LESSON PLAN ON NATURAL SCIENCE

WEEK 9

Name of Teacher: Mr. Mac-Donald Arinze

Class: Year 7 & 8

Average age of learners: 13years

Gender: Mixed

Topic: Motion

Duration: 40mins

Date: Week ending 1st March, 2024.

CONTENT: Types of motion and kinematics

RATIONALE: The knowledge acquired will enable the learners to understand the types of motion, state the equations of motion and also solve calculation questions using appropriate equation of motion.

PERFORMANCE OBJECTIVES: By the end of the lesson, the learners should be able to:

**Cognitive Domain (Minds-on):**

1. Mention correctly the types of motion.
2. State correctly the examples of the types of motion and mention at least two examples of each.
3. Write correctly the equations of motion
4. Solve correctly calculation questions involving motion using appropriate formulas.

**Affective Domain (Hearts-on):**

1. Show willingness in the lesson by attempting to solve calculation questions involving objects in motion.
2. Appreciate the lesson by answering the teacher’s questions with keen interest.

**Psychomotor domain (Hands-on)**

1. Demonstrate translational and oscillatory motion using pendulum bulb.

**Interpersonal domain:** (Learners’ ability to interact with others and share knowledge):

1. Discuss elaborately in groups and share knowledge and experiences acquired.

**ENTRY/ENTERING BEHAVIOUR:** Learners are familiar with various motion carried out by moving bodies.

**INSTRUCTIONAL MATERIALS:** Laptop/desktop, projector, textbooks, pendulum bulb, ceiling fan, toy car, pin ball, marker, whiteboard and coloured cardboard paper.

**INSTRUCTIONAL PROCEDURE:** Check table below.

**TABLE: INSTRUCTIONAL PROCEDURE**

| **Duration** | **Content Development** | **Teaching Strategies** | **Instructional Strategies** | **Specific Instructional Materials in Use** | **Teacher’s Performance Activities** | **Students’ Performance Activity** | **Learning Point** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 5 mins | Asking Provocative questions | Set Induction | Brainstorming | Marker, Whiteboard | The teacher divides the learners into groups of three members each to brainstorm on the meaning of motion and mention the different forms of motion exhibited by bodies. | Learners carry out the task that the teacher has given them after brainstorming. | Learners have made an attempt to define the term motion and site typical examples in real life scenarios |
| 14mins | Definition of motion and types of motion. | Use of examples and illustrations, planned repetition, stimulus variation, questioning and reinforcement. | Illustration, demonstration, and examples | The use of pendulum bulb, ceiling fan, toy car, and pin ball. | The teacher uses a flashcard to show an define the term motion and mention the different types of motion using the Acronym TORCUR | The learners identify the key words in the definitions and the types of motion. | The learners have learnt the definition of motion and the types of motion. |
| 8mins | Practical examples of the types of motion. | Use of examples and illustrations, planned repetition, stimulus variation | Think-pair-share, brainstorming. | Use of flash cards | The teacher groups the learners in three, to identify the type of motion exhibited by fan, pendulum bulb, toy car, pin ball, gases etc | The learners brainstorm and identify the type of motion carried out by each item provided | The learners have learnt the examples of the types of motion. |
| 8mins | Kinematics (equations of motion) | Use of examples and exercises from text and illustrations | Brainstorming, illustration | Use of flash cards. | The teacher guides the students on how to apply the equations of motion in solving calculation questions. | The learners identify the application of the equation in calculating the following parameters: acceleration, initial and final velocity, time and distance covered. | The learners have learnt how to calculate various parameters captured in the equations of motion. |

**EVALUATION:** The teacher evaluates the lesson using the following questions

1. Define the term motion
2. State an example of each type of motion
3. Write out any three equations of motion.
4. Calculate the average velocity of a car traveling at an acceleration of 2m/s² for 20secs

**CLOSURE:** The teacher summarizes the lesson by guiding the learners in going through the main points of the lesson, discussing the types and equations of motion and the application of the equations in calculation. The teacher gives the learners some time to reflect on what they have learnt, ask questions and as well take corrections.

**ASSIGNMENT (HOMEWORK):** the teacher tells the students to solve the following.

1. A car accelerates from rest at 2m/s² for 80secs, calculate the final velocity of the car.
2. Calculate the final velocity of a car with initial velocity of 50m/s assuming it accelerateds at 4m/s2 for 20 seconds.

**Actions to carry forward:** the students having learnt the concept of motion and the types can identify the types of motion carried out by some of their items and things around them.