

LESSON PLANS: SASKATCHEWAN

Grade 4: Space and Shape

Perimeter and Area



50 MINS

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Mathletics

Outcome: SS4.2

- 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 or m^2
 - estimating area by 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
 - drawing one or more lines of symmetry in a 2D shape.

Introduction to Lesson



10 MINS

Teacher Background:

Log into your

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

Type perimeter and area into your **Search** bar. Have students determine the difference between the two terms.

Ask students:

- When would we need to measure perimeter?
- When would need to know the area of something?
- How could we measure the perimeter of our classroom?
- What units of measurement would work best?

Students should write perimeter and area with definitions in their math journals or add to a Math Word Wall.



ITEMS NEEDED

- ✓ Mathletics teacher login
- ✓ Interactive whiteboard
- ✓ Mathletics eBooks
- ✓ Ruler
- ✓ Geoboards
- ✓ Graph paper
- ✓ Blocks



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.

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The Lesson

 30 MINS

Perimeter Word Problem with Geoboards

- Log into your **Teacher Console > eBooks > Grade 4 > Length, Area and Perimeter**, Perimeter section, page 12. Hand out students' geoboards and the printed handout from the eBook. Have students start working through the word problems by creating polygons on their geoboards.

For further practice ask students: If the perimeter of a polygon was 25cm, what shape could it be? What would be the lengths of the sides? How many sides does your polygon have? What shape could it not be? How do you know?

Area: Square Centimeters

- Handout grid paper to students. Students can use their pencils to shade in irregular polygons, or they can 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 with the proposed area as they can.

Prompt students by asking: How many different polygons can have an area of 8 square centimetres? 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 out one playing card per group. Students' task for this game is to create polygons with an area greater than 1 but less than 13 and a perimeter of 20cm. 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 Math > 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

- Have students begin working on assigned tasks.
- Suggested activities to assign for students to complete: Area of Shapes and Equal Areas.
- These are good activities for an introduction to area.
- Once students have completed both activities, they can play the Problem Solving game Making Tracks.



For more information contact our friendly team...

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