**LESSON DEVELOPMENT TWO**

**MERCURY THERMOMETER AND CLINICAL THERMOMETER**

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| **STAGE/TIME** | **TEACHER’S ACTIVITIES** | **LEARNER'S ACTIVITIES – MIND/HANDS ON** | **LEARNING POINTS** |
| **Step 1**  **Introduction**  **(5 minutes)** | 1. What is temperature?  2. What can we use to measure temperature? | 1. Temperature is the degree of hotness or coldness of an object.  2. Thermometer | Linking the Previous knowledge to the new lesson |
| **Step 2**  **Development**  **(5 minutes)**  **Grouping** | 1. Groups the learners into four groups – A, B, C, and D.  2. Guide the learners to choose a leader and secretary for your group.  3. Gives each group learning materials. – pencil, book, ruler, warm, hot and cold water, and chart of thermometer or the real thermometer. | 1. Belong to a group.  2. Choose their leader and secretary.  3. Received learning materials for their group. | Learner’s group, leader and secretary confirmed. |
| **Step 3**  **Development**  **(10 minutes)** | To measure temperature, we use a thermometer. When the temperature of an object changes, the liquid in the thermometer moves up or down.  There are two types of thermometer –  Mercury thermometer used to measure temperature of water, air and other liquid.  Clinical thermometer is used to check the temperature of the body. | Pupils discuss and describe –  1. The uses of thermometer with one another in the group.  2. The movement of liquid in the thermometer (moves up and down).  3. Types of thermometer and their uses. | Different types of thermometer and their uses. |
| **Step 4**  **Development**  **(20 minutes)**  **Or** | If thermometer is not available, let the pupils know that as the water get gradually, the liquid moves up until it reaches 100°C.  As the water get freeze, the liquid moves down until it reaches 0°C.  Guides and lets the pupils study the chart carefully and take the readings –  Exercises on 187 and 188, New Method Mathematics Book 5 | Listen to the teacher and ask questions if don’t understand.  Follow the example and attempt the following questions on 187 and 188, New Method Mathematics Book 5 | Boiling and freezing points |
| **Step 4**  **Development**  **(20 minutes)** | Remember – the liquid in the thermometer moves up or down.  Instructions – if real thermometer is available.  1. Put thermometer into warm or hot water.  2. Record the movement of liquid in the thermometer.  3. Put thermometer in the ice or cold water.  4. Record the movement of liquid in the thermometer.  5. State the movement of liquid in the thermometer when the water is gradually boil or freeze. | Pupil’s Activities –  1. Hot water – The liquid moves up to 100°C.  2. Cold water – The liquid moves down to 0°C.  3. The more the water get boil, the liquid gradually move up until it reaches 100°C.  4. The more the water get freeze, the liquid gradually move down until it reaches 0°C. | Boiling and freezing points |
| **Step 5**  **Conclusion**  **(5 minutes)** | To conclude the lesson, the teacher revises the entire lesson and ask the key questions.  1. What is the different between Mercury and Clinical thermometer.  2. Describe the movement of liquid in the thermometer at boiling or freezing points. | The learners listen, ask and answer questions.  ***Answers***  1. Mercury thermometer is used to measure liquid water, air and other liquid. While Clinical thermometer is used to measure temperature of the body.  2. The liquid moves up until it reaches 100°C and moves down until it reaches 0 °C. | Lesson Evaluation and Conclusion |