

Lesson Plan

Introduction to Geometric Reasoning

Grade Level: Year 3

Subject: Mathematics

Duration: 60 minutes

Australian Curriculum: Measurement and Geometry - Geometric reasoning

Learning Area: Mathematics

Objectives: By the end of this lesson, students will be able to:

1. Identify and describe 2D shapes based on their properties.
2. Recognize and classify triangles and quadrilaterals.
3. Apply geometric reasoning skills to solve simple shape-related problems.

Materials Needed:

- Geometric shapes (cutouts or shapes printed on cards)
- Whiteboard and markers
- Worksheets with shape classification exercises

- Chart paper or interactive whiteboard for sorting shapes
- Picture books or posters depicting various 2D shapes

Lesson Procedure:

1. Introduction (10 minutes)

- Begin with a discussion about shapes that students are familiar with. Show pictures of common 2D shapes (circle, square, triangle, rectangle) and ask students to identify and name them.
- Discuss the properties of each shape (e.g., number of sides, corners, straight lines).

2. Exploration Activity: Shape Sorting (15 minutes)

- Distribute geometric shapes (cutouts or cards) to students.
- Ask students to sort the shapes into groups based on their properties (e.g., triangles, quadrilaterals).
- Encourage students to discuss why they grouped shapes together and what properties they used to classify them.

3. Guided Practice: Shape Classification (15 minutes)

- Use the whiteboard or chart paper to sort and classify shapes as a class.
- Discuss the criteria for classifying shapes (e.g., number of sides, types of angles).
- Have students volunteer to come up and place shapes in the correct categories, explaining their reasoning.

4. Application and Problem-Solving (15 minutes)

- Provide worksheets with shape-related problems (e.g., "Find all the triangles in this picture," "Which shape has four sides and all sides equal?").
- Allow students to work individually or in pairs to solve the problems.
- Circulate to provide support and guidance as needed.

5. Conclusion and Reflection (5 minutes)

- Recap the different types of shapes discussed and their properties.

- Discuss any challenges students faced during the activity and how they solved them.
- Ask students to reflect on one thing they learned about shapes today.

Assessment:

- Informal assessment through observation of students' participation in discussions and activities.
- Review worksheets to assess understanding of shape properties and ability to classify shapes correctly.

Homework (Optional):

- Assign a worksheet for students to find and draw examples of different shapes they see around their home or neighbourhood.

This lesson plan aims to engage students actively in exploring geometric reasoning through hands-on activities and discussions.

It encourages critical thinking and application of knowledge while addressing the key concepts outlined in the Australian curriculum

for Year 3 mathematics. Adjustments can be made based on class dynamics and resources available.

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