INTERGRATED SCIENCE SCHEMES OF WORK GRADE 8

NAME OF THE TEACHER:

SCHOOL: TERM: YEAR:

|  |  |  |  |  |  |  |  |  |  |
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| **Week** | **LSN** | **strand** | **Sub-strand** | **Specific Learning Outcomes** | **Key Inquiry Question(s)** | **Learning Experiences** | **Learning Resources** | **Assessment Methods** | **Refl** |
| 1 | 1 | Mixtures,Elements andCompounds-  Elements and compounds | The relationship between an atom, element, compound and a molecule | By the end of the lesson the learner should be able to:   1. explain the relationship between an atom, an element, a molecule and a compound 2. watch a video clip of a compound elements, atom, molecules. 3. appreciate the importance of elements, compounds, atom, molecule. | What is an elements?  What is a compound? | The learner is guided to:   * discuss the meaning of atoms, elements, molecules and compounds, | Chart of different elements and compounds, digital devices  ***Spotlight Integrated Science T.G pg. 27-33***  ***Spotlight Integrated Science P.B pg.34-36*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | The relationship between an atom, element, compound and a molecule | By the end of the lesson the learner should be able to:  **Knowledge**   1. explain the relationship between an atom, an element, a molecule and a compound   **Skill**   1. watch a video clip of a compound elements, atom, molecules.   **Attitude**   1. appreciate the importance of elements, compounds, atom, molecule. | What is an elements?  What is a compound? | The learner is guided to:  discuss the meaning of atoms, elements, molecules and compounds, | Digital devices  ***Spotlight Integrated Science T.G pg. 41-44***  ***Spotlight Integrated Science P.B pg. 47-48*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 |  | The relationship between an atom, element, compound and a molecule | By the end of the lesson the learner should be able to:  **Knowledge**   1. explain the relationship between an atom, an element, a molecule and a compound   **Skill**   1. watch a video clip of a compound elements, atom, molecules.   **Attitude**   1. appreciate the importance of elements, compounds, atom, molecule. | What is an elements?  What is a compound? | The learner is guided to:  discuss the meaning of atoms, elements, molecules and compounds, | Digital devices  ***Spotlight Integrated Science T.G pg. 41-44***  ***Spotlight Integrated Science P.B pg. 47-48*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 |  | Relating common elements and their symbols | By the end of the lesson the learner should be able to:  **Knowledge**   1. relate common elements to their symbols,   **Skill**   1. Assign appropriate symbols to common elements,   **Attitude**   1. Value assigning symbols to common elements | How are symbols assigned to elements? | The learner is guided to:   * assign appropriate symbols to common elements and compounds cover ***(copper, aluminium, iron, silver, table salt, and water),*** | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | Relating common elements and their symbols | By the end of the lesson the learner should be able to:  **Knowledge**   1. relate common elements to their symbols,   **Skill**   1. Assign appropriate symbols to common elements,   **Attitude**   1. Value assigning symbols to common elements consumed substances. | How are symbols assigned to elements? | The learner is guided to:   * 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***), | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 2 | 1 |  | Relating common elements and their symbols | By the end of the lesson the learner should be able to:  **Knowledge**   1. relate common elements to their symbols,   **Skill**   1. Assign appropriate symbols to common elements,   **Attitude**   1. Value assigning symbols to common elements consumed substances. | How are symbols assigned to elements? | The learner is guided to:   * 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***), | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | Relating common elements and their symbols | By the end of the lesson the learner should be able to:  **Knowledge**   1. relate common elements to their symbols,   **Skill**   1. Assign appropriate symbols to common elements,   **Attitude**   1. Value assigning symbols to common elements consumed substances. | How are symbols assigned to elements? | The learner is guided to:   * 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***), | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 |  | Relating common elements and their symbols | By the end of the lesson the learner should be able to:  **Knowledge**   1. relate common elements to their symbols,   **Skill**   1. Assign appropriate symbols to common elements,   **Attitude**   1. Value assigning symbols to common elements consumed substances. | How are symbols assigned to elements? | The learner is guided to:   * 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***), | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 |  | Relating common elements and their symbols | By the end of the lesson the learner should be able to:  **Knowledge**   1. relate common compounds to their symbols,   **Skill**   1. Assign appropriate symbols to common compounds,   **Attitude**   1. Value assigning symbols to common elements | How are symbols assigned to elements? | The learner is guided to:   * 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***), | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | Word equations for  reactions of  elements to form  compounds | By the end of the lesson the learner should be able to:   1. identify the symbols of elements and compounds 2. use word equations to represent reactions of elements to form compounds, 3. Value assigning symbols to common elements |  | The learner is guided to:  ● write word equations to represent reactions of selected elements to form compounds,  ● identify elements in selected compounds with peers (compounds with only two elements) | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 3 | 1 |  | Word equations for  reactions of  elements to form  compounds | By the end of the lesson the learner should be able to:   1. identify the symbols of elements and compounds 2. use word equations to represent reactions of elements to form compounds, 3. Value assigning symbols to common elements |  | The learner is guided to:  ● write word equations to represent reactions of selected elements to form compounds,  ● identify elements in selected compounds with peers (compounds with only two elements) | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | Word equations for  reactions of  elements to form  compounds | By the end of the lesson the learner should be able to:   1. identify the symbols of elements and compounds 2. use word equations to represent reactions of elements to form compounds 3. Value assigning symbols to common elements |  | The learner is guided to:  ● write word equations to represent reactions of selected elements to form compounds,  ● identify elements in selected compounds with peers (compounds with only two elements) | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 |  | Word equations for  reactions of  elements to form  compounds | By the end of the lesson the learner should be able to:   1. identify the symbols of elements and compounds 2. use word equations to represent reactions of elements to form compounds 3. Value assigning symbols to common elements |  | The learner is guided to:  ● write word equations to represent reactions of selected elements to form compounds,  ● identify elements in selected compounds with peers (compounds with only two elements) | The periodic table of elements  ***Spotlight Integrated Science T.G pg. 33-36***  ***Spotlight Integrated Science P.B pg.36-39*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 |  | Application of common elements and compounds in day-to-day life | By the end of the lesson the learner should be able to:  **Knowledge**   1. outline the applications of common elements in day-to-day life,   **Skill**   1. demonstrate application of common elements   **Attitude**   1. appreciate the application of common elements in day-to-day life. | What is the value of elements in day-to-day life? | The learner is guided to:   * discuss the importance and market value of common elements and compounds in society (***jewellery, iron, toiletries, food nutrients, mineral elements, medals among others***), | Locally available household consumer products and their packaging’s e.g. toothpaste.  ***Spotlight Integrated Science T.G pg. 36-38***  ***Spotlight Integrated Science P.B pg.39-43*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | Application of common elements and compounds in day-to-day life | By the end of the lesson the learner should be able to:  **Knowledge**   1. outline the applications of common elements in day-to-day life,   **Skill**   1. demonstrate application of common elements   **Attitude**   1. appreciate the application of common elements in day-to-day life. | What is the value of elements in day-to-day life? | The learner is guided to:   * discuss the importance and market value of common elements and compounds in society (***jewellery, iron, toiletries, food nutrients, mineral elements, medals among others***), | Locally available household consumer products and their packaging’s e.g. toothpaste.  ***Spotlight Integrated Science T.G pg. 36-38***  ***Spotlight Integrated Science P.B pg.39-43*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 4 | 1 |  | Application of common elements and compounds in day-to-day life | By the end of the lesson the learner should be able to:  **Knowledge**   1. outline the applications of common compounds in day-to-day life,   **Skill**   1. demonstrate application of common compounds   **Attitude**   1. appreciate the application of common compounds in day-to-day life. | What is the value of elements in day-to-day life? | The learner is guided to:   * discuss the importance and market value of common elements and compounds in society (***jewellery, iron, toiletries, food nutrients, mineral elements, medals among others***), | Locally available household consumer products and their packaging’s e.g. toothpaste.  ***Spotlight Integrated Science T.G pg. 36-38***  ***Spotlight Integrated Science P.B pg.39-43*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | Market value of commonly used elements and compounds | By the end of the lesson the learner should be able to:   1. define the term market value. 2. Analyze the market value of commonly used elements and compounds, 3. Appreciate the market value of various elements and compounds | What is the value of elements in day-to-day life? | The learner is guided to:   * discuss the importance and market value of common elements and compounds in society (***jewellery, iron, toiletries, food nutrients, mineral elements, medals among others***), | Locally available household consumer products and their packaging’s e.g. toothpaste.  ***Spotlight Integrated Science T.G pg. 36-38***  ***Spotlight Integrated Science P.B pg.39-43*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 |  | Information on packaging labels on commonly consumed products | By the end of the lesson the learner should be able to:   1. identify the information on packaging labels of commonly consumed elements. 2. analyze the information in relation to common elements and compounds, 3. appreciate the information on packaging labels of commonly consumed substances. | What is the importance of reading packaging labels on consumer products? | The learner is guided to:   * Sample labelled containers of different substances indicating the common elements as part of the ingredients. | Locally available household consumer products and their packaging’s e.g. toothpaste.  ***Spotlight Integrated Science T.G pg. 39-40***  ***Spotlight Integrated Science P.B pg.44-46*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 | Kinetic theory of matter | **Properties of matter in the different states - Solids** | By the end of the lesson the learner should be able to:  **Knowledge**   1. Define the term matter, 2. Describe the properties of solids,   **Skill**   1. Demonstrate the different properties of solids through practical   **Attitude**  Appreciate the properties of solids. | What are the physical properties of solids? | The learner is guided to:   * perform simple experiments on properties of the different states of matter ***(volume, shape, density, compressibility and ability to flow),*** * where necessary, use digital devices to search, play and observe videos and animations showing the properties of different states of matter ***(in relation to volume, shape, density, compressibility and ability to flow).*** | Protective clothing, small stone, a string, measuring cylinder, water, clean cloth  ***Spotlight Integrated Science T.G pg. 1-9***  ***Spotlight Integrated Science P.B pg. 1-8*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | **Properties of matter in the different states - Liquids** | By the end of the lesson the learner should be able to:  **Knowledge**   1. Describe the properties of Liquids,   **Skill**   1. Demonstrate the different properties of liquids through practical   **Attitude**  Appreciate the properties of liquids. | What are the physical properties of liquids? | The learner is guided to:   * perform simple experiments on properties of the different states of matter ***(volume, shape, density, compressibility and ability to flow),*** * where necessary, use digital devices to search, play and observe videos and animations showing the properties of different states of matter ***(in relation to volume, shape, density, compressibility and ability to flow).*** | Beaker, conical flask, water, measuring cylinder, U-tube, plastic bottle, weighing balance  ***Spotlight Integrated Science T.G pg. 9-13***  ***Spotlight Integrated Science P.B pg.8-12*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 5 | 1 |  | **Properties of matter in the different states - Gases** | By the end of the lesson the learner should be able to:  **Knowledge**   1. Describe the properties of gases,   **Skill**   1. Demonstrate the different properties of gases through practical   **Attitude**   1. Appreciate the properties of gases. | What are the physical properties of gases? | The learner is guided to:   * perform simple experiments on properties of the different states of matter ***(volume, shape, density, compressibility and ability to flow),***   where necessary, use digital devices to search, play and observe videos and animations showing the properties of different states of matter ***(in relation to volume, shape, density, compressibility and ability to flow).*** | Syringe 100ml, balloon, string, pump, small piece of cloth, two jars, gas jar lid  ***Spotlight Integrated Science T.G pg. 13-17***  ***Spotlight Integrated Science P.B pg.12-16*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | **Diffusion in liquids** | By the end of the lesson the learner should be able to:   1. Define the term diffusion 2. demonstrate diffusion in liquids, 3. appreciate the importance of diffusion in liquids. | How do solid particles move in liquids? | The learner is guided to:   * perform experiments to demonstrate diffusion in liquids ***(use of water and potassium manganate (VII)***, | Glass beaker, potassium manganate (VII) crystals or blue ink, straw, distilled water  ***Spotlight Integrated Science T.G pg. 17-18***  ***Spotlight Integrated Science P.B pg.16-18*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 |  | **Diffusion in liquids** | By the end of the lesson the learner should be able to:   1. Define the term diffusion 2. demonstrate diffusion in liquids, 3. appreciate the importance of diffusion in liquids. | How do solid particles move in liquids? | The learner is guided to:   * perform experiments to demonstrate diffusion in liquids ***(use of water and potassium manganate (VII)***, | Glass beaker, potassium manganate (VII) crystals or blue ink, straw, distilled water  ***Spotlight Integrated Science T.G pg. 17-18***  ***Spotlight Integrated Science P.B pg.16-18*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 |  | Role of diffusion in living things – ***demonstrating diffusion using perfume*** | By the end of the lesson the learner should be able to:  **Knowledge**   1. define the term diffusion   **Skill**   1. demonstrate the process of diffusion using a perfume   **Attitude**  appreciate the importance of diffusion in living things. | What is the role of diffusion in living things? | The learner is guided to;   * carry out experiments to demonstrate the effects of heat, dilutes acids and alkalis on the cell membrane, carry out experiments to demonstrate diffusion using perfumes/scented flowers and discuss their roles in living things, | Laboratory Apparatus and Equipment, Textbooks, Software, Relevant reading materials, Digital Devices, Recordings  ***Spotlight Integrated Science T.G pg. 100-102***  ***Spotlight Integrated Science P.B pg. 113-115*** | Written test, Oral questions, Project, experiments, investigation |  |
|  | 5 |  | Role of diffusion in living things – ***demonstrating diffusion using perfume*** | By the end of the lesson the learner should be able to:  **Knowledge**   1. define the term diffusion   **Skill**   1. demonstrate the process of diffusion using a perfume   **Attitude**  appreciate the importance of diffusion in living things. | What is the role of diffusion in living things? | The learner is guided to;   * carry out experiments to demonstrate the effects of heat, dilutes acids and alkalis on the cell membrane, carry out experiments to demonstrate diffusion using perfumes/scented flowers and discuss their roles in living things, | Laboratory Apparatus and Equipment, Textbooks, Software, Relevant reading materials, Digital Devices, Recordings  ***Spotlight Integrated Science T.G pg. 100-102***  ***Spotlight Integrated Science P.B pg. 113-115*** | Written test, Oral questions, Project, experiments, investigation |  |
| 6 | 1 |  | pure and impure substances- ***by melting point*** | By the end of the lesson the learner should be able to:  a) Define the terms boiling and melting points  b) distinguish between pure and impure substances using melting and boiling points  c) appreciate the importance of boiling and melting points of various substances | 1. How can you classify mixtures? | The learner is guided to:  • carry out, in groups, simple experiments to determine the boiling and melting points of pure and impure substances (ice, candle wax, water, salty water).  • search for, and watch videos and animations on determining melting and boiling points of substances. | • Course book  • Basic Laboratory Apparatus, equipment and selected specimens  • Ice, candle wax  • water/salty water.  • Sieve, magnet  ***Active Integrated Scie. Gr 7 T.G pg. 51-54***  ***Active Integrated Scie. Gr 7 P.B pg.66-68*** | • Written Test  • Assessment Rubrics  • Checklist  • Anecdotal Records  • Oral Questions and Answers |  |
|  | 2 |  | pure and impure substances- ***by Boiling point*** | By the end of the lesson the learner should be able to:  a) Define the terms boiling and melting points  b) distinguish between pure and impure substances using melting and boiling points  c) appreciate the importance of boiling and melting points of various substances | 1. How can you classify mixtures? | The learner is guided to:  • carry out, in groups, simple experiments to determine the boiling and melting points of pure and impure substances (ice, candle wax, water, salty water).  • search for, and watch videos and animations on determining melting and boiling points of substances. | • Basic Laboratory Apparatus, equipment and selected specimens  • Ice, candle wax  • water/salty water.  • Sieve, magnet  ***Active Integrated Scie. Gr 7 T.G pg. 51-54***  ***Active Integrated Scie. Gr 7 P.B pg.66-68*** | • Written Test  • Assessment Rubrics  • Checklist  • Anecdotal Records  • Oral Questions and Answers |  |
|  | 3 |  | **Temporary (physical) changes in substances** | By the end of the lesson the learner should be able to:   1. distinguish between temporary and permanent changes in substances, 2. Demonstrate temporary physical changes in substance. 3. appreciate changes in various substances | What is the difference between a temporary change and a permanent change? | The learner is guided to:   * carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent changes of substances, | Water, iodine, candle wax, zinc oxide, test tubes, test tube holders, conical flask, gas lighter, Bunsen burner, tripod stand, gauze wire.  ***Spotlight Integrated Science T.G pg. 19-21***  ***Spotlight Integrated Science P.B pg.18-22*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 |  | **Temporary (physical) changes in substances** | By the end of the lesson the learner should be able to:   1. distinguish between temporary and permanent changes in substances, 2. Demonstrate temporary physical changes in substance. 3. appreciate changes in various substances | What is the difference between a temporary change and a permanent change? | The learner is guided to:   * carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent changes of substances, | Water, iodine, candle wax, zinc oxide, test tubes, test tube holders, conical flask, gas lighter, Bunsen burner, tripod stand, gauze wire.  ***Spotlight Integrated Science T.G pg. 19-21***  ***Spotlight Integrated Science P.B pg.18-22*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | **Temporary chemical changes in substance** | By the end of the lesson the learner should be able to:   1. distinguish between temporary and permanent changes in substances, 2. Demonstrate temporary physical changes in substance. 3. appreciate changes in various substances | What is the difference between a temporary change and a permanent change? | The learner is guided to:   * carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent changes of substances, | Copper (II) Sulphate crystals, boiling tubes test tubes, Bunsen burner, delivery tube, stopper, spatula, clamp, stand, thermometer, distilled water, cobalt (II) chloride crystals  ***Spotlight Integrated Science T.G pg. 21-22***  ***Spotlight Integrated Science P.B pg.23-26*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 7 | 1 |  | **Temporary chemical changes in substance** | By the end of the lesson the learner should be able to:   1. distinguish between temporary and permanent changes in substances, 2. Demonstrate temporary physical changes in substance. 3. appreciate changes in various substances | What is the difference between a temporary change and a permanent change? | The learner is guided to:   * carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent changes of substances, | Copper (II) Sulphate crystals, boiling tubes test tubes, Bunsen burner, delivery tube, stopper, spatula, clamp, stand, thermometer, distilled water, cobalt (II) chloride crystals  ***Spotlight Integrated Science T.G pg. 21-22***  ***Spotlight Integrated Science P.B pg.23-26*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | **Temporary chemical changes in substance** | By the end of the lesson the learner should be able to:  **Knowledge**   1. distinguish between temporary and permanent changes in substances,   **Skill**   1. Demonstrate temporary physical changes in substance.   **Attitude**   1. appreciate changes in various substances | What is the difference between a temporary change and a permanent change? | The learner is guided to:   * carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent changes of substances, | Copper (II) Sulphate crystals, boiling tubes test tubes, Bunsen burner, delivery tube, stopper, spatula, clamp, stand, thermometer, distilled water, cobalt (II) chloride crystals  ***Spotlight Integrated Science T.G pg. 21-22***  ***Spotlight Integrated Science P.B pg.23-26*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 |  | **Permanent or chemical changes in substances** | By the end of the lesson the learner should be able to:  **Knowledge**   1. distinguish between temporary and permanent changes in substances,   **Skill**   1. Demonstrate permanent or chemical changes in substances.   **Attitude**  appreciate changes in various substances | What is the difference between a temporary change and a permanent change? | The learner is guided to:   * carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent changes of substances, | Boiling tubes, test tube holders, wooden splints, spatula, source of heat, potassium manganate (VII), Crystals and copper (ii) nitrate crystals  ***Spotlight Integrated Science T.G pg. 22-23***  ***Spotlight Integrated Science P.B pg.26-28*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 |  | **Permanent or chemical changes in substances** | By the end of the lesson the learner should be able to:   1. distinguish between temporary and permanent changes in substances, 2. Demonstrate permanent or chemical changes in substances.   **Attitude**   1. appreciate changes in various substances | What is the difference between a temporary change and a permanent change? | The learner is guided to:   * carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent changes of substances, | Boiling tubes, test tube holders, wooden splints, spatula, source of heat, potassium manganate (VII), Crystals and copper (ii) nitrate crystals  ***Spotlight Integrated Science T.G pg. 22-23***  ***Spotlight Integrated Science P.B pg.26-28*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | **Permanent or chemical changes in substances** | By the end of the lesson the learner should be able to:  **Knowledge**   1. distinguish between temporary and permanent changes in substances,   **Skill**   1. Demonstrate permanent or chemical changes in substances.   **Attitude**   1. appreciate changes in various substances | What is the difference between a temporary change and a permanent change? | The learner is guided to:   * carry out simple experiments to demonstrate physical changes, temporary chemical changes and permanent changes of substances, | Boiling tubes, test tube holders, wooden splints, spatula, source of heat, potassium manganate (VII), Crystals and copper (ii) nitrate crystals  ***Spotlight Integrated Science T.G pg. 22-23***  ***Spotlight Integrated Science P.B pg.26-28*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 8 | 1 |  | **Application of change of state of matter in day-to-day life** | By the end of the lesson the learner should be able to:  **Knowledge**   1. outline applications of change of state of matter in day-to-day life,   **Skill**   1. apply the different change of state of matter in day to life.   **Attitude**  appreciate changes in various substances | What are the applications of change of state of matter in day-to-day life? | The learner is guided to:   * discuss the applications of change of state of matter in day-to-day life ***(refrigerators, ice-cream vendors, fog formation, among others),*** | Container  Discussion cards with information  ***Spotlight Integrated Science T.G pg. 23-25***  ***Spotlight Integrated Science P.B pg.28-30*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | **Application of change of state of matter in day-to-day life** | By the end of the lesson the learner should be able to:  **Knowledge**   1. outline applications of change of state of matter in day-to-day life,   **Skill**   1. apply the different change of state of matter in day to life.   **Attitude**   1. appreciate changes in various substances | What are the applications of change of state of matter in day-to-day life? | The learner is guided to:   * discuss the applications of change of state of matter in day-to-day life ***(refrigerators, ice-cream vendors, fog formation, among others),*** | Container  Discussion cards with information  ***Spotlight Integrated Science T.G pg. 23-25***  ***Spotlight Integrated Science P.B pg.28-30*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 |  | **Application of change of state of matter in day-to-day life** | By the end of the lesson the learner should be able to:  **Knowledge**   1. outline applications of change of state of matter in day-to-day life,   **Skill**   1. apply the different change of state of matter in day to life.   **Attitude**   1. appreciate changes in various substances | What are the applications of change of state of matter in day-to-day life? | The learner is guided to:   * discuss the applications of change of state of matter in day-to-day life ***(refrigerators, ice-cream vendors, fog formation, among others),*** | Container  Discussion cards with information  ***Spotlight Integrated Science T.G pg. 23-25***  ***Spotlight Integrated Science P.B pg.28-30*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4-5 | **HALF TERM** | | | | | | | |
| 9 | 1 |  | **Importance of change of state of matter in day-to-day life** | By the end of the lesson the learner should be able to:  ***Knowledge***   1. outline the importance of change of state of matter in day-to-day life,   **Skill**   1. watch a video clip on the importance of change of state of matter,   **Attitude**  appreciate the applications of change of state of matter in day-today life. | What is the importance of change of state of matter? | The learner is guided to:   * discuss the applications of change of state of matter in day-to-day life ***(refrigerators, ice-cream vendors, fog formation, among others),*** | Placards  ***Spotlight Integrated Science T.G pg. 26***  ***Spotlight Integrated Science P.B pg.31-33*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | **Importance of change of state of matter in day-to-day life** | By the end of the lesson the learner should be able to:  ***Knowledge***   1. outline the importance of change of state of matter in day-to-day life,   **Skill**   1. watch a video clip on the importance of change of state of matter,   **Attitude**   1. appreciate the applications of change of state of matter in day-today life. | What is the importance of change of state of matter? | The learner is guided to:   * discuss the applications of change of state of matter in day-to-day life ***(refrigerators, ice-cream vendors, fog formation, among others),*** | Placards  ***Spotlight Integrated Science T.G pg. 26***  ***Spotlight Integrated Science P.B pg.31-33*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 | Classes of fire | Causes of fire in nature | By the end of the lesson the learner should be able to:  **Knowledge**   1. identify the causes of fire,   **Skill**   1. Observe pictures on the causes of fire   **Attitude**   1. Desire to control fire outbreak | What are the causes of fire | The learner is guided to:   * discuss the possible causes of fire in nature, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 |  | Causes of fire in nature | By the end of the lesson the learner should be able to:  **Knowledge**   1. identify the causes of fire,   **Skill**   1. Observe pictures on the causes of fire   **Attitude**   1. Desire to control fire outbreak | What are the causes of fire | The learner is guided to:  discuss the possible causes of fire in nature, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | Causes of fire in nature | By the end of the lesson the learner should be able to:  **Knowledge**   1. identify the causes of fire,   **Skill**   1. watch a video clip on the causes of fire.   **Attitude**   1. Desire to control fire outbreak | What are the causes of fire | The learner is guided to:  discuss the possible causes of fire in nature, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 10 | 1 |  | Causes of fire in nature | By the end of the lesson the learner should be able to:   1. identify the causes of fire, 2. watch a video clip on the causes of fire. 3. Desire to control fire outbreak | What are the causes of fire | The learner is guided to:  discuss the possible causes of fire in nature, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | Role of fire triangle | By the end of the lesson the learner should be able to:   1. explain the role of fire triangle in spread of fire, 2. Watch a video clip of the fire triangle 3. Desire to know the role of the fire triangle. | What is the role of fire triangle? | The learner is guided to:  discuss the role of the fire triangle in the  spread of fire, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 |  | Role of fire triangle | By the end of the lesson the learner should be able to:   1. explain the role of fire triangle in spread of fire, 2. Watch a video clip of the fire triangle 3. Desire to know the role of the fire triangle. | What is the role of fire triangle? | The learner is guided to:  discuss the role of the fire triangle in the  spread of fire, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 |  | Role of fire triangle | By the end of the lesson the learner should be able to:   1. explain the role of fire triangle in spread of fire, 2. Watch a video clip of the fire triangle 3. Desire to know the role of the fire triangle. | What is the role of fire triangle? | The learner is guided to:  discuss the role of the fire triangle in the  spread of fire, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | Role of fire triangle | By the end of the lesson the learner should be able to:   1. explain the role of fire triangle in spread of fire, 2. Watch a video clip of the fire triangle 3. Desire to know the role of the fire triangle. | What is the role of fire triangle? | The learner is guided to:  discuss the role of the fire triangle in the  spread of fire, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 11 | 1 |  | Classes of fire and control measures – break the triangle | By the end of the lesson the learner should be able to:  **Knowledge**   1. discuss the classes of fire   **Skill**   1. practice fire control measures (breaking fire triangle).   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * 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, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | Classes of fire and control measures – break the triangle | By the end of the lesson the learner should be able to:  **Knowledge**   1. discuss the classes of fire   **Skill**   1. practice fire control measures (breaking fire triangle).   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * 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, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
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|  | 4 |  | Classes of fire and control measures – break the triangle | By the end of the lesson the learner should be able to:  **Knowledge**   1. discuss the classes of fire   **Skill**   1. practice fire control measures (breaking fire triangle).   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * 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, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | Classes of fire and control measures – use of fire extinguisher | By the end of the lesson the learner should be able to:  **Knowledge**   1. discuss the classes of fire   **Skill**   1. practice fire control measures (use of fire extinguisher).   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * 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, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 12 | 1 |  | Classes of fire and control measures – use of fire extinguisher | By the end of the lesson the learner should be able to:  **Knowledge**   1. discuss the classes of fire   **Skill**   1. practice fire control measures (use of fire extinguisher).   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * 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, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | Classes of fire and control measures – use of fire extinguisher | By the end of the lesson the learner should be able to:  **Knowledge**   1. discuss the classes of fire   **Skill**   1. practice fire control measures (use of fire extinguisher).   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * 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, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3 |  | Classes of fire and control measures – use of fire extinguisher | By the end of the lesson the learner should be able to:  **Knowledge**   1. discuss the classes of fire   **Skill**   1. practice fire control measures (use of fire extinguisher).   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * 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, | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 4 | Project | Classes of fire and control measures – use of fire extinguisher | By the end of the lesson the learner should be able to:  **Knowledge**   1. Identify the causes of fire.   **Skill**   1. Make posters on classes of fire and their control measures   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * project:   Learner is guided to prepare posters on classes of fires and their control measures and hang either at school, home or neighbouring markets | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 5 |  | Classes of fire and control measures – use of fire extinguisher | By the end of the lesson the learner should be able to:  **Knowledge**   1. Identify the causes of fire.   **Skill**   1. Make posters on classes of fire and their control measures   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * project:   Learner is guided to prepare posters on classes of fires and their control measures and hang either at school, home or neighbouring markets | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
| 13 | 1 |  | Classes of fire and control measures – use of fire extinguisher | By the end of the lesson the learner should be able to:  **Knowledge**   1. Identify the causes of fire.   **Skill**   1. Make posters on classes of fire and their control measures   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * project:   Learner is guided to prepare posters on classes of fires and their control measures and hang either at school, home or neighbouring markets | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 2 |  | Classes of fire and control measures – use of fire extinguisher | By the end of the lesson the learner should be able to:  **Knowledge**   1. Identify the causes of fire.   **Skill**   1. Make posters on classes of fire and their control measures   **Attitude**   1. appreciate the classes of fire towards safety. | hat are the dangers of fire in nature? | The learner is guided to:   * project:   Learner is guided to prepare posters on classes of fires and their control measures and hang either at school, home or neighbouring markets | Digital devices  ***Spotlight Integrated Science T.G pg. 61-65***  ***Spotlight Integrated Science P.B pg. 71-77*** | Observation  Oral question and answer  Rubrics  checklist |  |
|  | 3-5 | **END TERM ASSESSMENT/CLOSING** | | | | | | | |