1		•		OP	ENING AND RECEIVING LEARNERS		•	
2	1	ELEMENTS,MI XTURES AND COMPOUNDS	Introduction to Matter	By the end of the lesson learner should be able to: a)define matter b)identify some matter. c)watch a video clip on matter state in our day to day life	The learner is guided to: •perform simple experiments on projectperties of the different states of matter (volume e, shape, density, compressibility and ability to flow) •  use digital devices to search, play and observe videos and animations sho wing the projectperties of different states of matter (in relation to volume, shape, density, compressibility and ability to flow	w do the movement of particles in matter affect its physical projectperties	Laboratory Apparatus and Equipment  Textbooks  Software  Relevant reading materials  Digital Devices  Recording Spotlight Integrated Science Learner's Book Grade 8 pg. 1-2	Reflections  Game Playing  Pre  Post T esting  Model Making  Explorations  Experiments  Investigations  Conventions, Conferences, and Debates  Applications  Projectject  Journals  Portfolio  Oral or Aural Questions  Learner's Project
	2	ELEMENTS,MI XTURES AND COMPOUNDS	Classification of matter	By the end of the lesson learner should be able to: a) describe projectperties of the different states of matter, b) appreciate the applications of change of state in our day to day life	The learner is guided to:  perform simple experiments on projectperties of the different states of matter ( volum e, shape, density, compressibility and ability to flow ),	w do the movement of particles in matter affect its physical projectperties	Laboratory Apparatus and Equipment  Textbooks  Software  Relevant reading materials  Digital Devices	Reflections  Game Playing  Pre  Post T esting  Model Making  Explorations

						Pagarding	Evporimente	$\overline{}$
				perform experiments to demonstrate diffusion in liquids ( use of water and potassium manganate (VII ),  c arry out simple experiments to demonstrate physical changes, temporary chemical changes and perma nent changes of substances,  discuss the applications of change of state of matter in day  to  day life ( refrigerators, ice  cream vendors, fog formation, among others ),  where necessary, use digital devices to search, play and observe videos and animations sho wing the projectperties of different states of matter (in relation to volume, shape, density, compressibility and ability to flow		Recording Spotlight Integrated Science Learner's Book Grade 8 pg. 3-4	Experiments Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject Journals Oral or Aural Questions Learner's Project	
3	ELEMENTS,MI XTURES AND COMPOUNDS	Projectperties of solids	By the end of the lesson learner should be able to: a) describe projectperties of the different states of matter, b) demonstrate diffusion in liquids, c) distinguish between temporary and permanent changes	The learner is guided to :  perform simple experiments on projectperties of the different states of matter ( volum e, shape, density, compressibility and ability to flow ),  perform experiments to demonstrate	w do the movement of particles in matter affect its physical projectperties	Laboratory Apparatus and Equipment  Textbooks Software Relevant reading materials Digital Devices Recording Spotlight Integrated	Reflections  Game Playing  Pre  Post T esting  Model Making  Explorations  Experiments	

	1		Ι.	T 1100 1 1 1 1 1 1 1	1	T		
			in	diffusion in liquids (		Science Learner's Book	Investigations	
			substances	use of water and		Grade 8 pg. 7	•	
			,	potassium manganate (VII			Conventions,	
			d)	),			Conferences, and	
			outline	•			Debates	
			applications of	С				
			change of state of matter	arry out simple experiments to			Applications	
			in day	demonstrate physical changes,			Applications	
			-	temporary chemical changes and			Teacher	
			to	perma				
			10				Observations	
			alant life	nent changes of substances,			•	
			day life,	•			Projectject	
			e)	discuss the applications of change of			•	
			appreciate the	state of matter in day			Journals	
			applications of change of	-			l •	
			state in our day to day life	to			Portfolio	
				-			1 Ortiono	
				day life			Orol or Aural	
				1 (			Oral or Aural	
				refrigerators, ice			Questions	
				-			•	
				araam yandara fas			Learner's Project	
				cream vendors, fog				
				formation, among others				
				),				
				•				
				where necessary,				
				use digital devices				
				to search, play and observe videos				
				and animations sho				
				wing the				
				projectperties of different states of				
				matter				
				(in relation to				
				volume, shape, density,				
				compressibility and ability to flow				
4	ELEMENTS,MI	Projectperties	By the end of the lesson learner	The learner	w do the	Laboratory	Reflections	
	XTURES AND	of liquids	should be able to:	is	movement of	Apparatus and	•	
	COMPOUNDS	1	a)	guided to	particles in	Equipment	Game Playing	
	2 2 3 2 2 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2		describe		matter affect its		• Carrie I laying	
			projectperties of the		physical	Textbooks	Pre	
			different states	norform aimale our eries ente		I GYIDOOKS	Pie	
				perform simple experiments	projectperties	•	-	
			of	on		Software	Post T	
			matter,	projectperties of the different states of		•	esting	
			b)	matter (		Relevant reading	•	
			demonstrate diffusion in	volum		materials	Model Making	
			liquids,	e, shape, density,		•	•	
			c)	compressibility and ability to flow		Digital Devices	Explorations	
			distinguish between	1).		Ligital Dovidos	_Apiorations	
			temporary and permanent			Recording	Evporimente	
			changes	perform experiments to demonstrate			Experiments	
			in			Spotlight Integrated	•	
				diffusion in liquids (		Science Learner's Book	Investigations	
		<u> </u>	substances	use of water and		Grade 8 pg. 8	•	

			d) outline applications of change of state of matter in day to day life, e) appreciate the applications of change of state in our day to day life	potassium manganate (VII ),  c arry out simple experiments to demonstrate physical changes, temporary chemical changes and perma nent changes of substances,  discuss the applications of change of state of matter in day  day life ( refrigerators, ice  cream vendors, fog formation, among others ),  where necessary, use digital devices to search, play and observe videos and animations sho wing the projectperties of different states of matter (in relation to volume, shape, density, compressibility and ability to flow			Conventions, Conferences, and Debates  Applications  Teacher Observations  Projectject  Journals  Portfolio  Oral or Aural Questions  Learner's Project	
5	ELEMENTS,MI XTURES AND COMPOUNDS	Projectperties of gases	By the end of the lesson learner should be able to: a) describe projectperties of the different states of matter, b) demonstrate diffusion in liquids, c) distinguish between temporary and permanent changes in substances , d)	The learner is guided to:  perform simple experiments on projectperties of the different states of matter ( volum e, shape, density, compressibility and ability to flow ),  perform experiments to demonstrate diffusion in liquids ( use of water and potassium manganate (VII ),	w do the movement of particles in matter affect its physical projectperties	Laboratory Apparatus and Equipment  Textbooks  Software  Relevant reading materials  Digital Devices  Recording Spotlight Integrated Science Learner's Book Grade 8 pg. 9	Reflections  Game Playing  Pre  Post T esting  Model Making  Explorations  Experiments  Investigations  Conventions, Conferences, and	

	1		a valin a		1		Dahataa	1
			outline applications of change of state of matter in day - to - day life, e) appreciate the applications of change of state in our day to day life	c arry out simple experiments to demonstrate physical changes, temporary chemical changes and perma nent changes of substances, discuss the applications of change of state of matter in day to day life (refrigerators, ice cream vendors, fog formation, among others), where necessary, use digital devices to search, play and observe videos and animations sho wing the projectperties of different states of matter (in relation to volume, shape, density,			Debates  Applications  Teacher Observations  Projectject  Journals  Portfolio  Oral or Aural Questions  Learner's Project	
3 1	ELEMENTS,MI XTURES AND COMPOUNDS	Temporary and permanent changes	By the end of the lesson learner should be able to: a) describe projectperties of the different states of matter, b) demonstrate diffusion in liquids, c) distinguish between temporary and permanent changes in substances , d) outline applications of	compressibility and ability to flow  The learner is guided to:  perform simple experiments on projectperties of the different states of matter ( volum e, shape, density, compressibility and ability to flow ),  perform experiments to demonstrate diffusion in liquids ( use of water and potassium manganate (VII ),  c	w do the movement of particles in matter affect its physical projectperties	Laboratory Apparatus and Equipment Textbooks Software Relevant reading materials Digital Devices Recording Spotlight Integrated Science Learner's Book Grade 8 pg. 15	Reflections  Game Playing  Pre  Post T esting  Model Making  Explorations  Investigations  Conventions, Conferences, and Debates	

		change of state of matter in day  to  day life, e) appreciate the applications of change of state in our day to day life	arry out simple experiments to demonstrate physical changes, temporary chemical changes and perma nent changes of substances,  discuss the applications of change of state of matter in day  to  day life ( refrigerators, ice  cream vendors, fog formation, among others ),  where necessary, use digital devices to search, play and observe videos and animations sho wing the projectperties of different states of matter (in relation to volume, shape, density,			Applications  Teacher Observations  Projectject  Journals  Portfolio  Oral or Aural Questions  Learner's Project
MIXTURES ,ELEMENTS AND COMPOUNDS	Elements and compound	By the end of the lesson the learner should be able to: a) distinguish between an element and a compound, b) relate common elements to their symbols, c) outline the ap plications of common elements in day - to - day life,	rner is guided to :  d iscuss the difference between elements and compounds, a ssign approjectpriate symbols to common elemen ts and compounds cover ( copper, aluminium, iron,silver, table salt, and water ), discuss the names of common elements and their symbols (the first 13 elements of	How are symbols assigned to elements? 2. What is the value of elements in day - t	Laboratory Apparatus and Equipment  Textbooks  Software Relevant reading materials Digital Devices Recording Spotlight Integrated Science Learner's Book Grade 8 pg. 16-17	Reflections  Game Playing  Pre  Post T esting  Model Making  Explorations  Investigations  Conventions, Conferences, and Debates  Applications

			d) appreciate the information on packag ing labels of commonly consumed substances	the periodic table and commonly used metals: zinc, lead, tin, gold, mercury and limited to the latin names only where applicable),  d iscuss the importance and market value of common elements and compounds in society ( jewellery, iron, toiletries, food nutrients,mineral elements, medals among others ),  S ample labelled containers of different substances indicating the common elements as part of the ingredients			Teacher Observations  Projectject  Journals  Portfolio  Oral or Aural Questions  Learner's Project	
3	MIXTURES ,ELEMENTS AND COMPOUNDS	Common elements and their symbols	By the end of the lesson the learner should be able to: a) distinguish between an element and a compound, b) relate common elements to their symbols, c) outline the ap plications of common elements in day - to - day life, d) appreciate the information on packag ing labels	rner is guided to :  d discuss the difference between elements and compounds,  a ssign approjectpriate symbols to common elemen ts and compounds cover ( copper, aluminium, iron,silver, table salt, and water ),  discuss the names of common elements and their symbols (the first 13 elements of the periodic table and commonly used metals: zinc, lead, tin, gold, mercury and limited to	How are symbols assigned to elements? 2. What is the value of elements in day - t	Laboratory Apparatus and Equipment  Textbooks  Software  Relevant reading materials  Digital Devices  Recording Spotlight Integrated Science Learner's Book Grade 8 pg. 18	Reflections Game Playing Pre Post T esting Model Making Explorations Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject	

	I		1 - t	d	1			
			of commonly consumed	the latin names only where applicable),			Journals	
			substances	• where applicable),			Portfolio	
				d			•	
				iscuss the importance and market			Oral or Aural	
				value of			Questions	
				common elements and compounds in			•	
				society (			Learner's Project	
				jewellery, iron, toiletries, food				
				nutrients,mineral elements, medals among				
				others				
				).				
				, ''				
				S				
				ample labelled containers of different				
				substances				
				indicating the common elements				
				as part of the ingredients				
4	MIXTURES	Applications of	By the end of the lesson the learner	rner	How are	Laboratory	Reflections	
•	,ELEMENTS	common	should	is	symbols	Apparatus and	•	
	AND	elements	be able to:	guided to	assigned to	Equipment	Game Playing	
	COMPOUNDS		a)	:	elements?	•	•	
			distinguish between	•	2.	Textbooks	Pre	
			an	d	What is the	•	<del>-</del>	
			element and a	iscuss the difference between elements	value of	Software	Post T	
			compound, b)	and compounds,	elements in day	Delever of searches	esting	
			relate common	•	uay	Relevant reading materials	Model Making	
			elements to their	a	l t	materials	woder waking	
			symbols,	ssign approjectpriate symbols to		Digital Devices	Explorations	
			(c)	common		• Digital Devices	•	
			outline the	elemen		Recording	Experiments	
			ap	ts and compounds cover (		Spotlight Integrated	•	
			plications of	copper,		Science Learner's Book	Investigations	
			common elements	aluminium, iron,silver, table salt, and		Grade 8 pg. 20	•	
			in day	water			Conventions,	
				/, •			Conferences, and	
			to	discuss the names of common			Debates	
			-	elements and			Applications	
			day life,	their symbols (the first 13 elements of			Applications	
			d)	the			• Teacher	
			appreciate the	periodic table and commonly used			Observations	
			information on	metals:			•	
			packag	zinc, lead, tin, gold, mercury and limited to			Projectject	
			ing labels of	the			•	
			commonly consumed	latin names only where applicable),			Journals	
			substances	•			•	
				d			Portfolio	
				iscuss the importance and market			•	

				value of common elements and compounds in society ( jewellery, iron, toiletries, food nutrients, mineral elements, medals among others ),  • S ample labelled containers of different			Oral or Aural Questions • Learner's Project
				substances indicating the common elements as part of the ingredients			
5	MIXTURES ,ELEMENTS AND COMPOUNDS	Packaging lables	By the end of the lesson the learner should be able to: a) distinguish between an element and a compound, b) relate common elements to their symbols, c) outline the ap plications of common elements in day - to - day life, d) appreciate the information on packag ing labels of commonly consumed substances	rner is guided to :  d d iscuss the difference between elements and compounds,  a ssign approjectpriate symbols to common elemen ts and compounds cover ( copper, aluminium, iron,silver, table salt, and water ),  discuss the names of common elements and their symbols (the first 13 elements of the periodic table and commonly used metals: zinc, lead, tin, gold, mercury and limited to the latin names only where applicable),  d iscuss the importance and market value of common elements and compounds in society ( jewellery, iron, toiletries, food nutrients, mineral elements, medals	How are symbols assigned to elements? 2. What is the value of elements in day - t	Laboratory Apparatus and Equipment  Textbooks Software Relevant reading materials Digital Devices Recording	Reflections  Game Playing  Pre  Post T esting  Model Making  Explorations  Experiments  Investigations  Conventions, Conferences, and Debates  Applications  Teacher Observations  Projectject  Journals  Portfolio  Oral or Aural Questions  Learner's Project

	1			T	T	T		1
					among others ),  S ample labelled containers of different substances indicating the common elements as part of the ingredients			
5		MIXTURES ,ELEMENTS AND COMPOUNDS	Package labels	By the end of the lesson the learner should be able to: a) distinguish between an element and a compound, b) relate common elements to their symbols, c) outline the ap plications of common elements in day - to - day life, d) appreciate the information on packag ing labels of commonly consumed substances	rner is guided to:  d iscuss the difference between elements and compounds, a ssign approjectpriate symbols to common elemen ts and compounds cover (copper, aluminium, iron,silver, table salt, and water), discuss the names of common elements and their symbols (the first 13 elements of the periodic table and commonly used metals: zinc, lead, tin, gold, mercury and limited to the latin names only where applicable), d iscuss the importance and market value of common elements and compounds in society (jewellery, iron, toiletries, food nutrients,mineral elements, medals among others), S	How are symbols assigned to elements? 2. What is the value of elements in day - t	Laboratory Apparatus and Equipment  Textbooks  Software  Relevant reading materials  Digital Devices  Recording	Reflections Game Playing Pre Post T esting Model Making Explorations Experiments Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject Journals Portfolio Oral or Aural Questions Learner's Project

			ample labelled containers of different substances indicating the common elements as part of the ingredients			
2 MIXTURES ,ELEMENTS AND COMPOUND	Common elements and their symbols	By the end of the lesson the learner should be able to: a) distinguish between an element and a compound, b) relate common elements to their symbols, c) outline the ap plications of common elements in day - to - day life, d) appreciate the information on packag ing labels of commonly consumed substances	rner is guided to :  d discuss the difference between elements and compounds,  a ssign approjectpriate symbols to common elemen ts and compounds cover ( copper, aluminium, iron,silver, table salt, and water ),  discuss the names of common elements and their symbols (the first 13 elements of the periodic table and commonly used metals: zinc, lead, tin, gold, mercury and limited to the latin names only where applicable),  d iscuss the importance and market value of common elements and compounds in society ( jewellery, iron, toiletries, food nutrients, mineral elements, medals among others ),  S ample labelled containers of different substances indicating the common elements as part of the ingredients	How are symbols assigned to elements? 2. What is the value of elements in day t	Laboratory Apparatus and Equipment  Textbooks Software Relevant reading materials Digital Devices Recording Spotlight Integrated Science Learner's Book Grade 8 pg. 22	Reflections Game Playing Pre Post T esting Model Making Explorations Experiments Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject Journals Oral or Aural Questions Learner's Project

4	MIXTURES ,ELEMENTS AND COMPOUNDS	Common elements and their symbols  STRUCTURE	By the end of the lesson the learner should be able to: a) distinguish between an element and a compound, b) relate common elements to their symbols, c) outline the ap plications of common elements in day - to - day life, d) appreciate the information on packag ing labels of commonly consumed substances	rner is guided to:  d iscuss the difference between elements and compounds,  a ssign approjectpriate symbols to common elemen ts and compounds cover (copper, aluminium, iron,silver, table salt, and water),  discuss the names of common elements and their symbols (the first 13 elements of the periodic table and commonly used metals: zinc, lead, tin, gold, mercury and limited to the latin names only where applicable),  d iscuss the importance and market value of common elements and compounds in society (jewellery, iron, toiletries, food nutrients, mineral elements, medals among others),  S ample labelled containers of different substances indicating the common elements as part of the ingredients  The learner is guided to:	How are symbols assigned to elements? 2. What is the value of elements in day - t	Laboratory Apparatus and Equipment  Textbooks  Software  Relevant reading materials  Digital Devices  Recording	Reflections Game Playing Pre Post T esting Model Making Explorations Experiments Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject Journals Portfolio Oral or Aural Questions Learner's Project  Written Test
	ELEMENTS AND	OF THE ATOM	should be able to:	• d	structure of an atom?	Basic Laboratory Apparatus	Assessment Rubrics Checklist Anecdotal
	COMPOUNDS	ATOM 7	able to:	iscuss the meaning of the atom and	atom?	Apparatus Equipment	Records
	COMFOUNDS	′	describe the structure	illustrate its structure (projecttons,	How do atoms	Selected specimens	Oral Questions and

			of an atom and electron arrangement of elements, b) determine atomic number and mass number of eleme nts, c) classify elements into metals and non - metals, d) appreciate the value of different elements in day - to - day life a)	neutrons, and electrons),  d raw and discuss the electron arrangements of elements and classify them into metals and non  metals ( first 20 elements of the periodic table ),  d iscuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table ),  use digital or pr int media to search for information on the structure of an atom, electron arrangement, atomic number and mass number of elements,  Projectject: model the atomic structure of selected elements of the periodic table using locally available materials	gain stability	Ice Candle wax Water/salty water Spotlight Integrated Science Learner's Book Grade 7 pg. 66-67	AnswersReflection s  Game Playing Pre Post T esting Model Making Explorations Experiments Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject Journals Portfolio Oral or Aural Questions
5	MIXTURES, ELEMENTS AND COMPOUNDS	Atomic numbe	By the end of the lesson the learner should be able to: a) describe the structure of an atom and electron arrangement of elements, b) determine atomic number and mass number of elements,	The learner is guided to:  d iscuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons),  d raw and discuss the electron arrangements of elements and classify them into metals and non	hat is the structure of an atom? 2. How do atoms gain stability	Course book Basic Laboratory Apparatus Equipment Selected specimens Ice Candle wax Water/salty water Spotlight Integrated Science Learner's Book Grade 8 pg. 66-67	Written Test Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection s  Game Playing Pre

		1	Ι ,	T			D . T	
			c)	-			Post T	
			classify elements into	metals			esting	
			metals and non				•	
			-	first			Model Making	
			metals,	20			•	
			d)	elements of the periodic table			Explorations	
			appreciate the value of	\			Explorations	
				),			•	
			different elements in	•			Experiments	
			day	d			•	
			-	iscuss and illustrate the atomic			Investigations	
			to	number			anvooligations	
				and mass number of elements (			•	
			day life	first 13			Conventions,	
							Conferences, and	
			b)	elements of the periodic table			Debates	
				),			•	
				•			Applications	
				use digital or pr			, applications	
				int media to search for			Totalon	
				information on the			Teacher	
							Observations	
				structure of an atom,			•	
				electron arrangement, atomic number			Projectject	
				and mass number of elements,			- rejectject	
				•			lournolo	
				Projectject:			Journals	
				model the atomic structure of			•	
				and a standard and a standard and the analysis of the standard at the standard			Portfolio	
				selected elements of the periodic table				
				using locally available materials			Oral or Aural	
							Questions	
							Questions	
							•	
							Learner's Project	
1	MIXTURES,	Mass number	By the end of the lesson the learner	The learner is guided to:	hat is the	Course book	Written Test	
*	ELEMENTS	Trans Iranicoi	should be	a summer to guilded to:	structure of an	Basic Laboratory	Assessment Rubrics	
	AND		able to:	d	atom?	Apparatus	Checklist Anecdotal	
	COMPOUNDS		a)	iscuss the meaning of the atom and	2.	Equipment	Records	
			describe the structure	illustrate its structure (projecttons,	How do atoms	Selected specimens	Oral Questions and	
			of an atom and electron	neutrons,	gain stability	Ice	AnswersReflection	
			arrangement of	and electrons),	,	Candle wax	s	
			elements,	•		Water/salty water	~	
			b)	4		Spotlight Integrated		
				d		Spoutgrii Integrated	O a mar Di	
			determine atomic	raw and discuss		Science Learner's Book	Game Playing	
			number and mass	the electron		Grade 8 pg. 66-67	•	
			number of eleme	arrangements of elements and classify			Pre	
			nts,	them into metals and non			-	
			c)	-			Post T	
			classify elements into	metals				
			metals and non	IIICIAIS			esting	
			metals and non				•	
			-	first			Model Making	
			metals,	20			•	
			d)	elements of the periodic table			Explorations	
			appreciate the value of	),				
			different elements in	,, •			Cynarimanta	
			day	•			Experiments	
	l .	I	, au	1			1	1

			to day life c)	d iscuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table ),  use digital or pr int media to search for information on the structure of an atom, electron arrangement, atomic number and mass number of elements,  Projectject: model the atomic structure of selected elements of the periodic table using locally available materials			Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject Journals Portfolio Oral or Aural Questions Learner's Project	
2	MIXTURES, ELEMENTS AND COMPOUNDS	Metals and non metals	By the end of the lesson the learner should be able to: a) describe the structure of an atom and electron arrangement of elements, b) determine atomic number and mass number of eleme nts, c) classify elements into metals and non - metals, d) appreciate the value of different elements in day - to - day life d)	The learner is guided to:  d iscuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons),  d raw and discuss the electron arrangements of elements and classify them into metals and non  metals ( first 20 elements of the periodic table ),  d iscuss and illustrate the atomic number and mass number of elements ( first 13 elements of the periodic table ),  e	hat is the structure of an atom? 2. How do atoms gain stability	Course book Basic Laboratory Apparatus Equipment Selected specimens Ice Candle wax Water/salty water Spotlight Integrated Science Learner's Book Grade 8 pg. 66-67	Written Test Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection s  Game Playing Pre Post T esting Model Making Explorations Investigations Conventions, Conferences, and Debates Applications	

				use digital or pr int media to search for information on the structure of an atom, electron arrangement, atomic number and mass number of elements, • Projectject: model the atomic structure of selected elements of the periodic table using locally available materials			• Teacher Observations • Projectject • Journals • Portfolio • Oral or Aural Questions • Learner's Project	
3	MIXTURES, ELEMENTS AND COMPOUNDS	Metals and non metals	By the end of the lesson the learner should be able to: a) describe the structure of an atom and electron arrangement of elements, b) determine atomic number and mass number of elements, c) classify elements into metals and non - metals, d) appreciate the value of different elements in day - to - day life e)	The learner is guided to:  d iscuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons), d raw and discuss the electron arrangements of elements and classify them into metals and non metals ( first 20 elements of the periodic table ), d d iscuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table ), use digital or pr int media to search for information on the structure of an atom, electron arrangement, atomic number and mass number of elements, Projectject: model the atomic structure of	hat is the structure of an atom? 2. How do atoms gain stability	Course book Basic Laboratory Apparatus Equipment Selected specimens Ice Candle wax Water/salty water Spotlight Integrated Science Learner's Book Grade 8 pg. 66-67	Written Test Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection S  Game Playing Pre Bost T Esting Model Making Explorations Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject Journals	

				selected elements of the periodic table using locally available materials			Portfolio Oral or Aural Questions Learner's Project
4	MIXTURES, ELEMENTS AND COMPOUNDS	Metals and non metals	By the end of the lesson the learner should be able to: a) describe the structure of an atom and electron arrangement of elements, b) determine atomic number and mass number of elements, c) classify elements into metals and non - metals, d) appreciate the value of different elements in day - to - day life f)	The learner is guided to:  d iscuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons),  d raw and discuss the electron arrangements of elements and classify them into metals and non  metals ( first 20 elements of the periodic table ),  d iscuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table ),  use digital or pr int media to search for information on the structure of an atom, electron arrangement, atomic number and mass number of elements,  Projectject: model the atomic structure of selected elements of the periodic table using locally available materials	hat is the structure of an atom? 2. How do atoms gain stability	Course book Basic Laboratory Apparatus Equipment Selected specimens Ice Candle wax Water/salty water Spotlight Integrated Science Learner's Book Grade 8 pg. 66-67	Written Test Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection s  Game Playing Pre Post T esting Model Making Explorations Experiments Investigations Conventions, Conferences, and Debates Applications  Teacher Observations Projectject Journals Portfolio Oral or Aural Questions Learner's Project
5	MIXTURES,	Importance of	By the end of the lesson the learner	The learner is guided to:	hat is the	Course book	Written Test

	ELEMENTS AND COMPOUNDS	elements	should be able to: a) describe the structure of an atom and electron arrangement of elements, b) determine atomic number and mass number of elements, c) classify elements into metals and non metals, d) appreciate the value of different elements in day to day life g)	d iscuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons),  d raw and discuss the electron arrangements of elements and classify them into metals and non - metals ((first 20 elements of the periodic table),  d d iscuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table),  use digital or pr int media to search for information on the structure of an atom, electron arrangement, atomic number and mass number of elements,  Projectject: model the atomic structure of selected elements of the periodic table using locally available materials	structure of an atom? 2. How do atoms gain stability	Basic Laboratory Apparatus Equipment Selected specimens Ice Candle wax Water/salty water Spotlight Integrated Science Learner's Book Grade 8pg. 66-67	Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection s  Game Playing Pre Post T esting Model Making Explorations Investigations Onventions, Conferences, and Debates Applications Teacher Observations Projectject Journals Portfolio Oral or Aural Questions Learner's Project
11 1	MIXTURES, ELEMENTS AND COMPOUNDS	OXYGEN	BY The end of the lesson the learner should be able to: a) prepare oxygen in the laboratory, b) investigate the physical and chemical projectperties of oxygen,	learner is guided to:  carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen,  d iscuss the role of oxygen in co	how is oxygen important in day to day life? 2. What are the different	Basic Laboratory Apparatus Equipment Selected specimens Candle wax Water Spotlight Integrated Science Learner's Book Grade8 pg. 67-	Written Test Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection S

		1	1 -1	make continuous and the account of the	alanana at Car	COL abanata = :	Cama Dlavina
			c) explain the role of oxygen in combustion and spread of f ire, d) identify classes of fire and their control measures, e) appreciate the role of oxygen in day to day life The a)	mbustion and the spread of fire,  c lassify fire according to the cause and suggest control measures,  p ractise fire control measures ( breaking the fire triangle and use of fire extinguishers ),  d iscuss rights to safety and access to information on flammable s ubstances,  discuss the role of oxygen in every life  Projectperty of the Government of Kenya Not for Sale Page   9  where possible, u se digital devices to search, play and watch and discuss videos and animations on the different classes of fire.	classes of fire	68Laboratory  Apparatus and Equipment  Textbooks  Software  Relevant reading materials  Digital Devices  Recording	Game Playing  Pre Post T esting  Model Making  Explorations  Experiments  Investigations  Conventions, Conferences, and Debates  Applications  Teacher Observations  Projectject  Journals  Portfolio  Oral or Aural Questions  Learner's Project
2	MIXTURES, ELEMENTS AND COMPOUNDS	PREPARATIO N OF OXYGEN	BY The end of the lesson the learner should be able to: a) prepare oxygen in the laboratory, b) investigate the physical and chemical projectperties of oxygen, c) explain the role of oxygen in combustion and spread of f ire, d) identify classes of fire and their control measures,	learner is guided to:  carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen,  d iscuss the role of oxygen in co mbustion and the spread of fire,  c lassify fire according to the cause and suggest control measures,  p ractise fire control measures	how is oxygen important in day to day life ? 2. What are the different classes of fire	Basic Laboratory Apparatus Equipment Selected specimens Candle wax Water Spotlight Integrated Science Learner's Book Grade8 pg. 67- 68Laboratory  Apparatus and Equipment  Textbooks Software	Written Test Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection s  Game Playing Pre Post T esting Model Making

			Τ	1	I	,
		e) appreciate the role of oxygen in day to day life The b)	( breaking the fire triangle and use of fire extinguishers ),		Relevant reading materials Digital Devices Recording	Explorations Experiments Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject Journals Oral or Aural Questions Learner's Project
EL AN	IXTURES, LEMENTS ND OMPOUNDS  PHYSICAL PROJECTPER TIES OF OXYGEN	BY The end of the lesson the learner should be able to: a) prepare oxygen in the laboratory, b) investigate the physical and chemical projectperties of oxygen, c) explain the role of oxygen in combustion and spread of f ire, d) identify classes of fire and their control measures, e) appreciate the role of oxygen in day to day life The c)	learner is guided to:  carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen,  d iscuss the role of oxygen in co mbustion and the spread of fire,  c lassify fire according to the cause and suggest control measures,  p ractise fire control measures ( breaking the fire triangle and use of fire extinguishers),  d iscuss rights to safety and access to information on flammable	how is oxygen important in day to day life ? 2. What are the different classes of fire	Basic Laboratory Apparatus Equipment Selected specimens Candle wax Water Spotlight Integrated Science Learner's Book Grade8 pg. 67- 68Laboratory  Apparatus and Equipment  Textbooks Software Relevant reading materials Digital Devices Recording	Written Test Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection s  Game Playing Pre Post T esting Model Making Explorations Investigations Conventions,

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					s ubstances,			Conferences, and Debates	
					ubstances,			Debates	
					discuss the role			Applications	
					of oxygen in every life			•	
								Teacher	
					Projectperty			Observations	
					of the Government of Kenya Not for Sale			• Projectject	
					Page			Projectject	
					9			Journals	
					•			•	
					where possible, u			Portfolio	
					se digital devices to search, play and watch and			•	
					discuss videos and animations on the			Oral or Aural Questions	
					different classes of fire.			Questions	
								Learner's Project	
								, , , , ,	
	4	MIXTURES,	CHEMICAL	BY The end of the lesson	learner is guided to:	how is	Basic Laboratory	Written Test	
		ELEMENTS AND	PROJECTPER TY OF	the learner should be able to:		oxygen important in	Apparatus Equipment	Assessment Rubrics Checklist Anecdotal	
		COMPOUNDS	OXYGEN	a) prepare oxygen in the	carry out experiment using hydrogen peroxide/potassium permanganate to	day to day	Selected specimens	Records	
		COMIT OCTUBS	ONTOLIN	laboratory,	prepare oxygen,	life	Candle wax	Oral Questions and	
				b)	•	?	Water	AnswersReflection	
				investigate the physical and	d	2.	Spotlight Integrated	S	
				chemical projectperties of	iscuss the role of oxygen in	What are the different	Science Learner's Book		
				oxygen,	co mbustion and the spread of fire,	classes of fire	Grade8 pg. 67-	Game Playing	
				explain the role of oxygen	inibustion and the spread of the,	olabbes of file	68Laboratory	• Came i laying	
				in combustion and spread	C		Apparatus and	Pre	
				of f	lassify fire according to the cause		Equipment	-	
				ire, d)	and suggest control measures,		•	Post T	
				identify classes of fire and	•		Textbooks	esting	
1				their control measures,	p ractise fire control measures		Software	Model Making	
				e)	(		•	•	
				appreciate the role of	breaking the fire triangle and use of		Relevant reading	Explorations	
				oxygen in day to day life The	fire extinguishers		materials	<u>•</u>	
				d)	),		• District Devices	Experiments	
					d		Digital Devices	• Investigations	
					iscuss rights to safety and access to		Recording	•	
					information on flammable			Conventions,	
					S			Conferences, and	
					ubstances,			Debates	
					discuss the role			Applications	
					of oxygen in every life			Applications	
								Teacher	
					Projectperty			Observations	
					of the Government of Kenya			•	

				Not for Sale Page   9  where possible, u se digital devices to search, play and watch and discuss videos and animations on the different classes of fire.			Projectject  Journals  Portfolio  Oral or Aural Questions  Learner's Project
5	MIXTURES, ELEMENTS AND COMPOUNDS	ROLE OF OXYGEN IN COMBUSTIO N	BY The end of the lesson the learner should be able to: a) prepare oxygen in the laboratory, b) investigate the physical and chemical projectperties of oxygen, c) explain the role of oxygen in combustion and spread of f ire, d) identify classes of fire and their control measures, e) appreciate the role of oxygen in day to day life The e)	learner is guided to:	how is oxygen important in day to day life ? 2. What are the different classes of fire	Basic Laboratory Apparatus Equipment Selected specimens Candle wax Water Spotlight Integrated Science Learner's Book Grade8 pg. 67- 68Laboratory  Apparatus and Equipment  Textbooks Software Relevant reading materials Digital Devices Recording	Written Test Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection s  Game Playing Pre Post T esting Model Making Explorations Investigations Conventions, Conferences, and Debates Applications Teacher Observations Projectject Journals Oral or Aural Questions

						Learner's Project
MIXTURES, ELEMENTS AND COMPOUNDS	CLASSES OF FIRE AND CONTROL MEASUE	BY The end of the lesson the learner should be able to: a) prepare oxygen in the laboratory, b) investigate the physical and chemical projectperties of oxygen, c) explain the role of oxygen in combustion and spread of f ire, d) identify classes of fire and their control measures, e) appreciate the role of oxygen in day to day life The f)	learner is guided to:  carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen,  d iscuss the role of oxygen in co mbustion and the spread of fire,  c lassify fire according to the cause and suggest control measures,  p ractise fire control measures ( breaking the fire triangle and use of fire extinguishers),  d iscuss rights to safety and access to information on flammable s ubstances,  discuss the role of oxygen in every life  Projectperty of the Government of Kenya Not for Sale Page    9  where possible, u se digital devices to search, play and watch and discuss videos and animations on the different classes of fire.	how is oxygen important in day to day life? 2. What are the different classes of fire	Basic Laboratory Apparatus Equipment Selected specimens Candle wax Water Spotlight Integrated Science Learner's Book Grade8 pg. 69-70 Laboratory  Apparatus and Equipment Textbooks Software Relevant reading materials Digital Devices Recording	Written Test Assessment Rubrics Checklist Anecdotal Records Oral Questions and AnswersReflection s  Game Playing Pre Post T esting Model Making Explorations Experiments Investigations Conventions, Conferences, and Debates Applications  Teacher Observations Projectject Journals Portfolio Oral or Aural Questions Learner's Project