

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.	<p>By the end of the lesson, the learner should be able to:</p> <ul style="list-style-type: none"> 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. 	<p>In groups,pairs and individually,learners are guided to:</p> <ul style="list-style-type: none"> 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. 	<p>What is Integrated Science?</p> <p>What are the components of Integrated Science?</p>	<p>Active Integrated Science pg 1-3.</p> <p>Digital device.</p> <p>Charts.</p>	<p>Assessment rubric.</p> <p>Oral questions.</p> <p>Written test.</p>	
	2	Scientific Investigation.	Introduction to Integrated Science.	<p>By the end of the lesson, the learner should be able to:</p> <ul style="list-style-type: none"> a) relate the knowledge and skills gained in Integrated 	<p>In groups, pairs, learners guided to;</p> <ul style="list-style-type: none"> study the pictures in learner's book pg 3 and identify career shown in each picture. 	<p>Which career opportunities relate to Integrated Science?</p>	<p>Active Integrated Science pg 3-5.</p> <p>Digital device: Tablets.</p>	<p>Assessment rubric.</p> <p>Written test.</p>	

				<p>Science to Career opportunities.</p> <p>b) Identify the careers opportunities related to Integrated Science.</p> <p>c) Use digital devices connected to internet to search for careers opportunities related to integrated science.</p> <p>d) appreciate the career opportunities related to knowledge and skills in integrated science.</p>	<p>search the internet on the careers related to integrated science.</p> <p>discuss the career opportunities related to knowledge and skills gained in integrated science.</p>			<p>Checklists.</p> <p>Oral questions.</p>	
	3	Scientific Investigation.	Introduction to Integrated Science.	<p>By the end of the lesson, the learner should be able to:</p> <p>a) Define the term pathway.</p>	<p>In groups,pairs, individually,Learners are guided to;</p> <p>define the term pathway.</p>	Which pathway in senior school does Integrated	Active Integrated Science pg 5-6. Charts	<p>Assessment rubric.</p> <p>Written test.</p>	

				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.	identify the pathways related to Integrated Science. discuss how Integrated Science is related to the pathways in senior school.	Science relate to?		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	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.	What is the importance of Integrated Science in daily life? How is the knowledge acquired in integrated	Active Integrated Science pg 6-7. Digital device.	Written test. Oral questions. Checklist.	

				<p>poverty eradication, solving environmental problems, promoting healthy living, understanding of our bodies & nature.</p> <p>c) appreciate the importance of integrated science in daily life.</p>	<p>search for information on the importance of Integrated Science in daily life.</p>	<p>science useful in daily life?</p>		Assessment rubric.	
2	1	Scientific Investigation.	Laboratory Safety.	<p>By the end of the lesson, the learner should be able to:</p> <p>a) define the terms laboratory and hazard.</p> <p>b) outline the common hazards in the laboratory.</p> <p>c) identify the symbols of the common laboratory hazards and state their meanings.</p>	<p>In pairs, groups and individually, learners are guided to;</p> <p>brainstorm the meaning of the word hazard and laboratory.</p> <p>identify and discuss the common hazards in the laboratory.</p> <p>interpret the common hazard symbols.</p> <p>use digital devices to search for the common laboratory hazards and their meanings.</p>	<p>What is a laboratory and hazard?</p> <p>What are the common hazards in the laboratory?</p>	<p>Integrated Science Learner's book pg 9-11.</p> <p>Realia.</p> <p>Digital devices.</p> <p>Charts.</p>	<p>Assessment rubric.</p> <p>Written test.</p> <p>Oral questions.</p> <p>Checklist.</p>	

				d) draw the symbols of the common laboratory hazards. e) appreciate the importance of hazard symbols.					
	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	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 occurring 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 occurring in the laboratory?	Charts. Active Integrated Science pg 11-12. Digital device.	Assessment rubric. Checklists. Written test. oral questions.	

				or posters in the laboratory.					
	3	Scientific Investigation.	Laboratory Safety.	<p>By the end of the lesson, the learner should be able to:</p> <ul style="list-style-type: none"> 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. 	<p>In groups, pairs learners are guided to:</p> <p>brainstorm the meaning of first aid and first aid kit.</p> <p>identify the items in a first aid kit.</p> <p>use digital devices to search for pictures of a first aid kit and its items.</p> <p>discuss the functions of the items in a first aid kit.</p>	<p>What is first aid?</p> <p>Why is it important to carry out first aid?</p>	<p>Active Integrated Science pg 13-14.</p> <p>Digital device.</p> <p>Charts.</p> <p>Pictures.</p>	<p>Written test.</p> <p>oral questions.</p> <p>Checklists.</p> <p>Assessment rubric.</p>	

	4	Scientific Investigation.	Laboratory Safety.	<p>By the end of the lesson, the learner should be able to:</p> <ul style="list-style-type: none"> 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. 	<p>In pairs, groups learners are guided to;</p> <p>outline the first aid procedure for chemicals in the eyes and minor burns and scalds.</p> <p>discuss the first aid procedures of chemicals in the eyes and minor burns and scalds and role play it.</p> <p>use digital devices to search for first aid procedures for minor burns and scalds and chemicals in the eyes.</p>	<p>What is the first aid procedure for minor burns and scalds?</p> <p>What is the first aid procedure for chemicals in the eyes?</p>	<p>Active Integrated Science pg 14.</p> <p>Digital device.</p>	<p>Assessment rubric.</p> <p>observation schedule.</p> <p>Checklists.</p> <p>Written test.</p> <p>oral questions.</p>	
3	1	Scientific Investigation.	Laboratory Safety.	<p>By the end of the lesson, the learner should be able to:</p> <ul style="list-style-type: none"> a) outline the first aid procedure for minor cuts and ingestion of 	<p>In groups, pairs, learners are guided to;</p> <p>use digital devices to search the internet the first aid procedures for minor cuts and ingestion of harmful chemicals.</p>	<p>What is the first aid procedure for minor cuts?</p> <p>What is the first procedure for ingestion</p>	<p>Active Integrated Science pg 15.</p> <p>Digital devices.</p>	<p>Assessment rubric.</p> <p>Practical.</p> <p>Written test.</p>	

				<p>harmful substances.</p> <p>b) demonstrate the first aid safety measures for minor cuts and ingestion of harmful chemicals.</p> <p>c) appreciate first aid aid procedures for minor cuts and ingestion of harmful chemicals.</p>	<p>discuss the first aid procedures for minor cuts and ingestion of harmful chemicals.</p> <p>role play the first aid procedures for minor cuts and ingestion of harmful chemicals.</p>	of harmful chemicals?	Resource books.	<p>Oral question s.</p> <p>Checklis ts.</p>	
	2	Scientific Investigation.	Laboratory Safety.	<p>By the end of the lesson, the learner should be able to:</p> <p>a) outline the safety measures to observe while in the laboratory.</p> <p>b) discuss the safety measures to observe in the laboratory.</p> <p>c) design a poster highlighting the safety measures that laboratory</p>	<p>In groups,pairs,learners are guided to:</p> <p>identify and discuss the safety measures to observe while in the laboratory.</p> <p>use digital devices to search the internet for more safety measures that should be observed in the laboratory and its environment.</p> <p>make a chart/design posters containing the safety measures to</p>	Which safety measures should we observe while in the laboratory?	<p>Active Integrated Science pg 15-17.</p> <p>Digital devices.</p> <p>Charts.</p> <p>Posters.</p>	<p>Assessment rubric.</p> <p>Checklist.</p> <p>Oral question s.</p> <p>observation schedule</p> <p>Portfolio s.</p>	

				<p>users should practice.</p> <p>d) Appreciate the safety measures to be observed in the laboratory.</p>	observe while in the laboratory.			Written test.	
	3	Scientific Investigation.	Laboratory Safety.	<p>By the end of the lesson, the learner should be able to:</p> <p>a) state the importance of practising safety measures in the laboratory.</p> <p>b) discuss the importance of practising safety measures in the laboratory.</p> <p>c) appreciate the importance of safety in the and access to a healthy working environment.</p>	<p>In groups, learners are guided to:</p> <p>brainstorm the importance of practising safety measures in the laboratory.</p> <p>discuss the importance of practising safety measures in the laboratory.</p> <p>practice safety measures in the laboratory and the general school environment.</p>	Why is it important to observe safety measures in the laboratory?	<p>Active Integrated Science pg 17-18.</p> <p>Digital devices.</p>	<p>Assessment rubric.</p> <p>Written test.</p> <p>oral questions.</p>	
	4	Scientific Investigation.	Laboratory Safety. Self-Assessment 2.	<p>By the end of the lesson, the learner should be able to:</p> <p>a) Attempt the questions on the</p>	<p>In pairs, individually, learners are guided to:</p> <p>answer the questions in Self-Assessment 2.</p>		<p>Assessment books.</p> <p>Active Integrated</p>	Assessment rubric.	

				sub-strand: Laboratory safety.			Science pg 19.		
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.	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.	

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

					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	By the end of the lesson, the learner should be able to: Define the terms: Electric current, Luminous	In groups, pairs, learner are guided to: Define the terms electric current, luminous	What is the SI units of electric current, luminous intensity	Active Integrated Science pg 29-30. Requirements for	Assessment rubric. Practical .	

			<p>current, Luminous intensity and Amount of substance.</p> <p>.</p>	<p>intensity and Amount of substance.</p> <p>Mention the SI units of electric current, luminous intensity and amount of substance.</p> <p>Carry out a practical to determine the electric current flowing in a closed circuit.</p> <p>Apply the SI unit to determine electric current flowing in a closed circuit.</p>	<p>intensity and amount of substance.</p> <p>Identify the SI units of electric current, luminous intensity and amount of substance.</p> <p>Carry out a practical to determine the electric current flowing in a closed circuit.</p>	<p>and amount of substance?</p>	<p>the practical.</p> <p>Digital devices.</p>	<p>Observation</p> <p>Oral questions.</p> <p>Written test.</p>	
	2	Scientific Investigation.	<p>Basic Science Skills:</p> <p>(a). Derived Quantities: Area and Volume.</p> <p>,</p>	<p>By the end of the lesson, the learner should be able to:</p> <p>Identify the derived quantities.</p> <p>State the SI units of area, volume and density.</p> <p>Calculate area and volume applying their formulas.</p>	<p>In groups, pairs, individually, learners are guided to:</p> <p>Identify the derived quantities and state their SI units.</p> <p>Carry out practical activities to determine the area of the floor of classroom and volume of a carton box.</p> <p>Apply the formula for area and volume to calculate area and</p>	<p>What is the SI unit of area, volume and density?</p> <p>How do we calculate the area and volume of objects?</p>	<p>Active Integrated Science pg 30-31.</p> <p>Realia.</p> <p>Digital devices.</p> <p>Metre rules and Tape measure.</p>	<p>Assessment rubric.</p> <p>Written tests.</p> <p>Practical .</p> <p>Oral questions.</p>	

				Determine the area and volume of items using the SI units.	volume and use the SI units.				
	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 Quantities 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	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	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.	

				<p>products and study the information on the packaging materials.</p> <p>Appreciate the importance of packaging labels on quantities or products.</p>	<p>materials and discuss its importance.</p> <p>Discuss the importance of reading packaging labels on quantities or products.</p>				
6	1	Scientific Investigation.	<p>Basic Science Skills.</p> <p>Application of basic skills in science.</p>	<p>By the end of the lesson, the learner should be able to:</p> <p>Identify the application of basic skills in science.</p> <p>Discuss the application of basic skills in science in real life activities.</p> <p>Apply the basic skills in science to solve problems in daily life.</p>	<p>In groups,pairs, learners are guided to:</p> <p>Brainstorm the application of basic skills in science in daily life.</p> <p>Discuss the application of basic skills in science in daily life.</p> <p>Search on the internet for more information on the application of basic skills in science in daily life.</p>	How do you apply basic science skills in your daily life?	<p>Digital devices.</p> <p>Active Integrated Science pg 34-35</p>	<p>Assessment rubric.</p> <p>Oral questions.</p> <p>Written tests.</p>	
	2	Scientific Investigation.	<p>Basic Science Skills:</p> <p>Self-assessment 3.</p>	<p>By the end of the lesson, the learner should be able to:</p> <p>Attempt the questions on the sub-strand:Basic Science Skills.</p>	<p>Individually ,learners are guided to:</p> <p>Answer all the questions in Self-assessment 3.</p>		<p>Assessment books.</p> <p>Active Integrated Science pg 36-37.</p>	Assessment rubric.	

	3	Scientific Investigation.	Laboratory Apparatus and Instruments .	<p>By the end of the lesson, the learner should be able to:</p> <p>Identify the apparatus and instruments used in the laboratory.</p> <p>Classify the laboratory apparatus and instruments according to their uses.</p> <p>Draw the laboratory apparatus and instruments on charts and name them.</p> <p>Appreciate the uses of the laboratory apparatus and instruments.</p>	<p>In groups,pairs,learner are guided to:</p> <p>Watch a video clip showing the laboratory apparatus and instruments.</p> <p>Identify the laboratory apparatus and instruments.</p> <p>classify the laboratory apparatus and instruments according to their uses.</p> <p>Draw and name the laboratory apparatus and instruments on charts and display them.</p>	Which apparatus or instruments are used in the laboratory?	<p>Digital devices.</p> <p>Active Integrated Science pg 38.</p> <p>Charts.</p> <p>Realia.</p> <p>Pictures.</p>	<p>Checklists.</p> <p>Observation schedules.</p> <p>Assessment rubric.</p> <p>Written test.</p> <p>Oral questions.</p>	
	4	Scientific Investigation.	<p>Laboratory Apparatus and Instruments .</p> <p>(a). Apparatus used for heating purposes.</p>	<p>By the end of the lesson, the learner should be able to:</p> <p>List the laboratory apparatus used for heating.</p> <p>State the uses of the different heating apparatus in the laboratory.</p>	<p>In groups,pairs,individually,learners are guided to:</p> <p>List the laboratory apparatus used in the laboratory.</p> <p>Observe the pictures of the different heating apparatus.</p>	Which apparatus are used for heating in the laboratory?	<p>Digital devices.</p> <p>Active Integrated Science pg 38-39.</p> <p>Pictures.</p> <p>Real heating apparatus.</p>	<p>Assessment rubric.</p> <p>Observation.</p> <p>Oral questions.</p> <p>Checklists.</p>	

				<p>Draw the heating apparatus in the laboratory.</p> <p>Handle the heating apparatus with care.</p>	<p>identify each of the heating apparatus by name.</p> <p>discuss the uses of the different heating apparatus.</p> <p>draw the heating apparatus in their books.</p>			Written tests.	
7	MID-TERM BREAK								
8	1	Scientific Investigation.	<p>Laboratory Apparatus and Instruments :</p> <p>(a).Heating apparatus.</p>	<p>By the end of the lesson, the learner should be able to:</p> <p>Identify the parts of a Bunsen burner.</p> <p>State the functions of the different parts of a Bunsen burner.</p> <p>Draw and label the parts of a Bunsen burner.</p> <p>Demonstrate how to use a Bunsen burner.</p> <p>Appreciate the use of Bunsen burners in the laboratory.</p>	<p>In groups,pairs,individually,learner are guided to:</p> <p>Observe a picture of a Bunsen burner and identify its parts.</p> <p>Discuss the functions of each part of a Bunsen burner.</p> <p>Draw and label the parts of a Bunsen burner.</p> <p>Use a Bunsen burner to heat water .</p>	<p>What is the difference between a luminous and non-luminous flame?</p> <p>What are the parts of a Bunsen burner?</p>	<p>Bunsen burner.</p> <p>Active Integrated Science pg 40-42.</p>	<p>Practical .</p> <p>Assessment rubric.</p> <p>Oral questions.</p> <p>Observation schedule .</p> <p>Written test.</p>	

	2.	Scientific Investigation.	Laboratory apparatus and Instruments . (b) Instruments used to measure: mass and weight, temperature and time.	<p>By the end of the lesson, the learner should be able to;</p> <p>Identify the instruments used to measure mass and weight.</p> <p>Identify the instruments used to measure temperature and time.</p> <p>Carry out simple practical activities using instruments used to measure time, temperature, mass and weight.</p> <p>Have fun using the instruments used in measuring mass, weight, temperature and time.</p>	<p>In groups, pairs, individually, learner are guided to:</p> <p>Observe and Identify the instruments used to measure mass, weight, time and temperature.</p> <p>Carry out simple practical activities using the identified instruments and record their observations.</p> <p>Use digital devices to search the pictures of the instruments used to measure time, temperature, mass and weight and then draw them.</p>	Which instruments are used to measure time, temperature, mass and weight?	<p>Realia.- instruments.</p> <p>Digital devices.</p> <p>Active Integrated Science pg 43-45</p>	<p>Assessment rubric.</p> <p>Practicals.</p> <p>Written tests.</p> <p>Observation.</p> <p>Oral questions.</p>	
	3	Scientific Investigation.	Laboratory apparatus and instruments . (c). Instruments used to measure length, volume and	<p>By the end of the lesson, the learner should be able to:</p> <p>Identify the instruments used to measure length.</p> <p>Identify the apparatus used to measure volume (fixed and not fixed)</p>	<p>in groups, pairs, individually, learners are guided to:</p> <p>observe and identify the instruments and apparatus used for magnification, measuring length and volume.</p>	<p>Why are most of the apparatus used in measuring volume made of transparent glass or plastic?</p> <p>What is magnification?</p>	<p>Realia – apparatus and instruments.</p> <p>Active Integrated Science pg 45-49.</p>	<p>Assessment rubric.</p> <p>Oral questions.</p> <p>Written test.</p> <p>Observation</p>	

			magnification.	<p>Identify the instruments used for magnification.</p> <p>Draw apparatus used to measure volume and instrument for magnification.</p> <p>Carry out simple experiments to magnify and measure volume, length.</p> <p>Appreciate the apparatus used for magnification and measuring length, volume.</p>	<p>State the uses of the different apparatus used to measure volume.</p> <p>Define term magnification.</p> <p>Draw instruments for magnification and apparatus for measuring volume.</p>		Digital devices.	<p>schedules.</p> <p>Checklists.</p>	
	4.	Scientific Investigation.	<p>Laboratory apparatus and instruments .</p> <p>(d). Instruments used for magnification: Light Microscope .</p>	<p>By the end of the lesson, the learner should be able to:</p> <p>Identify the parts of the Light Microscope.</p> <p>State the functions of the different parts of the microscope.</p> <p>Draw and label the parts of a Light Microscope.</p> <p>Appreciate the uses of the Light Microscope.</p>	<p>In groups,pairs,individually,learner are guided to:</p> <p>Observe a Light Microscope and identify its different parts.</p> <p>Draw and label all the parts of a Light Microscope.</p> <p>Outline and discuss the functions of the different parts of the Light Microscope.</p> <p>Watch a video clip showing a light</p>	<p>What is a specimen and aperture?</p> <p>Why does a microscope have a wide base?.</p>	<p>Light Microscope.</p> <p>Active Integrated Science pg 49-51.</p> <p>Charts.</p> <p>Digital devices.</p>	<p>Assessment rubric.</p> <p>Written test.</p> <p>Oral questions.</p> <p>Checklists.</p>	

					microscope and functions of the different parts.				
9	1	Scientific Investigation.	Laboratory apparatus and instruments . (e).using a light microscope .	By the end of the lesson, the learner should be able to: Outline the procedure of using a light microscope. Discuss how to use a light microscope. Handle a light microscope with care. Appreciate the uses of light microscope.	In groups,pairs,learners are guided to: Discuss the procedure of using a light microscope Follow the outlined procedure to use a light microscope. Conduct an experiment using a light microscope. Watch a video on how to use a light microscope.	What is the procedure of using a light microscope?	Active Integrated Science pg 51-52. Digital device. Light Microscope.	Assessment rubric. Observation schedules. Checklists. Practical .	
	2	Scientific Investigation.	Laboratory apparatus and instruments . (f). Other commonly used laboratory apparatus.	By the end of the lesson, the learner should be able to: Identify other apparatus and instruments used in the laboratory. State the uses of the identified apparatus and instruments used in the laboratory. Draw the apparatus and instruments on charts.	In groups,pairs,individually,learner are guided to: Observe and identify other commonly used laboratory apparatus. Search on the internet the pictures of the apparatus and instruments.	Which are the other commonly used laboratory apparatus?	Digital devices. Pictures. Charts. Active Integrated Science pg 52-56.	Assessment rubric. Written test. Observation. Checklists.	

				Appreciate the uses of the apparatus and instruments.	Discuss the uses of each of the apparatus and instruments. Draw the apparatus on charts and display them in class .			Oral question s.	
	3	Scientific Investigation.	Laboratory apparatus and instruments . (g). How to handle and care for apparatus and instruments in the laboratory.	By the end of the lesson, the learner should be able to: State the safety precautions when handling laboratory instruments and apparatus, Handle and care for the apparatus and instruments in the laboratory. Appreciate the importance of the safety precautions when handling laboratory apparatus and instruments.	In groups,pairs ,learners are guided to: Search the internet for information on safety precautions to take when handling apparatus and instruments in the laboratory. Discuss how to handle and care for different types of apparatus and instruments in the laboratory.	Why is it important to take care of laboratory apparatus? What are the basic measures that should be considered when storing different laboratory apparatus?	Digital devices. Active Integrated Science pg 57-59	Assessment rubric. Written test. Oral question s. Checklists.	
	4	Scientific Investigation.	Laboratory apparatus and instruments .	By the end of the lesson, the learner should be able to; State the importance of the information on the packaging of the	In groups,pairs,learners are guided to: Explain the term consumer protection.	What is the importance of consumer protection when handling apparatus and	Digital devices. Active Integrated	Assessment rubric.	

			(h). Importance of consumer protection when handling laboratory apparatus and chemicals.	<p>laboratory chemicals and apparatus.</p> <p>Design a poster highlighting the safety precautions that should be taken when handling chemicals, apparatus and instruments in laboratory.</p> <p>Appreciate the importance of consumer protection when handling different apparatus and chemicals in the laboratory.</p>	<p>Discuss ways in which consumers are protected when handling chemicals and apparatus in the laboratory.</p> <p>Use digital device with internet connection to Search on the safety precautions to observe when handling apparatus and chemicals in the laboratory.</p> <p>Practice safety precautions when handling chemicals, apparatus and instruments in the laboratory.</p> <p>Design a poster highlighting the safety precautions that should be taken when handling chemicals, apparatus and instruments in lab.</p>	chemicals in the laboratory?	Science pg 59-61.	<p>Oral question s.</p> <p>Written test.</p> <p>Observa tion.</p>	
10	1	Scientific Investigation.	Laboratory apparatus and instruments .	<p>By the end of the lesson, the learner should be able to:</p> <p>Attempt the questions on the sub-strand: laboratory</p>	<p>Individually, learners are guided to:</p> <p>Answer the questions on the sub-strand.</p>		<p>Assessment books.</p> <p>Digital devices.</p> <p>Active Integrated</p>	<p>Assessment rubric.</p> <p>Written test.</p>	

			Self – assessment 4.	apparatus and instruments.			Science pg 61-62.		
	2	Mixture s ,Elements and Compounds.	Mixtures. (a). Classification of mixtures,	By the end of the lesson, the learner should be able to: a) Define the term mixture and give examples of mixtures.. a) Differentiate between a homogeneous and heterogeneous mixture. a) Classify different types of mixtures as homogeneous or heterogeneous.	In groups,pairs,learners are guided to: Find out the meaning of the words homogeneous and heterogenous from the dictionary. Explain what is a homogeneous mixture and heterogeneous mixture and give examples. Give examples of mixtures. Study the mixtures provided and classify them as either homogeneous or heterogenous. Classify mixtures based on the states of matter of the components of the mixture (solid- solid,solid-liquid,liquid- liquid,gas-gas)	What is a mixture? What is the difference between a homogeneous and heterogeneous mixture? How can you classify mixtures?	Dictionar y. Digital devices. Active Integrated Science pg 64-65. Realia.	Assessm ent rubric. Written test. Checklis ts. Practical s. Observa tion.	

	3	Mixtures, Elements and Compounds.	Mixtures. (a). Distinguishing between pure and impure substances.	By the end of the lesson, the learner should be able to: <ul style="list-style-type: none"> a) State the difference between a pure and impure substance. b) Distinguish between pure and impure substances using melting and boiling points. c) Search and watch videos and animations on determining melting and boiling points of substances. d) Enjoy watching the videos and animations. 	In groups, learners are guided to: Search the internet to find out at what temperature ice and candle wax melt at sea level. Search and watch videos and animations on determining melting and boiling points of substances. Discuss their findings from the videos and present in class.	What is the difference between a pure and impure substance?	Digital devices. Videos and animations. Active Integrated Science pg 66.	Observation. Oral report./questions	
	4	Mixtures, Elements and Compounds.	Mixtures. Distinguishing between pure and impure	By the end of the lesson, the learner should be able to: <ul style="list-style-type: none"> a) Define the term melting point. 	In groups, learners are guided to: Carry out a simple experiment to determine if ice is a pure or an impure substance by	What is melting point? How do you distinguish between a pure and impure	Active Integrated Science pg 66. Requirements for	Assessment rubric. Practical .	

			substances using the melting point.	b) Determine if ice is a pure or an impure substance by checking its melting point.	checking its melting point. Observe and record the temperature. Analyse the temperature recorded to determine if ice is a pure or impure substance.	substance by melting?	the experiment.	Observation. Oral questions.	
11	1	Mixtures, Elements and Compounds .	Mixtures.	By the end of the lesson, the learner should be able to: a) Determine if candle wax is a pure or impure substance by melting point.	In groups, learners are guided to: Carry out a simple experiment to determine if candle wax is a pure or impure substance by determining its melting point. Observe, record the temperature and analyse the temperature recorded to determine if candle wax is a pure or impure substance.	How do you distinguish between a pure and impure substance by melting?	Active Integrated Science pg 67. Requirements for the experiment.	Assessment rubric. Practical . Observation schedules. Oral questions. Checklists.	
	2	Mixtures, Elements and Compounds.	Mixtures. Distinguishing between pure and impure	By the end of the lesson, the learner should be able to: a) Determine the boiling point of	In groups, learners are guided to: Carry out an experiment to determine the boiling point of pure and impure water.	What is boiling point? How do you determine if a substance is pure or impure	Active Integrated Science pg 68-69. Requirements for	Practical . Oral questions.	

			substances using the boiling point.	pure and impure water.	Observe, record and analyse the temperature recorded to determine which water is pure and impure .	using the boiling point?	the experiment.	Observation schedule . Checklists.	
	3	Mixtures, Elements and Compounds.	Mixtures. Methods of Separating Mixtures, Simple distillation.	By the end of the lesson, the learner should be able to: <ul style="list-style-type: none"> a) Name two traditional and modern methods of separating mixtures. b) Outline the procedure for separating a mixture using simple distillation. c) Carry out an experiment to separate a mixture using simple distillation. d) Enjoy conducting the experiment. 	<p>In groups, learners are guided to:</p> <p>List the different methods of separating mixtures.</p> <p>Discuss simple distillation as a method of separating mixtures.</p> <p>Outline and discuss the procedure for separating a mixture using simple distillation.</p> <p>Carry out an experiment to separate salt and water from their solution using simple distillation.</p> <p>Observe, record and discuss the observations from the experiment.</p>	Which types of mixtures can be separated by simple distillation?	Active Integrated Science pg 69-70. Requirements for the experiment.	Practical . Observation schedules. Oral questions. Checklists. Written test	

	4	Mixture s, Elements and Compounds.	Mixtures. Experiment on fractional distillation	By the end of the lesson, the learner should be able to: a) Discuss fractional distillation as method of separating mixtures. b) Outline the procedure for separating a mixture using fractional distillation. c) Carry out an experiment to separate a mixture using fractional distillation.	In groups, learners are guided to: Discuss fractional distillation as a method of separating mixtures. Outline and explain the procedure for separating mixtures using fractional distillation. Carry out an experiment to separate a mixture of ethanol and water using fractional distillation. Discuss the observations from the experiment.	Which mixtures can be separated by fractional distillation? What is fractional distillation?	Requirements for the experiment. Active Integrated Science pg 70-72.	Assessment rubric. Practical . Observation schedule . Written test. Checklists. Oral questions.	
12	REVISION								
13	ASSESSMENT.								