REX CHRISTUS COLLEGE, KUBWA

SS1 CHEMISTRY SECOND TERM SCHEME OF WORK

|  |  |
| --- | --- |
| WEEK | TOPIC/CONTENT |
| 1 | CHEMICAL COMBINATION:  Periodic Table (First twenty elements). Electronic configurations of atoms. Types of bonds A. strong bonds (interatomic bonds) e.g. electrovalent (ionic) bond, covalent bond, coordinate covalent (dative) bond, metallic bonds. |
| 2 | CHEMICAL COMBINATION:  Types of bonds continues, B: Weak bonds e.g. hydrogen bond, Van der Waal’s forces, dipole forces of attraction (intermolecular bonds). Systems of naming compounds: conventional and IUPAC. |
| 3 | CHEMICAL COMBINATION:  States of matter: Solid, liquid and gaseous states, kinetic theory and its applications |
| 4 | SYMBOLS, FORMULAE AND EQUATIONS:  Chemical symbols of elements and their valences, Empirical formula and molecular formula, Laws of conservation of matter |
| 5 | SYMBOLS, FORMULAE AND EQUATIONS:  Law of constant composition, Law of multiple proportions, Chemical equations |
| 6 | GAS LAWS:  Boyle’s law, Charles’ law, General gas equation |
| 7 | GAS LAWS:  Gay – Lussac’s law, Avogadro’s law, Ideal gas equation |
| 8 | GAS LAWS:  Graham’s law, Molar volume of gases, Avogadro’s number and mole concept, calculations based on the gas laws |
| 9 | ACIDS, BASES, AND SALTS:  Characteristics, preparations, reactions and uses of acids, bases and salts |
| 10 | ACIDS, BASES AND SALTS:  Relative acidity and alkalinity (pH) scales, Deliquescence, efflorescence and hygroscopic substances |
| 11 | ACIDS, BASES AND SALTS:  Solubility of salts in water |
| 12 | REVISION |
| 13 | EXAMINATION |

REX CHRISTUS COLLEGE, KUBWA

LESSON PLAN FOR WEEK 1 LESSON 1 ENDING 12TH JANUARY, 2024.

SUBJECT: CHEMISTRY

Theme Chemical combinations

Date 10/01/2024

Class SS1

Time 9:20 – 10:00

Duration 80 Minutes

Unit Topic Types of chemical bonds

Lesson Topic Strong bonds

Specific At the end of the lesson, students should be

Objectives able to:

1. Define a chemical bond.
2. List the types of chemical bonds.
3. Write the examples of compound formed by each type of bond

Instructional The periodic Table chart.

Resources

LESSON DEVELOPMENT

|  |  |  |  |
| --- | --- | --- | --- |
| STAGES/STEPS | TEACHER’S ACTIVITIES | STUDENTS’  ACTIVITIES | MODE |
| PRESENTATION |  |  |  |
| STEP1  (IDENTIFICATION OF PRIOR IDEAS) | The teacher reviews the lesson by asking students to define electronic configuration. | The students respond to the teacher’s question by defining electronic configuration. | Individual |
| STEP 2  (EXPLORATION) | The teacher displays the periodic table chart to the students to observe electron donors and the electron acceptors in the formation of chemical bonds. | The students observe the displayed chart | Group |
| STEP 3  (DISCUSSION) | The teacher leads the discussion as follows:  **Definition of a chemical bond**  A chemical bond is defined as an attractive force that joins atoms together to form a molecule or compound. In the formation of chemical bonds, electrons are either shared between atoms or transferred from one atom to another.  **Strong bonds**: Strong bonds are also known as interatomic bonds. Examples of strong bonds are: electrovalent or ionic bond, covalent bond, co-ordinate covalent or dative bond and metallic bond.  **Examples of compounds formed by each type of bond:**  Examples of compounds formed by electrovalent bond include: sodium chloride (NaCl), magnesium oxide (MgO) magnesium chloride (MgCl) etc.  Examples of compounds formed by covalent bond are: carbon (IV) oxide, water molecule (H2O), ammonia gas (NH3), oxygen molecule (O2), nitrogen molecule (N2) etc. | The students listen and also contribute to the discussion by listing some of the elements. | Entire class |
| STEP 4 (APPLICATION) | The teacher asks the students to write the electronic configuration of potassium and chlorine. | The students respond to the teacher’s question. | Entire class |
| STEP 5 (EVALUATION) | The teacher evaluates the lesson by asking the students to:   1. Define a chemical bond 2. State the types of chemical bonds 3. Write the examples of compounds formed by electrovalent, covalent and metallic bonds. | The students respond to the teacher’s question | Individual |
| CONCLUSION | The teacher summarizes the lesson by emphasizing on the main points of the lesson. | The students listen and write down notes. | Entire class |
| ASSIGNMENT | List the noble gases and write their electronic configuration. | Write down the assignment | Entire class |
| REFERENCES | 1. New School Chemistry for Senior Secondary Schools by Osei – Yaw Ababio. 2. Understanding Chemistry by Godwin O. Ojokuku. |  |  |

HOD’S COMMENT:

………………………………..

……………………………….

………………………………

HOD’S NAME:…………………………

……………………………….

DATE: ……………………

……………………………