**MATHEMATICS LESSON PLAN**

**GRADE 7**

**TERM 3: July – September**

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| **PROVINCE:** |  |
| **DISTRICT:** |  |
| **SCHOOL:** |  |
| **TEACHER’S NAME:** |  |
| **DATE:** |  |
| **DURATION**: | 1 Hour |

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| 1. **TOPIC: GEOMETRY OF 3D OBJECTS**: Classifying 3D Objects **(Lesson 8)** |

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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson, learners should be able to :**   * Describe, sort, and compare polyhedra in terms of   + shape and number of faces   + number of vertices   + number of edges * Revise using nets to create models of geometric solids, including:   + cubes   + prisms |

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| 1. **RESOURCES:** | DBE workbook 2, Sasol-Inzalo book 2, Textbooks, containers, pair of scissors, ruler, set square | |
| 1. **PRIOR KNOWLEDGE:** | * Geometry of 3D objects | |
| 1. **REVIEW AND CORRECTION OF HOMEWORK** (suggested time: 10 minutes)   Homework provides an opportunity for teachers to track learners’ progress in the mastery of mathematics concepts and to identify the problematic areas which require immediate attention. Therefore it is recommended that you place more focus on addressing errors from learner responses that may later become misconceptions. | | |
| 1. **INTRODUCTION** (Suggested time: 10 Minutes)   The teacher will introduce the lesson by informing learners that the purpose of the lesson is to consolidate what they have learnt. | | |
| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: minutes) | | |
| **Teacher Activities** | | **Learner Activities** |
| The teacher will distribute the worksheet and then be available to offer assistance where needed | | Learners will complete the worksheet |
| 1. **CLASSWORK** (Suggested time: 50 minutes) | | |
| Learners will be given a worksheet to complete. Learners will work individually. They have 50 minutes to complete the activity.  CONSOLIDATION ACTIVITY   1. Indicate which of the following is a polyhedron and which one is not?  |  |  |  |  | | --- | --- | --- | --- | | Image result for nonahedron | . Image result for nonahedron | Image result for nonahedron | blue torus | |  | B. | C. | D. |  1. What is a polyhedron?   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |

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| 1. Study the objects below.    1. Write down the name of the shape of the base of each of the following 3D objects    2. Write down the name of each of the 3D objects below.  |  |  |  | | --- | --- | --- | | OBJECT | BASE | NAME | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | Image result for tetrahedron |  |  | | Image result for nonahedron |  |  |  1. What is the difference between a 2D shape and a 3D object?   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. Label the following using the words: face, edge, vertex, apex.  |  |  | | --- | --- | | square pyramid | Image result for polyhedron shapes | | |
| 1. Compare prisms and pyramids  |  |  | | --- | --- | | PYRAMIDS | PRISMS | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  |  1. Which geometric solid is it?   All the faces are flat. I count five faces. Two are triangles and three are rectangles.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. For each of the following solids A; B and C, you must:    * Draw a picture    * Name the solid    * Draw the net 2. A right prism with regular polygons 3. A regular polyhedron with four faces 4. A pyramid with five faces and a base which is a regular polygon |
| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK (Suggested time: 5 minutes)** |
| Learners should answer the questions below as homework.  What is the name of the solid (3D object) that:  (a) has only square faces?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (b) has a combination of square faces and triangular faces?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (c) has 3 faces and no vertices?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (d) has 4 triangular faces only?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |