FIRST TERM
WEEKLY LESSON NOTES
WEEK 1

Week Ending: 06-10-2023	**DAY:**	**Subject:** Science	
Duration: 100mins		**Strand:** Diversity Of Matter	
Class: B9	**Class Size:**	**Sub Strand:** Materials	
Content Standard: B9.1.1.1 Show an understanding of formation of binary chemical compounds and their uses (Acids, Bases and Salts)	**Indicator:** B9.1.1.1.1 Identify by name binary chemical compounds and discuss their uses.	**Lesson:** 1 of 2	
Performance Indicator: Learners can identify by name binary chemical compounds and discuss their uses		**Core Competencies:** DL 5.3: CI 6.8: DL 5.1: CI 6.6:	
References: Science Curriculum Pg. 87			
Key words: Compound, Element, Chemical symbol, Binary compound			

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Provide a hint or riddle for one of the compounds you will discuss today, and have learners guess what it is. Example: "I season my food with this white powder, but it's not sugar. What am I?" Answer: Table Salt Share learning indicators and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Divide the learners into small groups. Provide each group with samples or images of the various materials. Ask learners to discuss and identify each material based on their prior knowledge. Once identified, provide the actual names of the compounds in each material: • Table salt: Sodium Chloride (NaCl) • Water: Dihydrogen Monoxide (H_2O) • Vinegar: Acetic Acid ($C_2H_4O_2$) Note: not binary but can be used for contrast • Fuel (example: gasoline): various hydrocarbons Note: complex mixture • Soap: Sodium or Potassium salts of fatty acids Note: varies by soap • Detergents: varies by detergent (Sodium dodecylbenzenesulfonate can be an example) • Marble: Calcium Carbonate ($CaCO_3$) • Fertilizers: varies (Ammonium nitrate NH_4NO_3 can be an example) Discuss the common uses of each material in our daily life.	Pictures and charts

	Now that learners know the names of the compounds, ask them to list the elements found in each. Example: Sodium Chloride (NaCl) contains Sodium (Na) and Chlorine (Cl). Have them write the chemical symbols next to each element's name. <u>Assessment</u>: 1. What is a compound? 2. What is the chemical symbol for Sodium? 3. Name a binary compound commonly found at home and list its elements. 4. Why is vinegar not considered a binary compound?	
PHASE 3: **REFLECTION**	Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson. Take feedback from learners and summarize the lesson.	

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Content Standard: B9.1.1.1 Show an understanding of formation of binary chemical compounds and their uses (Acids, Bases and Salts)	**Indicator:** B9.1.1.1.2 Discuss the formation of binary chemical compounds	**Lesson:** 2 of 2
Performance Indicator: Learners can discuss the formation of binary chemical compounds	**Core Competencies:** DL 5.3: CI 6.8: DL 5.1: CI 6.6:	
References: Science Curriculum Pg. 87		
New words: Element, Molecule, Ion, Compound		

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Place a water molecule, salt crystal, a piece of iron, and a battery on different corners of a table. Ask: "What do these items have in common, and how might they be different on a microscopic level?" This will set the context for the lesson. Share learning indicators and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Using visuals, define each term: element, molecule, ion, and compound. Have learners categorize a list of items (like H2O, NaCl, Fe, Ca^{2+}) under the correct headings: element, molecule, ion, or compound. Review and clarify misconceptions Explain what binary compounds are, focusing on their formation. Teach learners how to write the molecular formula of binary compounds. Write the formulas for compounds such as water, carbon (IV) oxide, iron (II) sulphide, and magnesium oxide. Using a Venn diagram or a chart, have learners compare and contrast the properties of different binary chemical compounds based on their composition. Consider properties like solubility, conductivity, melting point, etc. Engage in a discussion about why certain compounds share properties and why some are vastly different. Provide learners with modeling kits or craft materials like colored balls (for atoms) and sticks (for bonds). <u>Assessment</u> 1. What is the primary difference between an element and a compound? 2. If a substance is made up of two types of atoms bonded together, is it a molecule or a compound? Justify your answer. 3. Write the molecular formula for iron (II) sulphide.	Pictures and charts

	4. Based on your models, how do the bonds in water differ from those in carbon (IV) oxide?	
PHASE 3: **REFLECTION**	Summarize the lesson by reiterating the importance of understanding the fundamental building blocks of matter. Emphasize the fascinating world of compounds and how even the tiniest differences can lead to vastly different properties. Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson. Take feedback from learners and summarize the lesson.	