**SCHEMES OF WORK**

**SCHOOL: ……………………………………….**

**GRADE: GRADE EIGHT**

**LEARNING AREA: INTEGRATED SCIENCE**

**TERM ………………………………..2024**

**TEACHER’S NAME: ……………………………………………. TSC NO…………………**

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|  |  |  |  |  |  |  |  |  |  |
| 1 | **OPENING AND RECEIVING LEARNERS** |
| 2 | **1** | ***ELEMENTS,MIXTURES AND COMPOUNDS*** | **Introduction to Matter** | By the end of the lesson learner should be able to:a)define matterb)identify some matter.c)watch a video clip on matterstate in our day to day life | The learner isguided to:•perform simple experimentson projectperties of the different states of matter (volumee, shape, density, compressibility and ability to flow)•use digital devices to search, play and observe videos and animations showing 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 1-2 | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | **2** | ***ELEMENTS,MIXTURES AND COMPOUNDS*** | **Classification of matter** | By the end of the lesson learner should be able to:a)describeprojectperties of the different states ofmatter,b)appreciate the applications of change of state in our day to day life | The learner isguided to:•perform simple experimentsonprojectperties of the different states of matter (volume, shape, density, compressibility and ability to flow),•perform experiments to demonstrate diffusion in liquids (use of water and potassium manganate (VII),•carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent 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 showing 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 3-4 | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | **3** | ***ELEMENTS,MIXTURES AND COMPOUNDS*** | **Projectperties of solids** | By the end of the lesson learner should be able to:a)describeprojectperties of the different states ofmatter,b)demonstrate diffusion in liquids,c)distinguish between temporary and permanent changes insubstances,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 | The learner isguided to:•perform simple experimentsonprojectperties of the different states of matter (volume, shape, density, compressibility and ability to flow),•perform experiments to demonstrate diffusion in liquids (use of water and potassium manganate (VII),•carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent 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 showing 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 7 | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | **4** | ***ELEMENTS,MIXTURES AND COMPOUNDS*** | **Projectperties of liquids** | By the end of the lesson learner should be able to:a)describeprojectperties of the different states ofmatter,b)demonstrate diffusion in liquids,c)distinguish between temporary and permanent changes insubstances,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 | The learner isguided to:•perform simple experimentsonprojectperties of the different states of matter (volume, shape, density, compressibility and ability to flow),•perform experiments to demonstrate diffusion in liquids (use of water and potassium manganate (VII),•carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent 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 showing 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 8 | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | **5** | ***ELEMENTS,MIXTURES AND COMPOUNDS*** | **Projectperties of gases** | By the end of the lesson learner should be able to:a)describeprojectperties of the different states ofmatter,b)demonstrate diffusion in liquids,c)distinguish between temporary and permanent changes insubstances,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 | The learner isguided to:•perform simple experimentsonprojectperties of the different states of matter (volume, shape, density, compressibility and ability to flow),•perform experiments to demonstrate diffusion in liquids (use of water and potassium manganate (VII),•carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent 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 showing 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 9 | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
| 3 | **1** | ***ELEMENTS,MIXTURES AND COMPOUNDS*** | **Temporary and permanent changes** | By the end of the lesson learner should be able to:a)describeprojectperties of the different states ofmatter,b)demonstrate diffusion in liquids,c)distinguish between temporary and permanent changes insubstances,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 | The learner isguided to:•perform simple experimentsonprojectperties of the different states of matter (volume, shape, density, compressibility and ability to flow),•perform experiments to demonstrate diffusion in liquids (use of water and potassium manganate (VII),•carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent 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 showing 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 15 | Reflections •Game Playing •Pre-Post Testing •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*** | **Elements and compound** | By the end of the lesson the learner should be able to: a)distinguish betweenan element and a compound,b)relate common elements to their symbols,c)outline the applications of common elements in day-to-day life,d)appreciate the information on packaging labelsof commonly consumed substances | rner isguided to:●discuss the difference between elements and compounds,●assign approjectpriate symbols to common elements 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, mercuryand limited to the latin names only where applicable),●discuss the importance and market value of common elements and compounds in society (jewellery, iron, toiletries, food nutrients,mineral elements, medals among others),●Sample 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 16-17 | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •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 betweenan element and a compound,b)relate common elements to their symbols,c)outline the applications of common elements in day-to-day life,d)appreciate the information on packaging labelsof commonly consumed substances | rner isguided to:●discuss the difference between elements and compounds,●assign approjectpriate symbols to common elements 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, mercuryand limited to the latin names only where applicable),●discuss the importance and market value of common elements and compounds in society (jewellery, iron, toiletries, food nutrients,mineral elements, medals among others),●Sample 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 18 | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | **4** | ***MIXTURES ,ELEMENTS AND COMPOUNDS*** | **Applications of common elements** | By the end of the lesson the learner should be able to: a)distinguish betweenan element and a compound,b)relate common elements to their symbols,c)outline the applications of common elements in day-to-day life,d)appreciate the information on packaging labelsof commonly consumed substances | rner isguided to:●discuss the difference between elements and compounds,●assign approjectpriate symbols to common elements 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, mercuryand limited to the latin names only where applicable),●discuss the importance and market value of common elements and compounds in society (jewellery, iron, toiletries, food nutrients,mineral elements, medals among others),●Sample 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 20 | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | **5** | ***MIXTURES ,ELEMENTS AND COMPOUNDS*** | **Packaging lables** | By the end of the lesson the learner should be able to: a)distinguish betweenan element and a compound,b)relate common elements to their symbols,c)outline the applications of common elements in day-to-day life,d)appreciate the information on packaging labelsof commonly consumed substances | rner isguided to:●discuss the difference between elements and compounds,●assign approjectpriate symbols to common elements 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, mercuryand limited to the latin names only where applicable),●discuss the importance and market value of common elements and compounds in society (jewellery, iron, toiletries, food nutrients,mineral elements, medals among others),●Sample 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•Recording | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
| **5** | **1** | ***MIXTURES ,ELEMENTS AND COMPOUNDS*** | **Package labels** | By the end of the lesson the learner should be able to: a)distinguish betweenan element and a compound,b)relate common elements to their symbols,c)outline the applications of common elements in day-to-day life,d)appreciate the information on packaging labelsof commonly consumed substances | rner isguided to:●discuss the difference between elements and compounds,●assign approjectpriate symbols to common elements 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, mercuryand limited to the latin names only where applicable),●discuss the importance and market value of common elements and compounds in society (jewellery, iron, toiletries, food nutrients,mineral elements, medals among others),●Sample 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•Recording | Reflections •Game Playing •Pre-Post Testing •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*** | **Common elements and their symbols** | By the end of the lesson the learner should be able to: a)distinguish betweenan element and a compound,b)relate common elements to their symbols,c)outline the applications of common elements in day-to-day life,d)appreciate the information on packaging labelsof commonly consumed substances | rner isguided to:●discuss the difference between elements and compounds,●assign approjectpriate symbols to common elements 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, mercuryand limited to the latin names only where applicable),●discuss the importance and market value of common elements and compounds in society (jewellery, iron, toiletries, food nutrients,mineral elements, medals among others),●Sample 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•RecordingSpotlight Integrated Science Learner’s Book Grade 8 pg. 22 | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •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 betweenan element and a compound,b)relate common elements to their symbols,c)outline the applications of common elements in day-to-day life,d)appreciate the information on packaging labelsof commonly consumed substances | rner isguided to:●discuss the difference between elements and compounds,●assign approjectpriate symbols to common elements 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, mercuryand limited to the latin names only where applicable),●discuss the importance and market value of common elements and compounds in society (jewellery, iron, toiletries, food nutrients,mineral elements, medals among others),●Sample 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 | LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•Recording | Reflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | 4 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | STRUCTURE OF THE ATOM7 | 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 | The learner is guided to:•discuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons), •draw and discuss the electron arrangements of elements and classify them into metals and non-metals (first 20elements of the periodic table),•discuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table),•use digital or print 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 bookBasic Laboratory Apparatus Equipment Selected specimensIce Candle waxWater/salty water*Spotlight Integrated Science Learner’s Book Grade 7 pg. 66-67* | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | 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,c)classify elements into metals and non-metals,d)appreciate the value of different elements in day-to-day life | The learner is guided to:•discuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons), •draw and discuss the electron arrangements of elements and classify them into metals and non-metals (first 20elements of the periodic table),•discuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table),•use digital or print 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 bookBasic Laboratory Apparatus Equipment Selected specimensIce Candle waxWater/salty water*Spotlight Integrated Science Learner’s Book Grade 8 pg. 66-67* | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | 1 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | Mass number | 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 | The learner is guided to:•discuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons), •draw and discuss the electron arrangements of elements and classify them into metals and non-metals (first 20elements of the periodic table),•discuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table),•use digital or print 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 bookBasic Laboratory Apparatus Equipment Selected specimensIce Candle waxWater/salty water*Spotlight Integrated Science Learner’s Book Grade 8 pg. 66-67* | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •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*** | 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 | The learner is guided to:•discuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons), •draw and discuss the electron arrangements of elements and classify them into metals and non-metals (first 20elements of the periodic table),•discuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table),•use digital or print 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 bookBasic Laboratory Apparatus Equipment Selected specimensIce Candle waxWater/salty water*Spotlight Integrated Science Learner’s Book Grade 8 pg. 66-67* | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •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 | The learner is guided to:•discuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons), •draw and discuss the electron arrangements of elements and classify them into metals and non-metals (first 20elements of the periodic table),•discuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table),•use digital or print 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 bookBasic Laboratory Apparatus Equipment Selected specimensIce Candle waxWater/salty water*Spotlight Integrated Science Learner’s Book Grade 8 pg. 66-67* | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•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 | The learner is guided to:•discuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons), •draw and discuss the electron arrangements of elements and classify them into metals and non-metals (first 20elements of the periodic table),•discuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table),•use digital or print 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 bookBasic Laboratory Apparatus Equipment Selected specimensIce Candle waxWater/salty water*Spotlight Integrated Science Learner’s Book Grade 8 pg. 66-67* | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | 5 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | Importance of elements | 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 | The learner is guided to:•discuss the meaning of the atom and illustrate its structure (projecttons, neutrons, and electrons), •draw and discuss the electron arrangements of elements and classify them into metals and non-metals (first 20elements of the periodic table),•discuss and illustrate the atomic number and mass number of elements (first 13 elements of the periodic table),•use digital or print 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 bookBasic Laboratory Apparatus Equipment Selected specimensIce Candle waxWater/salty water*Spotlight Integrated Science Learner’s Book Grade 8pg. 66-67* | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, 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 lessonthe 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 fire,d)identify classes of fire and their control measures,e)appreciate the role of oxygen in day to day lifeThe | learner is guided to:•carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen, •discuss the role of oxygen in combustion and the spread of fire,•classify fire according to the cause and suggest control measures,•practise fire control measures (breaking the fire triangle and use of fire extinguishers),•discuss rights to safety and access to information on flammable substances,•discuss the role of oxygen in every lifeProjectperty of the Government of KenyaNot for SalePage | 9•where possible, use digital devices to search, play and watch and discuss videos and animations on the different classes of fire. | how isoxygen important in day to day life?2.What are the different classes of fire | Basic Laboratory Apparatus Equipment Selected specimensCandle waxWater*Spotlight Integrated Science Learner’s Book Grade8 pg. 67-68*LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•Recording | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •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*** | PREPARATION OF OXYGEN |  BY The end of the lessonthe 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 fire,d)identify classes of fire and their control measures,e)appreciate the role of oxygen in day to day lifeThe | learner is guided to:•carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen, •discuss the role of oxygen in combustion and the spread of fire,•classify fire according to the cause and suggest control measures,•practise fire control measures (breaking the fire triangle and use of fire extinguishers),•discuss rights to safety and access to information on flammable substances,•discuss the role of oxygen in every lifeProjectperty of the Government of KenyaNot for SalePage | 9•where possible, use digital devices to search, play and watch and discuss videos and animations on the different classes of fire. | how isoxygen important in day to day life?2.What are the different classes of fire | Basic Laboratory Apparatus Equipment Selected specimensCandle waxWater*Spotlight Integrated Science Learner’s Book Grade8 pg. 67-68*LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•Recording | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | 3 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | PHYSICAL PROJECTPERTIES OF OXYGEN |  BY The end of the lessonthe 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 fire,d)identify classes of fire and their control measures,e)appreciate the role of oxygen in day to day lifeThe | learner is guided to:•carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen, •discuss the role of oxygen in combustion and the spread of fire,•classify fire according to the cause and suggest control measures,•practise fire control measures (breaking the fire triangle and use of fire extinguishers),•discuss rights to safety and access to information on flammable substances,•discuss the role of oxygen in every lifeProjectperty of the Government of KenyaNot for SalePage | 9•where possible, use digital devices to search, play and watch and discuss videos and animations on the different classes of fire. | how isoxygen important in day to day life?2.What are the different classes of fire | Basic Laboratory Apparatus Equipment Selected specimensCandle waxWater*Spotlight Integrated Science Learner’s Book Grade8 pg. 67-68*LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•Recording | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | 4 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | CHEMICAL PROJECTPERTY OF OXYGEN |  BY The end of the lessonthe 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 fire,d)identify classes of fire and their control measures,e)appreciate the role of oxygen in day to day lifeThe | learner is guided to:•carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen, •discuss the role of oxygen in combustion and the spread of fire,•classify fire according to the cause and suggest control measures,•practise fire control measures (breaking the fire triangle and use of fire extinguishers),•discuss rights to safety and access to information on flammable substances,•discuss the role of oxygen in every lifeProjectperty of the Government of KenyaNot for SalePage | 9•where possible, use digital devices to search, play and watch and discuss videos and animations on the different classes of fire. | how isoxygen important in day to day life?2.What are the different classes of fire | Basic Laboratory Apparatus Equipment Selected specimensCandle waxWater*Spotlight Integrated Science Learner’s Book Grade8 pg. 67-68*LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•Recording | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
|  | 5 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | ROLE OF OXYGEN IN COMBUSTION |  BY The end of the lessonthe 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 fire,d)identify classes of fire and their control measures,e)appreciate the role of oxygen in day to day lifeThe | learner is guided to:•carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen, •discuss the role of oxygen in combustion and the spread of fire,•classify fire according to the cause and suggest control measures,•practise fire control measures (breaking the fire triangle and use of fire extinguishers),•discuss rights to safety and access to information on flammable substances,•discuss the role of oxygen in every lifeProjectperty of the Government of KenyaNot for SalePage | 9•where possible, use digital devices to search, play and watch and discuss videos and animations on the different classes of fire. | how isoxygen important in day to day life?2.What are the different classes of fire | Basic Laboratory Apparatus Equipment Selected specimensCandle waxWater*Spotlight Integrated Science Learner’s Book Grade8 pg. 67-68*LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•Recording | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
| 12 | 1 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | CLASSES OF FIRE AND CONTROL MEASUE |  BY The end of the lessonthe 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 fire,d)identify classes of fire and their control measures,e)appreciate the role of oxygen in day to day lifeThe | learner is guided to:•carry out experiment using hydrogen peroxide/potassium permanganate to prepare oxygen, •discuss the role of oxygen in combustion and the spread of fire,•classify fire according to the cause and suggest control measures,•practise fire control measures (breaking the fire triangle and use of fire extinguishers),•discuss rights to safety and access to information on flammable substances,•discuss the role of oxygen in every lifeProjectperty of the Government of KenyaNot for SalePage | 9•where possible, use digital devices to search, play and watch and discuss videos and animations on the different classes of fire. | how isoxygen important in day to day life?2.What are the different classes of fire | Basic Laboratory Apparatus Equipment Selected specimensCandle waxWater*Spotlight Integrated Science Learner’s Book Grade8 pg. 69-70* LaboratoryApparatus and Equipment •Textbooks•Software•Relevant reading materials•Digital Devices•Recording | Written TestAssessment RubricsChecklist Anecdotal RecordsOral Questions and AnswersReflections •Game Playing •Pre-Post Testing •Model Making •Explorations •Experiments •Investigations •Conventions, Conferences, and Debates •Applications •Teacher Observations •Projectject•Journals•Portfolio•Oral or Aural Questions•Learner’s Project |  |
| 13-14 | END TERM EXAMINATION AND CLOSING |