways.	In groups,pairs, individually,Learners are guided to; define the term pathway. identify the pathways related to Integrated Science. discuss how Integrated Science is related to the pathways in senior school.	Which pathway in senior school does Integrated Science relate to?	Active Integrated Science pg 5-6. Charts	Assessment rubric. Written test. Oral questions.	
	4	Scientific Investigation.	Introduction to Integrated Science.	By the end of the lesson, the learner should be able to; a) state the importance of Integrated Science in daily life. b) discuss how Integrated science helps in poverty eradication, solving environmental problems, promoting healthy living, understanding of our bodies & nature. c) appreciate the importance of integrated science in daily life.	In groups,pairs learners are guided to; brainstorm on the importance of integrated science in daily life. discuss the importance of scientific knowledge in daily life. search for information on the importance of Integrated Science in daily life.	What is the importance of Integrated Science in daily life? How is the knowledge acquired in integrated science useful in daily life?	Active Integrated Science pg 6-7. Digital device.	Written test. Oral questions. Checklist. Assessment rubric.	

2	1	Scientific Investigation.	Laboratory Safety.	By the end of the lesson, the learner should be able to: a) define the terms laboratory and hazard. b) outline the common hazards in the laboratory. c) identify the symbols of the common laboratory hazards and state their meanings. d) draw the symbols of the common laboratory hazards. e) appreciate the importance of hazard symbols.	In pairs, groups and individually,learners are guided to; brainstorm the meaning of the word hazard and laboratory. identify and discuss the common hazards in the laboratory. interpret the common hazard symbols. use digital devices to search for the common laboratory hazards and their meanings.	What is a laboratory and hazard? What are the common hazards in the laboratory?	Integrated Science Learner's book pg 9-11. Realia. Digital devices. Charts.	Assessment rubric. Written test. Oral questions. Checklist.	
	2	Scientific Investigation.	Laboratory Safety.	By the end of the lesson, the learner should be able to: a) define the term accident. b) outline the causes of common laboratory accidents. c) analyse the causes of the common accidents in the laboratory. d) Make a chart showing the causes of different accidents in the laboratory. e) follow precautions that may be found placed on charts or posters in the laboratory.	In groups, individually and in pairs learners are guided to; brainstorm the meaning of accident. discuss the causes of common laboratory accidents. Match the different accidents in the laboratory with their causes. brainstorm on how we can minimise the chances of accidents occuring in the laboratory.	Which accidents can occur in the laboratory? What are the causes of the common laboratory accidents? How can we minimize the chances of accidents occuring in the laboratory?	Charts. Active Integrated Science pg 11-12. Digital device.	Assessment rubric. Checklists. Written test. oral questions.	

	3	Scientific Investigation.	Laboratory Safety.	By the end of the lesson, the learner should be able to: a) define the terms First aid and First aid kit. b) identify the items found in a first aid kit. c) discuss the functions of each item in the first aid kit. d) Draw and label the items found in a first aid kit. e) appreciate the importance of carrying out a first aid.	In groups, pairs learners are guided to: brainstorm the meaning of first aid and first aid kit. identify the items in a first aid kit. use digital devices to search for pictures of a first aid kit and its items. discuss the functions of the items in a first aid kit.	What is first aid? Why is it important to carry out first aid?	Active Integrated Science pg 13-14. Digital device. Charts. Pictures.	Written test. oral questions. Checklists. Assessment rubric.	
	4	Scientific Investigation.	Laboratory Safety.	By the end of the lesson, the learner should be able to: a) outline the first aid procedure for chemical in the eyes and minor burns and scalds b) demonstrate the first aid procedure for chemical in the eyes,minor burns and scalds. c) appreciate the importance of the first aid measures for chemicals in the eyes and minor burns and scalds.	In pairs, groups learners are guided to; outline the first aid procedure for chemicals in the eyes and minor burns and scalds. discuss the first aid procedures of chemicals in the eyes and minor burns and scalds and role play it. use digital devices to search for first aid procedures for minor burns and scalds and chemicals in the eyes.	What is the first aid procedure for minor burns and scalds? What is the first aid procedure for chemicals in the eyes?	Active Integrated Science pg 14. Digital device.	Assessment rubric. observation schedule. Checklists. Written test. oral questions.	
3	1	Scientific	Laboratory Safety.	By the end of the lesson, the learner should be able to:	In groups,pairs,learners are guided to;	What is the first aid procedure	Active Integrated	Assessment rubric. Practical.	

		Investigation.		a) outline the first aid procedure for minor cuts and ingestion of harmful substances. b) demonstrate the first aid safety measures for minor cuts and ingestion of harmful chemicals. c) appreciate first aid aid procedures for minor cuts and ingestion of harmful chemicals.	use digital devices to search the internet the first aid procedures for minor cuts and ingestion of harmful chemicals. discuss the first aid procedures for minor cuts and ingestion of harmful chemicals. role play the first aid procedures for minor cuts and ingestion of harmful chemicals.	for minor cuts? What is the first procedure for ingestion of harmful chemicals?	Science pg 15. Digital devices. Resource books.	Written test. Oral questions. Checklists.	
	2	Scientific Investigation.	Laboratory Safety.	By the end of the lesson, the learner should be able to: a) outline the safety measures to observe while in the laboratory. b) discuss the safety measures to observe in the laboratory. c) design a poster highlighting the safety measures that laboratory users should practice. d) Appreciate the safety measures to be observed in the laboratory.	In groups,pairs,learners are guided to: identify and discuss the safety measures to observe while in the laboratory. use digital devices to search the internet for more safety measures that should be observed in the laboratory and its environment. make a chart/design posters containing the safety measures to observe while in the laboratory.	Which safety measures should we observe while in the laboratory?	Active Integrated Science pg 15-17. Digital devices. Charts. Posters.	Assessment rubric. Checklist. Oral questions. observation schedule. Portfolios. Written test.	
	3	Scientific Investigation.	Laboratory Safety.	By the end of the lesson, the learner should be able to: a) state the importance of practising safety measures in the laboratory.	In groups,learners are guided to: brainstorm the importance of practising	Why is it important to observe safety measures in	Active Integrated Science	Assessment rubric. Written test.	

				b) discuss the importance of practising safety measures in the laboratory. c) appreciate the importance of safety in the and access to a healthy working environment.	safety measures in the laboratory. discuss the importance of practising safety measures in the laboratory. practice safety measures in the laboratory and the general school environment.	the laboratory?	pg 17-18. Digital devices.	oral questions.	
	4	Scientific Investigation.	Laboratory Safety. Self-Assessment 2.	By the end of the lesson, the learner should be able to: a) Attempt the questions on the sub-strand: Laboratory safety.	In pairs, individually,learners are guided to: answer the questions in Self-Assessment 2.		Assessment books. Active Integrated Science pg 19.	Assessment rubric.	
4	1	Scientific Investigation.	Basic Science Skills. (a) Basic Skills in Science.	By the end of the lesson, the learner should be able to: identify the basic skills in science. discuss the basic skills in science. Prepare flashcards and PowerPoint presentation on the basic skills in science. appreciate the basic skills in science.	In groups,pairs,learners are guided to; identify the basic skills in science. discuss the basic skills in science. use digital device with internet to search the meaning of the terms: manipulative skill, measuring skill, observation skill, prediction, communication skill and conclusion.	What are the basic skills in science?	Active Integrated Science pg 20-22. Digital devices. Charts.	Assessment rubric. Written test. Oral questions. Checklists.	

	2	Scientific Investigation.	Basic Science Skills. (b). Methods of communicating science information.	By the end of the lesson, the learner should be able to: identify the ways of communicating science information. describe the different ways of communicating science information. use the different ways to communicate science information. appreciate the different ways of communicating science information.	In groups,pairs, learners are guided to; identify and discuss the different ways in which science information can be communicated. use digital devices to search for ways in which science information can be communicated.	How is science information communicated?	Active Integrated Science pg 22-23. Digital devices.	Assessment rubric. Checklists. Oral questions. Written test.	
	3	Scientific Investigation.	Basic Science Skills. (c). The International System of Units.	By the end of the lesson, the learner should be able to: Define the term International System of Units. Differentiate between basic and derived quantities. List the basic quantities and their SI units. Make a chart showing the basic quantities and their SI units. Apply the International System of Units to determine temperature and length.	In groups,pairs,individually,learners are guided to: Search the meaning of International System of Units on the internet. Outline the difference between basic and derived quantities. Identify the basic quantities together with their SI units. define the terms length and temperature. convert degree celsius into kelvin. compare the different units of length and the SI unit.	What is the SI unit of temperature and length? What are the 7 basic quantities? What is the difference between basic and derived quantities?	Active Integrated Science pg 24-27. Digital devices. Requirements for the practicals. Teachers guide.	Assessment rubric. Checklists. Oral questions, Practical. Observation schedules. Written test.	

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					Carry out practicals to determine temperature of water and length of different items and apply the SI units.				
	4	Scientific Investigation.	Basic Science Skills. (b). Basic quantities:mass and time.	By the end of the lesson, the learner should be able to: Define the terms:mass and time . Mention the SI units of mass and time. State the relationship between other units of mass and time and the SI units (kg) (s). Carry out practical activities to determine the mass of objects and time taken and time taken to move from one point to another. Apply the SI units to determine mass and time.	In groups,pairs,individually ,learners are guided to: Define the terms mass and time and identify their SI units. discuss about mass and time and identify instruments used to measure mass and time. Carry out practical activities to determine the mass of objects and time taken to move from one point to another.	What is mass and time? What is the SI unit of mass and time?	Active Integrated Science pg 27-29. Requirements for the practicals:Watches Digital devices.	Assessment rubric. Written test. Practical. Oral questions.	
5	1	Scientific Investigation.	Basic Science Skills: Basic Quantities: Electric current, Luminous intensity and Amoun	By the end of the lesson, the learner should be able to: Define the terms: Electric current,Luminous intensity and Amount of substance. Mention the SI units of electric current,luminous intensity and amount of substance. Carry out a practical to determine the electric current flowing in a closed circuit.	In groups,pairs,learner are guided to: Define the terms electric current,luminous intensity and amount of substance. Identify the SI units of electric current,luminous intensity and amount of substance. Carry out a practical to determine the electric	What is the SI units of electric current,luminous intensity and amount of substance?	Active Integrated Science pg 29-30. Requirements for the practical. Digital devices.	Assessment rubric. Practical. Observation Oral questions. Written test.	

			t of substance. .	Apply the SI unit to determine electric current flowing in a closed circuit.	current flowing in a closed circuit.				
	2	Scientific Investigation.	Basic Science Skills: (a).Derived Quantities:Area and Volume . ,	By the end of the lesson, the learner should be able to: Identify the derived quantities. State the SI units of area,volume and density. Calculate area and volume applying their formulas. Determine the area and volume of items using the SI units.	In groups,pairs,individually ,learners are guided to: Identify the derived quantities and state their SI units. Carry out practical activities to determine the area of the floor of classroom and volume of a carton box. Apply the formula for area and volume to calculate area and volume and use the SI units.	What is the SI unit of area,volume and density? How do we calculate the area and volume of objects?	Active Integrated Science pg 30-31. Realia. Digital devices. Metre rules and Tape measure.	Assessment rubric. Written tests. Practical. Oral questions.	
	3	Scientific Investigation.	Basic Science Skills: Derived Quantities:Density. .	By the end of the lesson, the learner should be able to: Define density and identify its SI unit. Carry out a practical to determine the density. Calculate density applying the formula.	In groups,pairs and individually,learners are guided to: Carry out a practical activity to determine the density of a block of wood. Convert density in g/cm to SI unit kg/m and vice versa. calculate density applying a formula.	What is the SI unit of density? How do you calculate density?	Active Integrated Science pg 32-33.	Assessment rubric. Written test. Practical. Oral questions.	

	4	Scientific Investigation.	Basic Science Skills: Importance of Reading Packaging Labels on Qantities or Products. .	By the end of the lesson, the learner should be able to: Identify the importance of packaging labels on quantities or products. Discuss the importance of reading packaging labels on quantities or products. Collect the packaging labels of different products and study the information on the packaging materials. Appreciate the importance of packaging labels on quantities or products.	In groups,pairs,learner are guided to: Brainstorm what is packaging label on quantities. Collect the packaging labels of different products such as bread,juice,soap,bottled water,sugar,flour etc. Study the information on the packaging materials and discuss its importance. Discuss the importance of reading packaging labels on quantities or products.	What is the importance of packaging labels on quantities or products?	Active Integrated Science pg 33-34. Realia. Digital devices. Pictures.	Assessment rubric. Written tests. Oral questions. Checklists.	

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GRADE 7 SCHEMES OF WORK TERM 2

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ACTIVE INTEGRATED SCIENCE GRADE 7 SCHEMES OF WORK – TERM 2

Week	Lesson	Strand	Sub-Strand	Specific Learning Outcome	Learning Experiences	Key Inquiry Question	Learning Resources	Assessment Methods	Reflection
1	1	Mixtures, Elements and Compounds.	Mixtures; Separation of mixtures (a). Simple distillation.	By the end of the lesson, the learner should be able to; d) Outline the procedure for separating a mixture using simple distillation. e) Carry out an experiment to separate a mixture of salt and water using simple distillation. f) Appreciate the use of simple distillation in separation of mixtures.	In groups, learners are guided to; Discuss what is simple distillation. Prepare the requirements for the experiment. State the procedure for separating a mixture of salt and water using simple distillation. Carry out an experiment to separate a mixture of salt and water using simple distillation. Record and discuss the observations from the experiment.	What is a solvent, solute and solution in a mixture?	Active Integrated Science pg 69-70. Digital devices. Table salt and water. Portable burner. Boiling tubes. Delivery tube. Retort stand and clamp.	Observation. Assessment rubrics. Practical work. Checklists. Written tests. Oral discussions. Oral questions.	
	2	Mixtures, Elements and Compounds.	Mixtures. Separation of mixtures.(b) Fractional distillation.	By the end of the lesson, the learner should be able to; f) Outline the procedure for separating a mixture of ethanol and water. g) Search the internet for a video on separation of a mixture of ethanol and water using fractional distillation. h) Appreciate the use of fractional distillation as	In groups, learners are guided to; Discuss fractional distillation as method of separating mixtures. List the requirements for separating a mixture using the fractional distillation. State the procedure for separating a mixture using fractional distillation. Search the internet for videos on separating a mixture of ethanol	What is Fractional distillation?	Active Integrated Science pg 70-72. Digital devices. Internet. Video clips.	Assessment rubrics. Oral questions. Observation schedule. Oral discussions. Written tests.	

				a method of separating mixture.	and water using fractional distillation. Discuss the observation from the experiment.				
	3	Mixtures, Elements and Compounds.	Mixtures: Separation method. (c).Sublimation.	By the end of the lesson, the learner should be able to; e) Outline the procedure for separating a mixture of sodium chloride and iodine by sublimation. f) Carry out an experiment to separate a mixture of sodium chloride and iodine by sublimation. g) Appreciate the use of sublimation in separating mixture.	In groups, learner are guided to; List and prepare the requirements for the experiment. State the procedure for separating a mixture of iodine and sodium chloride by sublimation. Follow the procedure to carry out the experiment on separating a mixture of iodine and sodium chloride by sublimation. Record and discuss the observations from then experiment.	What is sublimation as method of separating mixtures?	Active Integrated Science pg 75-76. Iodine crystals. Sodium chloride. Beaker,round-bottomed flask. Spatula. Portable burner. Wire gauze,tripod stand. Digital devices.	Assessment rubric. Checklists. Practical work. Observation. Oral questions. Oral discussions.	
	4	Mixtures, Elements and Compounds.	Mixtures; Separation method; (d). Crystallisation.	By the end of the lesson, the learner should be able to; d) State the procedure for separating a mixture by crystallisation. e) Carry out an experiment to separate a mixture by crystallisation. f) Appreciate the use of crystallisation as a method of separating mixtures.	In groups and pairs, learners are guided to; List and prepare the requirements for separating a mixture using crystallisation. Outline and discuss the procedure for separating mixtures using crystallisation method. Carry out an experiment to separate salt from a mixture of salt and water by crystallisation.	What is crystallisation as a method of separating mixtures? What is a saturate	Active Integrated Science pg 80-81. Copper (II) sulphate salt. Water. Evaporating dish. Thermometer,filter paper. Conical flask. Stirring rod,beaker.	Assessment rubrics. Checklists. Oral questions. Practical work. Oral discussions.	

					Record and discuss the observations from the experiment.	d solution ?			
2	1	Mixtures, Elements and Compounds.	Mixtures:Separating methods;(e). Evaporation.	By the end of the lesson, the learner should be able to; a) Outline the procedure for separating a mixture by evaporation method. b) Carry out an experiment to separate a mixture of salt and water by evaporation method. c) Appreciate the use of evaporationmethod to separate mixtures.	In groups, learners are guided to; List and prepare requirements for separating a mixture by evaporation. State the procedure for separating a homogenous mixture by evaporation method. Carry out an experiment to separate a mixture of salt and water by evaporation method. Record and discuss the observation from the experiment.	What is evaporation as a method of separating mixtures ?	Digital devices. Teachers notes. Salt and water. Portable burner. Video clips.	Practical work. Observation . Written tests. Oral questions. Oral discussions. Assessment rubric.	
	2	Mixtures, Elements and Compounds.	Mixtures:Separation methods;(f).Solvent extraction.	By the end of the lesson, the learner should be able to; a) Outline the procedure for extracting oil from nuts by solvent extraction. b) Carry out an experiment to extract oil from nuts by solvent extraction. c) Appreciate the use of solvent extraction in extracting oil from nuts.	In groups,the learner should be able to; List and prepare the requirements for the experiment. Outline the procedure for extracting oil from nuts by solvent extraction. Carry out the experiment following the procedure. Discuss and record the observations from the experiment.	Why is crushing necessary in solvent extraction? Why is water not used as a solvent ? Why is the extract obtained after decantin	Active Integrated Science pg 78. Groundnuts or simsim seeds. Propane or methylated spirit. Mortar and pestle. Dropper,filter paper. Evaporating dish.	Assessment rubric. Practical work. Observation Oral questions.	

						g left in the sun?			
	3	Mixtures, Elements and Compounds.	Mixtures: Separating method;(g).Paper chromatography.	By the end of the lesson, the learner should be able to; **e)** Outline the procedure for separating a mixture using paper chromatography. **f)** Carry out an experiment to separate components of the extract of green leaves using paper chromatography. **g)** Acknowledge the applications of chromatography in our lifes.	In groups and pairs, learners are guided to; List and prepare the requirements for separating components of an extract using paper chromatagraphy. Outline the steps for separating components of an extract of green leaves using paper chromatography. Conduct an experiment to separate the components of an extract of green leaves using paper chromatography. Draw the appearance of the filter paper and discuss the observations from the experiment.	What is paper chromatography? How is paper chromatography used to separate mixtures?	Active Integrated Science pg 76-77. Mortar and pestle. Beakers. Knife,fresh green leaves. Filter papers. Droppers. Propane.	Practical work. Assessment rubric. Checklists. Oral discussion. Observation.	
	4	Mixtures, Elements and Compounds.	Mixtures: Applications of Paper Chromatography.	By the end of the lesson, the learner should be able to; a) State the applications of paper chromatography in cosmetic,sport, pharmaceutical and food industry. b) Search the internet for information on the application of paper chromatography in cosmetic, sport, food and pharmaceutical industry.	In groups and pairs, learners are guided to: Search the internet for information on the application of paper chromatography in food, sport, cosmetic and pharmaceutical industries. Discuss and present the applications of paper chromatography in food,sport, pharmaceutical and cosmetic industry.	What are the applications of paper chromatography in sport, food, cosmetic and pharmaceutical industries?	Active Integrated Science pg 77. Teacher's Notes. Internet. Digital devices.	Assessment rubrics. Oral discussion. Oral questions.	

				c) Appreciate the importance of paper chromatography in our daily lifes.					
3	1	Mixtures, Elements and Compounds.	Mixtures.	By the end of the lesson, the learner should be able to; a) Outline the applications of of methods of separating mixtures in real life b) Discuss the applications of methods of separating mixtures in real life. c) Appreciate the use of different methods of separating mixtures in day to day life.	In groups, learners are guided to: Outline the applications of the different methods of separating mixtures in our day to day life. Discuss and present the applications of the different methods of separating mixtures in day to day life. Search the internet for information on applications of the different methods of separating mixtures in our day to day life.	How is the separation of mixtures important in day to day life?	Active Integrated Science pg 82-83. Digital devices. Internet. Teacher's Notes.	Assessment rubrics. Written tests. Oral discussion. Oral questions.	
	2	Mixtures, Elements and Compounds.	Acids, Bases and Indicators.	By the end of the lesson, the learner should be able to; f) Identify acids and bases using litmus paper. g) Carry out simple experiments to test household solutions if they are acidic or basic using litmus paper. h) Classify the household solutions as either basic or acidic. i) Enjoy carrying out the experiments.	In groups, learners are guided to; Use litmus paper to test if household solutions are acidic or basic. Record their observations in books and explain them. Classify the household solutions as either basic or acidic.	How do you know a substance or solution is acidic or basic using a litmus paper?	Active Integrated Science. Litmus Papers. Household solutions	Practical work. Observation. Written tests Oral questions Assessment rubric. Oral questions	
	3	Mixtures, Elements and	Acids, Bases and	By the end of the lesson, the learner should be able to; d) Outline the procedure for preparing an acid-	In groups, learners are guided to: State the procedure for preparing an acid-base indicators from plant extracts.	How do you prepare an acid-	Active Integrated Science pg 85.	Practical work. Assessment rubric.	

		Compounds.	Indicators.	base indicator from plant extracts. e) Prepare an acid-base indicator from plant extracts. f) Enjoy preparing an acid-base indicator from plant extracts.	Discuss the procedure for preparing acid-base indicators from plant extracts. Carry out an experiment to prepare an acid-base indicator from plant extracts and dispose off laboratory waste responsibly.	base indicator from plant extracts?	Teacher's Notes. Fresh green leaves. Mortar and pestle. Propane. Beaker.	Observation. Oral discussion. Checklists.	
	4	Mixtures, Elements and Compounds.	Acids, Bases and Indicators.	By the end of the lesson, the learner should be able to; a) Use acid-base indicator from plant extracts to test the household solutions if they are acidic or basic. b) Classify the household solutions as either basic or acidic. c) Enjoy carrying out the experiment.	In groups, learners are guided to: Carry out simple experiments to test common household solutions if they are basic or acidic using the acid-base indicator from plant extracts. Record their observations and classify the household solutions as either basic or acidic.	How do you identify a substance as basic or acidic using an acid-base indicator from plant extract?	Active Integrated Science pg 86-87. Acid-base indicator from plant extract. Household solutions.	Practical work. Assessment rubric. Checklists. Observation.	
4	1	Mixtures, Elements and Compounds.	Acids, Bases and Indicators.	By the end of the lesson, the learner should be able to; a) Identify the physical properties of acids. b) Describe the physical properties of acids. c) Carry out activities to investigate the physical properties of acids. d) Acknowledge the physical properties of acids.	In groups, learners are guided to; Brainstorm and present the physical properties of acids. Carry out activities to investigate the physical properties of acids. Describe the physical properties of acids. Search the internet for information on the physical properties of acids.	What are the physical properties of acids?	Internet. Household solutions Digital devices. Active Integrated Science. Litmus paper. Teacher's notes.	Observation. Practical work. Checklists. Assessment rubric. Written tests. Oral questions.	

	2	Mixtures, Elements and Compounds.	Acids, Bases and Indicators.	By the end of the lesson, the learner should be able to; a) Identify the physical properties of bases b) Describe the physical properties of bases. c) Carry out activities to investigate the physical properties of bases d) Acknowledge the physical properties of bases.	In groups, learners are guided to: Brainstorm and present the physical properties of bases. Carry out activities to investigate the physical properties of bases. Describe the physical properties of bases. Search the internet for information on the physical properties of bases.	What are the physical properties of bases?	Teacher's Notes. Active Integrated Science. Internet. Digital devices. Household solutions. Litmus paper.	Practical work. Observation. Written tests. Assessment rubric. Oral questions. Oral discussion.	
	3	Mixtures, Elements and Compounds.	Acids, Bases and Indicators.	By the end of the lesson, the learner should be able to; a) Outline the applications of acids in real life. b) Discuss the uses of acids in real life. c) Search the internet for information on applications of acids in real life. d) Appreciate the uses of acids in real life.	In groups, learners are guided to: Brainstorm and present the applications of acids in real life. Discuss and present the uses of acids in real life. Search the internet or print media for information on the applications or uses of acids in our daily lifes and present their findings.	What are the applications of acids in our daily lifes?	Active Integrated Science pg 92-93. Internet. Digital devices. Teacher's Notes.	Assessment rubrics. Oral questions Written tests. Oral discussion.	
	4	Mixtures, Elements and Compounds.	Acids, Bases and Indicators.	By the end of the lesson, the learner should be able to; a) Identify the applications of bases in our daily life. b) Search the internet or print media for the applications of bases in our daily life. c) Appreciate the uses of bases in our daily life.	Individually or in pairs, learners are guided to: Explore the applications of bases in our daily life from the internet or print media. Discuss the applications of bases in our daily life.	What are the uses of bases in our day to day life?	Internet. Digital devices. Active Integrated Science pg 93-94. Teacher's Notes.	Written tests. Oral questions Assessment rubrics. Checklists.	

5	1	Mixtures, Elements and Compounds.	Acids, Bases and Indicators.	By the end of the lesson, the learner should be able to; a) State the applications of indicators in our daily life. b) Search the internet or print media for the applications of indicators in our daily life. c) Acknowledge the applications of indicators in our daily life.	In groups, pairs, learners are guided to: Explore the applications of indicators from the print media or internet. Outline the applications of indicators. Discuss the applications of indicators in our daily life.	What are the applications of indicators in our daily life?	Active Integrated Science pg 94-95. Internet. Digital devices. Teacher's Notes.	Written tests. Assessment rubric. Oral questions.	
	2	Mixtures, Elements and Compounds.	Acids, Bases and Indicators.	By the end of the lesson, the learner should be able to; a) Attempt questions on the sub-strand; Acids, Bases and Indicators.	In pairs or individually, learners are guided to; Answer the questions on the sub-strand: Acids, Bases and Indicators.		Assessment books. Active Integrated Science pg 95-96. Teacher's Assessment Questions.	Written tests. Assessment rubric.	
	3	Living Things and Their Environment.	Human Reproductive System.	By the end of the lesson, the learner should be able to; a) Identify the parts of the human male and female reproductive systems. b) Draw and label the parts of the male and female reproductive system. c) Appreciate the parts of the male and female reproductive system.	In groups, pairs, individually, learners are guided to; Mention some of the parts of human male and female reproductive system. Use charts or pictures to observe and identify the parts of the human male and female reproductive systems. Draw and label the parts of the male and female reproductive systems.	Which parts of the male and female reproductive system do you know?	Active Integrated Science. Pictures. Charts. Teacher's Notes. Digital devices.	Written tests. Oral questions. Assessment rubrics. Checklists.	

	4	Living Things and Their Environment.	Human Reproductive System.	By the end of the lesson, the learner should be able to; a) State the functions of the parts of the male reproductive system. b) Describe the functions of the parts of the male reproductive system. c) Acknowledge the functions of the parts of the male reproductive system.	In groups and pairs, learners are guided to: Brainstorm and present the functions of some of the parts of male reproductive system. Search the internet for information on the functions of parts of male reproductive system (penis, testis and urethra) Discuss the functions of the parts of male reproductive system and share.	What are the functions of the parts of male reproductive system?	Digital devices. Teacher's Notes. Active Integrated Science. Internet.	Written tests. Oral questions. Oral discussion. Assessment rubric. Checklists.	

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GRADE 7 SCHEMES OF WORK TERM 3

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GRADE 7 INTEGRATED SCIENCE SCHEMES OF WORK TERM 3

WK	LSN	STRAND	SUBSTRAND	SPECIFIC LEARNING OUTCOME	KEY INQUIRY QUESTION	LEARNING EXPERIENCES	LEARNING RESOURCES	ASSESSMENT METHOD	REFL
1	1	FORCE AND ENERGY	Static electricity	By the end of the lesson the learner should be able to: -define what are static charges -demonstrate the existence of static charges in objects -appreciate use of static electricity	How can you demonstrate static electricity ?	The learner is guided to: -discuss what are static charges -demonstrate the existence of static charges in objects	Active Integrated Science Grade 7 page 124-126	-oral questions -observation -written questions	
	2	FORCE AND ENERGY	Static electricity	-define what are static charges -demonstrate the existence of static charges in objects -appreciate use of static electricity	How can you demonstrate static electricity ?	-discuss what are static charges -demonstrate the existence of static charges in objects	Active Integrated Science Grade 7 page 124-126	-oral questions -observation -written questions	
	3	FORCE AND ENERGY	Static electricity	-identify types of charges -demonstrate charging objects by rubbing, induction -appreciate use of static electricity	How many types of charges do we have?	-discuss types of charges -demonstrate charging objects by rubbing, induction	Active Integrated Science Grade 7 page	-oral questions -observation -written questions	
	4	FORCE AND ENERGY	Static electricity	-identify types of charges	How many types of	-discuss types of charges -demonstrate charging objects by rubbing, induction	Active Integrated Science	-oral questions	

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				-demonstrate charging objects by rubbing, induction -appreciate use of static electricity	charges do we have?		Grade 7 page 126-128	-observation -written questions	
	5	FORCE AND ENERGY	Static electricity	-identify types of charges -demonstrate charging objects by rubbing, induction -appreciate use of static electricity	How many types of charges do we have?	-discuss types of charges -demonstrate charging objects by rubbing, induction	Active Integrated Science Grade 7 page 126-128	-oral questions -observation -written questions	
2	1	FORCE AND ENERGY	Static electricity	-identify effects of force between charged objects -demonstrate the effect of force between objects with similar charges -demonstrate the effect of force between objects with opposite charges -appreciate use of static electricity	What are the effects of force between charged objects?	-discuss effects of force between charged objects -demonstrate the effect of force between objects with similar charges -demonstrate the effect of force between objects with opposite	Active Integrated Science Grade 7 page 129-130	-oral questions -observation -written questions	
	2	FORCE AND ENERGY	Static electricity	-identify effects of force between charged objects -demonstrate the effect of force between objects with similar charges -demonstrate the effect of force between objects with opposite charges -appreciate use of static electricity	What are the effects of force between charged objects?	-discuss effects of force between charged objects -demonstrate the effect of force between objects with similar charges -demonstrate the effect of force between objects with opposite	Active Integrated Science Grade 7 page 129-130	-oral questions -observation -written questions	

	3	FORCE AND ENERGY	Static electricity	-outline safety measures when dealing with static charges -identify safety measurers during lightning -identify uses of static charges in everyday life -appreciate use of static electricity	Which are safety measures when dealing with static charges?	-outline safety measures when dealing with static charges -discuss safety measurers during lightning -discuss uses of static charges in everyday life	Active Integrated Science Grade 7 page 129-130	-oral questions -observation -written questions	
	4	FORCE AND ENERGY	Static electricity	-outline safety measures when dealing with static charges -identify safety measurers during lightning -identify uses of static charges in everyday life -appreciate use of static electricity	Which are safety measures when dealing with static charges?	-outline safety measures when dealing with static charges -discuss safety measurers during lightning -discuss uses of static charges in everyday life	Active Integrated Science Grade 7 page 129-130	-oral questions -observation -written questions	
	5	FORCE AND ENERGY	Static electricity	-outline safety measures when dealing with static charges -identify safety measurers during lightning -identify uses of static charges in everyday life -appreciate use of static electricity	Which are safety measures when dealing with static charges?	-outline safety measures when dealing with static charges -discuss safety measurers during lightning -discuss uses of static charges in everyday life	Active Integrated Science Grade 7 page 129-130	-oral questions -observation -written questions	
3	1	FORCE AND ENERGY	Electrical energy	-identify sources of electricity in the environment -use digital devices to search for sources of electricity -draw the sources of electricity	Which the sources of electricity in the environment?	-in groups discuss sources of electricity in the environment -use digital devices to search for sources of electricity -draw the sources of electricity	Active Integrated Science Grade 7 page 136-137	-oral questions -observation -written questions	

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				-appreciate use of electricity					
	2	FORCE AND ENERGY	Electrical energy	-identify sources of electricity in the environment -use digital devices to search for sources of electricity -draw the sources of electricity -appreciate use of electricity	Which the sources of electricity in the environment?	-in groups discuss sources of electricity in the environment -use digital devices to search for sources of electricity -draw the sources of electricity	Active Integrated Science Grade 7 page 136-137	-oral questions -observation -written questions	
	3	FORCE AND ENERGY	Electrical energy	-identify sources of electricity in the environment -use digital devices to search for sources of electricity -draw the sources of electricity -appreciate use of electricity	Which the sources of electricity in the environment?	-in groups discuss sources of electricity in the environment -use digital devices to search for sources of electricity -draw the sources of electricity	Active Integrated Science Grade 7 page 136-137	-oral questions -observation -written questions	
	4	FORCE AND ENERGY	Electrical energy	-connect simple electrical circuits to demonstrate the flow of electric current -demonstrate a simple electrical circuit in which dry cells are in series and in parrallel -appreciate the use of electricity in day to day life	How is electricity used in day to day life?	-In groups connect simple electrical circuits to demonstrate the flow of electric current -set up a simple electrical circuit in which dry cells are in series and in parrallel	Active Integrated Science Grade 7 page 138-140	-oral questions -written questions	
	5	FORCE AND ENERGY	Electrical energy	-connect simple electrical circuits to demonstrate the flow of electric current -demonstrate a simple electrical circuit in which dry cells are in series and in parrallel	How is electricity used in day to day life?	-In groups connect simple electrical circuits to demonstrate the flow of electric current -set up a simple electrical circuit in which dry cells are in series and in parrallel	Active Integrated Science Grade 7 page 138-140	-oral questions -written questions	

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				-appreciate the use of electricity in day to day life					
4	1	FORCE AND ENERGY	Electrical energy	-connect simple electrical circuits to demonstrate the flow of electric current -demonstrate a simple electrical circuit in which bulbs are arranged in series and parallel -appreciate the use of electricity in day to day life	What is the difference between the arrangement of bulbs in Activities 3A and 3 B?	-connect simple electrical circuits to demonstrate the flow of electric current -demonstrate a simple electrical circuit in which bulbs are arranged in series and parallel	Active Integrated Science Grade 7 page 140	-oral questions -written questions	
	2	FORCE AND ENERGY	Electrical energy	-connect simple electrical circuits to demonstrate the flow of electric current -demonstrate a simple electrical circuit in which bulbs are arranged in series and parallel -appreciate the use of electricity in day to day life	What is the difference between the arrangement of bulbs in Activities 3A and 3 B?	-connect simple electrical circuits to demonstrate the flow of electric current -demonstrate a simple electrical circuit in which bulbs are arranged in series and parallel	Active Integrated Science Grade 7 page 140	-oral questions -written questions	
	3	FORCE AND ENERGY	Electrical energy	-differentiate between conductors and non conductors of electricity -perform experiments to classify materials as either conductors or non conductors of electricity -appreciate the use of electricity in day to day life	What do we call materials which allow electricity to go through them?	-discuss the difference between conductors and non conductors of electricity -perform experiments to classify materials as either conductors or non conductors of electricity	Active Integrated Science Grade 7 page 141	-oral questions -written questions	

	4	FORCE AND ENERGY	Electrical energy	-differentiate between conductors and non conductors of electricity -perform experiments to classify materials as either conductors or non conductors of electricity -appreciate the use of electricity in day to day life	What do we call materials which allow electricity to go through them?	-discuss the difference between conductors and non conductors of electricity --perform experiments to classify materials as either conductors or non conductors of electricity	Active Integrated Science Grade 7 page 141	-oral questions -written questions	
	5	FORCE AND ENERGY	Electrical energy	-identify electrical appliances used in day to day life -draw electrical appliances used in day to day life -appreciate the use of electricity in day to day life	Name electrical appliances used at home?	-discuss and identify common electrical appliances used in day to day life -draw and name electrical appliances -discuss uses of electrical appliances	Active Integrated Science Grade 7 page 142-143	-oral questions -written questions	

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