

LESSON PLANS: ALBERTA

Grade 4: Shape and Space Measurement

 50 MINS

powered by

 Mathletics

General Outcome:

- Use direct or indirect measurement to solve problems.

Specific Outcomes:

- Demonstrate an understanding of area of regular and irregular 2D shapes by:
 - Recognizing that area is measured in square units
 - Selecting and justifying referents for the units cm^2 and m^2
 - Estimating area, using referents for cm^2 or m^2
 - Determining and recording area (cm^2 or m^2)
 - Constructing different rectangles for a given area (cm^2 or m^2) in order to demonstrate that many different rectangles may have the same area.



ITEMS NEEDED

- ✓ Mathletics teacher login
- ✓ Interactive whiteboard
- ✓ Mathletics eBooks
- ✓ Ruler
- ✓ Geoboards
- ✓ Dotted paper



ASSESSMENTS

- ✓ Collect and assess "Claim Your Path" group handouts.
- ✓ Check Results section for curriculum activity marks



ACCOMMODATIONS/ MODIFICATIONS

- ✓ Ability/levelled groups.
- ✓ Encourage students to use the "Something Easier" or "Something Harder" options when completing curriculum activities.



EXTENSION OF LEARNING

- ✓ Have students draw a room with its dimensions. Students should include pictures, rugs, windows and other objects where the perimeter and area can be determined.
- ✓ Rainforest Maths: additional area and perimeter practice. Encourage students to try a grade level above or below based on their ability level.

Introduction to Lesson

 10 MINS

Teacher Background:

Log in to

[Teacher Console](#) > [Demonstrations](#) > [Concept Search](#).

Type area into your **Search** bar.

Ask students:

- When would we need to measure area?
- How could you measure the area of the classroom?
- What units of measurement would work best?
- Estimate the area of your desk.
- What unit of measurement did you use?

Students should determine a definition of area in their math journals or add to a Math Word Wall.

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The Lesson

 30 MINS

Area—Square Centimetres

- Hand out grid paper to students. Students can use their pencils to shade in irregular polygons or use blocks to fill in the shape. Use page 16 in the Area section of the same eBook used for the Perimeter activity. Display the questions on the board and have students create as many different shapes as they can with the proposed area.
- **Prompt students by asking:** How many different polygons can have an area of 8 square centimeters? What if all sides had to be equal in length? Can you make an irregular polygon? What would the area and perimeter be of one of your polygons?

Problem Solving: Claim Your Patch

- Students need to be in groups of 4 for this Problem Solving activity. You will need to go to **eBooks > Problem Solving > Level 2 > Logical Reasoning > Worksheet Four**.
- Print one playing card per group. Students task for this game is to create polygons with an area greater than 1 but less than 13 on a perimeter of 20 cm. Students will need to use their Problem Solving skills to determine what different shapes could be made. Each person in the group should use a different colour to draw their shapes.
- The teacher can click on **Demonstrations > Rainforest Maths > Grade 4 > Area**. Draw your own shapes and display them on the interactive whiteboard. Students who are having difficulty can work one-on-one with the teacher to determine different polygons. Students are able to draw the shapes on graph paper and interactively determine area and perimeter.



After the lesson

 10 MINS

- Students can play the Problem Solving Game "Making Tracks."

Fact of the Day

- Have students write down one fact they learned about area. This can be added to a math bulletin board or written in math journals.



For more information contact our friendly team...
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