



LESSON PLAN

Subject: Grade 4 Math

Lesson: The Many Shapes of a Chair

Standards Addressed:

- Classify quadrilaterals and triangles based on angle measure, side lengths, and the presence or absence of parallel or perpendicular lines. (NC.4.G.2)
- Recognize symmetry in a two-dimensional figure and identify and draw lines of symmetry. (NC.4.G.3)

Objectives:

- Students will be able to classify types of angles.
- Students will be able to identify parallel and perpendicular lines.
- Students will be able to determine if a polygon is symmetrical and identify lines of symmetry.

Materials Needed:

- Device to show the video
- Straight edge, right angle (corner of a notebook), scissors
- “The Many Shapes of a Chair” Activity

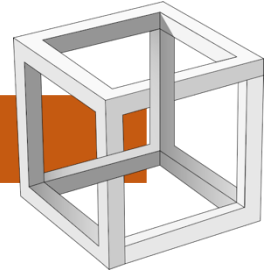
Outline:

- Prior to the lesson, students should be able to identify an octagon, square, and acute, obtuse, and right angles. Students should also understand the difference between parallel and perpendicular and be able to identify lines of symmetry.
- Show the 10-minute video, “The Many Shapes of a Chair.” <https://youtu.be/sTTfC-ypYFU>
- Discuss the activity prompts, modeling as needed.
- Students can finish the activity independently or with a partner.

Take It Further: Students follow these instructions to make a compass using a pin, string, and a pencil: <https://sciencing.com/make-compass-home-geometry-12082521.html>

Cross-Curriculum Connection: Students design a notebook cover using only octagons, squares, and triangles.





THE MANY SHAPES OF A CHAIR

Grade 4 Math



Student Name: _____

Date: _____

1. Classify the types of angles that make up the shapes below as acute, obtuse or right. You can use the corner of your notebook as a reference for right angles.

Draw the symbols for the different angles on the shapes.

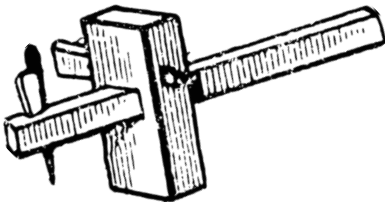
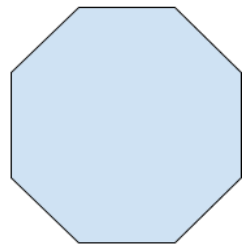
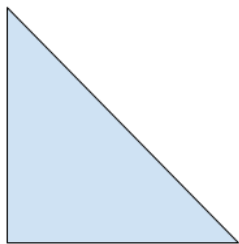
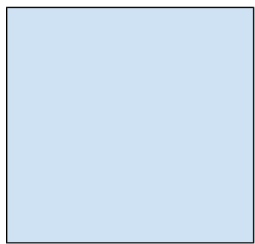
2. Identify parallel and perpendicular lines in each shape.

Put a next to the parallel lines and a next to the perpendicular lines.

3. Determine if each shape is symmetrical.

Draw at least one line of symmetry on the shapes.

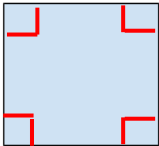
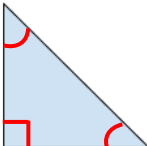

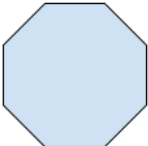
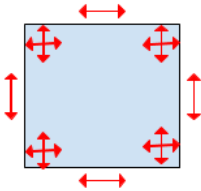
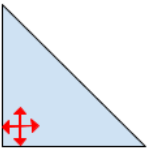

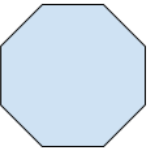

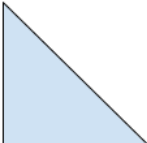

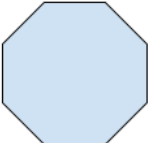
4. *Cut out the shape and fold it on the lines of symmetry to check your work.*



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ANSWER KEY

1.					<p>Every angle in the octagon is obtuse.</p>
2.					<p>Each opposite side of the square and octagon is parallel.</p>
3.					<p>All of these shapes are symmetrical.</p>
4.	