**SCHEMES OF WORK**

**SCHOOL: ……………………………………….**

**GRADE: GRADE EIGHT**

**LEARNING AREA: INTEGRATED SCIENCE**

**TERM ……………………………….. 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 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  •  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)  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  ),  •  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 | 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. 3-4 | 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 |  |
|  | **3** | ***ELEMENTS,MIXTURES 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  in  substances  ,  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  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  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 | 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. 7 | 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 |  |
|  | **4** | ***ELEMENTS,MIXTURES AND COMPOUNDS*** | **Projectperties of liquids** | 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  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  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  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 | 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. 8 | 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 |  |
|  | **5** | ***ELEMENTS,MIXTURES 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)  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  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  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 | 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  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)  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  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  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  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 | 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  •  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 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 | 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  •  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 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 | 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  •  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 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 | 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. 20 | 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 |  |
|  | **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  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 | 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 |  |
| **5** | **1** | ***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  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 | 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 |  |
|  | **2** | ***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  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 | 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  •  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  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 | 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 |  |
|  | 4 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | STRUCTURE OF THE ATOM  7 | 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 | 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 7 pg. 66-67* | Written Test  Assessment Rubrics  Checklist Anecdotal Records  Oral Questions and  AnswersReflections  •  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, 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 eleme  nts,  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:  •  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  AnswersReflections  •  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 | ***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 eleme  nts,  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:  •  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  AnswersReflections  •  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*** | 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 | 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  AnswersReflections  •  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 |  |
|  | 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 eleme  nts,  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:  •  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  AnswersReflections  •  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 |  |
|  | 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 eleme  nts,  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:  •  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  AnswersReflections  •  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, 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 eleme  nts,  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:  •  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 8pg. 66-67* | Written Test  Assessment Rubrics  Checklist Anecdotal Records  Oral Questions and  AnswersReflections  •  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 |  |
| 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,  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 | 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. 67-68*Laboratory  Apparatus and  Equipment  •  Textbooks  •  Software  •  Relevant reading materials  •  Digital Devices  •  Recording | Written Test  Assessment Rubrics  Checklist Anecdotal Records  Oral Questions and  AnswersReflections  •  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*** | PREPARATION 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 | 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. 67-68*Laboratory  Apparatus and  Equipment  •  Textbooks  •  Software  •  Relevant reading materials  •  Digital Devices  •  Recording | Written Test  Assessment Rubrics  Checklist Anecdotal Records  Oral Questions and  AnswersReflections  •  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 |  |
|  | 3 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | PHYSICAL PROJECTPERTIES 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 | 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. 67-68*Laboratory  Apparatus and  Equipment  •  Textbooks  •  Software  •  Relevant reading materials  •  Digital Devices  •  Recording | Written Test  Assessment Rubrics  Checklist Anecdotal Records  Oral Questions and  AnswersReflections  •  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 |  |
|  | 4 | ***MIXTURES, ELEMENTS AND COMPOUNDS*** | CHEMICAL PROJECTPERTY 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 | 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. 67-68*Laboratory  Apparatus and  Equipment  •  Textbooks  •  Software  •  Relevant reading materials  •  Digital Devices  •  Recording | Written Test  Assessment Rubrics  Checklist Anecdotal Records  Oral Questions and  AnswersReflections  •  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, ELEMENTS AND COMPOUNDS*** | ROLE OF OXYGEN IN COMBUSTION | 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 | 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. 67-68*Laboratory  Apparatus and  Equipment  •  Textbooks  •  Software  •  Relevant reading materials  •  Digital Devices  •  Recording | Written Test  Assessment Rubrics  Checklist Anecdotal Records  Oral Questions and  AnswersReflections  •  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 |  |
| 12 | 1 | ***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 | 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  AnswersReflections  •  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 |  |
| 13-14 | END TERM EXAMINATION AND CLOSING | | | | | | | | |