LESSON PLAN ON

WEEK 6

Name of Teacher: Peter Ekeocha

Class: Year 7 & 8

Average age of learners: 11- 12years

Gender: Mixed

Subject: Mathematics

Topic: Variation

Duration: 40mins

Date: 12th - 16th February, 2024

CONTENT:

RATIONALE: The knowledge acquired will enable the learners to understand the concept of variation.

PERFORMANCE OBJECTIVES: By the end of the lesson, given an infographic of variation, chart of concept mapping as well as videos displaying of variation, the learners should be able to:

1. **Cognitive Domain (Minds-on):**
2. Solve correctly, variation.
3. State types of variation.
4. Differentiate by solving direct and inverse variation respectively.
5. **Affective Domain (Hearts-on):**
6. Show willingness in the lesson by analyzing correctly the use of variation.
7. Appreciate the lesson by answering the teacher’s questions with keen interest.
8. **Psychomotor domain (Hands-on)**
9. Use infographic to vividly represent the variation, without any mistake.
10. Implore a concept map to show variation at a glance without mistakes.
11. **Interpersonal domain:** (Learners’ ability to interact with others and share knowledge):
12. Discuss elaborately in groups and share knowledge and experiences acquired.

**ENTRY/ENTERING BEHAVIOUR:** Learners are familiar with variation.

**INSTRUCTIONAL MATERIALS:** Laptop/desktop, projector, videos, printed images, charts, 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 and identify different parts | Learners answer the probing questions that the teacher has given them after brainstorming. | Learners have listed the approach of solving variation. Methods of solving variation has been learnt |
| 14mins | Identification of variation | Use of examples and illustrations, planned repetition, stimulus variation, questioning and reinforcement. |  |  | The teacher uses a slide to show an infographic of the variation, plays videos showing the different ways of solving variation | The learners identify the ways of solving variation, pay attention to the teacher, generate new ideas and integrate them with other concepts | The learners have learnt how to Identify variation. |
| 8mins | Differentiating between variation |  |  |  |  |  |  |
| 8mins | Requirements for variation. | Use of examples and illustrations | Role-play, brainstorming | Coloured cardboard papers |  |  |  |

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

1. Identify the variation.
2. Identify the various types of variation.
3. Differentiate by solving direct and inverse variation respectively.
4. Using a concept mapping, show variation at a glance.

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

**CLASS FUN:**

1. If y varies directly as x and y=12 when x=8, find

(i) the constant of proportionality;

(ii) y when x=10

1. P varies inversely as the square root of q and P=2 when q=225, find P when q=576.
2. If A varies directly as B, when A=10 and B=5, find A when B is 4

**ASSIGNMENT (HOMEWORK):**

Man Mathematics textbook for Junior Secondary School 3.

1. Page 187 Class Exercise 19.2(b) question 1 to 7

**REFLECTION ON LESSON:**

**CONTENT**

**. Identification of variation**

**. Direct and Indirect variation**

**Variation**

Variation is the relationship between two or more variables such that any change in one affects the other.

**Direct and Indirect variation:**

Direct variation

Example1

If y varies directly as the square of x and y=72 when x=3, find y when x=5

**Solution**

Y

y

k=

K= = 24

y=24(

= 2455

= 600

Example2

A quantity P varies directly as the quantity Q. When P=270, Q=30, find

1. the relationship between P and Q;
2. the value of P when Q=60

Solution

P

P=kQ

k

= 9

1. P
2. P=? Q=60

P=9

= 540

Example 3

If p varies directly as q, and p q=5, find the value of p when q=7.

Solution

p

p

k

k

p

**Indirect variation**

Example4

Given that T varies inversely as and T=9 when w=4, find the value of T when w=9.

Solution

T

T

k

k

Example 5

Given that x varies inversely as the cube of y and that x=240 when y=3. Find x when y=2.

Solution

x

x

240

6480

x

x

