

# Lesson 3: Rectangles

## Objectives:

Students review shapes learned, patterns, how to make a rectangle from a square and the properties of a rectangle.

## Essential Questions:

*“Can you find a pattern? What is a rectangle? How is a rectangle different from a triangle or a square?”*

## Alaska Native Values:

See connections-All things are related.  
Know who you are- You are a reflection of your family.

## Standards:

- L21: Demonstrate eye hand coordination in different tasks
- M1. Continues a simple pattern
- M2. Knows basic shapes
- M3 Describes and compares measurable attributes
- M4. Counts orally, counts objects and names numerals.
- M5. Understands spatial relationships.



Whole Group	Guided Play	Independent Play
<p><b>Materials:</b> Shapes in a bag Scissors Lined paper (or smaller easy to cut paper for students) Shapes poster from previous lesson</p>	<p><b>Materials:</b> Blocks Toy cars or vehicles</p>	<p><b>Materials:</b> Magnetic shapes White board with parka</p>
<p><b>Activity:</b> See lesson below.</p>	<p><b>Activity:</b> Work with students in building with blocks. Make houses, ramps, bridges. Explore what each shape is good for in building. <i>“Triangles make good roofs so that when it rains or snows the water will run off of the house and not get stuck on top of the house. Rectangles are good for ramps because they have long sides and cars can go down fast!”</i></p>	<p><b>Activity:</b> Allow students to play with shapes making patterns on the parka or using shapes on other side of board to make new things.</p>

# Activity: Rectangles



## Engage: Whole Group Activity: Shapes, Patterns & How to Make a Square

Place shapes into a bag. Have a student close their eyes and reach into bag and guess what shapes they have picked out. Have them feel around the sides and picture the shape in their mind. Review the properties of the square, *“Remember squares have 4 sides and all the sides are the same size. Triangles have three sides.”* Once a student pulls a rectangle out tell the students, *“This is a new shape we are going to make today. Let’s count the sides to see how many sides it has: 1, 2, 3, 4. A rectangle has 4 sides just like the square. How is the rectangle different from the square?”* Hold both up to compare and listen to student responses.

*“Yes a rectangle has 4 sides and 2 of the sides are short and they are equal in size to each other and 2 of the other sides are long and they are equal in size to each other. A rectangle is a strong shape its used for lots of different things. Let’s take 5 min now and everyone search around the room for a rectangle. If its something you can hold come back with it to share.”* Set timer for 5 min and help students look for a rectangle to share. Go back to center and discuss what each student has found.

*“Now everyone watch me first and I am going to show you how to make a rectangle first then I will talk about how I made it but I want to see what you notice about me and how I make it.”*

Demonstrate how you fold the corner of a paper over to first make a square. Cut out the square. Fold a square in half. Cut the half to make 2 rectangles. Do not talk about it the first time making one. Then ask, *“Who noticed what do I do first when I make a rectangle? (Listen to responses) Yes I first fold my paper over to make a square. Now what do I do? (Listen). Yes, I cut out the square and now I have my square shape that has four sides that are all equal. How do I make the rectangle? (Listen) Yes! I fold my square one more time and now I have 2 rectangles!”*



## Explore: Touch, Agturu, Agtur, Vandaniichit

Activity : Give students a paper to practice making rectangles. When they have made one that they are proud of have them bring it up to the shapes poster with the squares and triangle houses. The rectangles can be added for smoke houses, fuel tanks, dog houses.



## Explain: Talking, Niugtuk, Qalarte, Qenax

Explain: Once all of the students have had a chance to make a rectangle and add it onto the shapes poster have students clean up and go back to the shapes poster. *“Wow look at all of the shapes we have made! With all of these shapes we first started with a square, then we made triangles, and now rectangles. With these shapes we can make work on patterns for our parka. During center time the shapes will be here to explore. On this side of the board you can make a pattern for the parka, on the empty side of the board you can make houses or rockets or whatever you want with the shapes.”*

## Evaluation

Emerging: Students did not participate.	Developing: Student tried making a rectangle but needs more practice.	Proficient: Student can make a rectangle and correctly identify the properties of a rectangle.	Advanced: Student can make a rectangle and correctly identify the properties of a rectangle. They can also state an example of a rectangular object.
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