**LESSON DEVELOPMENT THREE**

**ANGLES ON A STRAIGHT LINE AND ANGLES AT A POINT**

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| **STAGE/TIME** | **TEACHER’S ACTIVITIES** | **LEARNER'S ACTIVITIES – MIND/HANDS ON** | **LEARNING POINTS** |
| **Step 1****Introduction** **(5 minutes)** | Introductory Activities – Guides the pupils to 1. Draw a straight line and name it line AB. 2. Place your protractor on the straight line. 3. Take your reading from A (at 0°) to B (at 180°). 3. What is angle on a straight line?  | MIND ON ACTIVITIES – A BAngle on a straight line is 180°. | 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 – mathematical set, clock, chart of different angles and plain paper.  | 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)** | 1. Draw two straight lines to intersect. 2. Name all the angles formed a, b, c and d respectively.3. Use your protractor to measure each angle – guide them.4. Add all the 4 angles together. **Point to know –** angle on a straight line equal to 180°. Angles on 2 straight lines equal to 360°.5. What are angles on the first and second straight lines? 6. Add together angles on each straight lines together. ***Point to note -*** ∠ a and ∠ c are opposite each other. Likewise ∠ b and ∠ d are opposite each other. ***The two angles that are opposite each other are called vertically opposite angles.*** | 1. & 2. a b c d3. Measurements –∠ a = \_\_\_\_, ∠ b = \_\_\_\_, ∠ c = \_\_\_\_, and ∠ d = \_\_\_\_. 4. ∠ a + ∠ b + ∠ c + ∠ d = 360°5. 1st line, ∠ a and ∠ b. 2nd line ∠ c and ∠ d.6. 1st line, ∠ a + ∠ b = 180°.2nd line, ∠ c + ∠ d = 180 °. | Measuring of Angles using protractor.  |
| **Step 4****Development****(10 minutes)** | Calculate the size of each marked angle.  | Groups Activities | Measurement of angles using clock.  |
| **Step 10****Development****(10 minutes)** | Asks each group to present their results/solutions so that you can compare responses with those in other groups. | Presentation1. Angles on a straight line is 180°.Therefore, 160° + c = 180°c = 180° - 160° = 20° | Group Presentation  |
| **Step 6****Conclusion****(5 minutes)** | To conclude the lesson, the teacher revises the entire lesson and ask the key questions. **KEY QUESTIONS** 1. What is the different between angles on a straight line and angles at a point. 2. The two angles that are opposite each other are called \_\_\_\_\_\_\_\_\_\_\_ (a) vertically opposite (b) horizontally opposite (c) adjacent **ASSIGNMENT** 3. Calculate angle ∠ m.  | The learners listen, ask and answer questions. | Lesson Evaluation and Conclusion  |

***Reference book – New Method Mathematics Book 5.***