

Stage 1: Identify Desired Results

Outcome(s)/Indicator(s):
SS7.2

Develop and apply formulas for determining the area of:

- triangles
- parallelograms
- circles.

([CN, PS, R, V])

- a) Illustrate and explain how the area of a rectangle can be used to determine the area of a triangle
- b) Generalize, using examples, a formula for determining the area of triangles
- c) Illustrate and explain how the area of a rectangle can be used to determine the area of a parallelogram
- d) Generalize, using examples, a formula for determining the area of parallelogram

Key Understandings: ('I Can' statements)

- I can analyze the base and height of a triangle
- I can effectively use the formula $A=bh/2$
- I can use the formula on different types of triangles
- I can relate solving the area of a triangle to real life scenarios (triangle shaped roof or garden)
- I can multiple numbers
- I can divide numbers

Essential or Key Questions:

- How can the area of a rectangle be used to find the area of a triangle?
- What do you know about finding the area of a triangle?
- Can you effectively write and solve the formula to find the area?
- What is a parallelogram?
- Why do we use a 90 degree angle when looking for area?

Prerequisite Learning:

- Basic understanding of geometry (lines, shapes, polygons, angles)
- Identify triangles by their sides & angles
- Knowledge of base and height
- Common arithmetic skills to do calculations

Instructional Strategies:

- Review
- Discussion
- Worksheet

Stage 2: Determine Evidence for Assessing Learning

- Students will be given a quick review of area and how to find the area of a rectangle based on their previous math lessons.

- Students will be shown how to use their previous knowledge of area within a rectangle and how that correlates with finding the area of a triangle. By reviewing the students previous knowledge of area, it will help them to make connections to the new formula with triangles.
- The lesson will end with the students individually completing questions on the math worksheet, showing their work in their answers. For example:
 - $a = \frac{1}{2} b \times h$
 - $\frac{1}{2} 10 \times 10$
 - $\frac{1}{2} 5 \times 10$
 - $a = 50\text{cm}^2$
- Reviewing the student's work on the worksheet will assess their learning and if/what adjustments could be made in future.

Stage 3: Build Learning Plan

Set (Engagement):

Length of time: 5-10 mins

1. Explain what the lesson will look like and start off with a review.
2. Review and write down definitions of:
 - What is area?
 - How do you find area of a rectangle?

Development:

Length of time: 15 mins

3. Explain the formula of how to find the area of a triangle.
4. Draw and provide an example on the board of how to find the 90 degree angle of a triangle.
5. Go through full examples of area = $\frac{1}{2}$ base x height (3-4 examples)

Learning Closure:

Length of time: 25 mins

6. Provide students with the math worksheet to finish during the remaining time in class. No calculators.
7. Go around and provide support to the students if needed.

Materials/Resources:

- 25 number of worksheets (Area of Triangle - Corbett Maths)
- Pencil/ erasers
- Paper

Possible Adaptations/Different Strategies:

- Manage time, if students finish too quickly have them complete any outstanding assignments they may have

Management Strategies:

- Continue to build relationships with the students.
- Continue to work on remembering all students' names.
- Praise positive behaviors and ignore bad when possible.

Safety Considerations:

- Unsure if any.

Stage 4: Reflection

- Time management:

- What worked well/what did not:
- Were explanations thorough/further explanation needed:
- Were all students able to participate: