

LESSON PLANS: ALBERTA

Grade 6: Shape and Space (Measurement)

Triangles

 45 MINS

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 Mathletics

General Outcome:

- Use direct and indirect measurement to solve problems.

Specific Outcomes:

- Construct and compare triangles, including:
 - scalene
 - isosceles
 - equilateral
 - right
 - obtuse
 - acute



ITEMS NEEDED

- ✓ Interactive whiteboard
- ✓ Mathletics teacher login
- ✓ Marian Small's printed student problem
- ✓ Laptops
- ✓ Geoboards
- ✓ Elastics
- ✓ Dot paper



ASSESSMENTS

- ✓ Observation
- ✓ Group work checklist
- ✓ Journal entries
- ✓ Comment section of interactive word problem



ACCOMMODATIONS/ MODIFICATIONS

- ✓ Modify lesson using flipped classroom approach. Students look up concepts in Mathletics Concept Search at home prior to lesson.



EXTENSION OF LEARNING

- ✓ Students present a type of triangle to the class, using information found in Concept Search within Mathletics.
- ✓ Ask students to create different 2D polygons using various types of angles using dot paper or geoboards.
- ✓ Complete pages 11 and 12 in Year 5 Geometry eBook, 2D Shapes section in Mathletics.

Introduction to Lesson

 10 MINS

Teacher Background:

Play Dr. Marian Small's "What Triangle Is That?" video to introduce triangles. Log in to

[Teacher Console > eBooks > Grade 5 > Marian Small's What Triangle? video](#). Pause after the questions in the video.

Ask students,

- What types of triangles are there?
- Is it possible to have a scalene triangle?
- What does that tell you about the angles?
- How do we know a triangle is isosceles? obtuse? scalene? etc.
- Brainstorm everything you know about triangles and angles in a KWL chart.

NOTE: You can show additional videos related triangles in the Teacher Console by clicking on **Teacher Toolkit**. Type triangles into **Search** bar. Click on **Presentations** tab. Select any video for added visual for students.

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The Lesson

 30 MINS

Centres

- **Teacher Background:** Place students in ability groups. Have students choose their starting centre, or place students in a selected rotation. Teacher will need to set up centres prior to lesson and print "What Triangle Is That?" word problem for students. Have students record their learning in a math journal at each centre (if math journals are implemented in your classroom).
 - **Centre 1: Laptops/Computers**
Students can sign into their Student Console. At this centre, have students explore concept search. Students can search for concepts related to classifying triangles. Suggested terms could be: isosceles, triangles, equilateral, scalene. Students can click on the square and arrow icon located in the bottom right-hand corner to maximize view and interact with the concept. Have students record what types of angles help to classify different triangles.
 - **Centre 2: Problem Solving**
Students can work on the printed Marian Small word problem, What Triangle Is That? To accommodate various learning styles, set up geoboards where students can practice making the triangles with elastics. Dot paper can also be used. Students can then answer the problem on their word problem sheet, recording as many different triangles as would work for the suggested problem.
 - **Centre 3: Interactive Whiteboard**
Reinforcement activity; display Marian Small's interactive problem on the interactive whiteboard. Log in to your **Teacher Console > eBooks > Year 5 > What Triangle? > What Triangle is that?** interactive problem. Have students work through the problem in their groups using the interactive protractor. Students should include a comment once they have reached a possible solution to the problem.

Extra-time/cross-curriculum activity: Have students create an art project using only triangles. Students need to make a repeating design using only one type of triangle. They should use a protractor to create one type of triangle and then cut the second shape out. Use this triangle as a template to flip, slide, and turn to create a design or pattern. Have students colour in the geometric pattern in art.

After the lesson

 5 MINS

Think, Pair, Share

- Give students 2 minutes to think about something they have learned during this lesson. Have students turn to their elbow partners and share their learning. Prompt with questions like: What properties are specific to isosceles triangles? What did you find easy/difficult about constructing triangles?



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