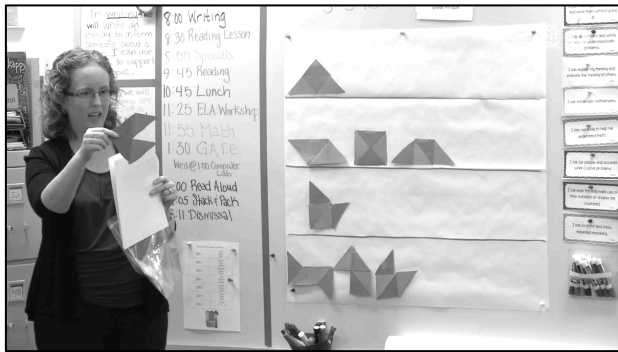


# Learning About the Attributes of Shapes



## Standards-Focused Classroom Series

The Standards-Focused Classroom Series was created to provide educators with actual classroom examples of lessons that target 21st century learning standards.

### Pre-viewing Discussion Prompt

How can you make abstract mathematical concepts concrete for your students?

## About This Segment

Students in Ms. Lisa Mahanna's 3rd grade class at Marc Kahre Elementary School in Las Vegas, Nevada, are learning about the attributes of shapes, including number of sides and number of angles. The students will sort shapes according to one attribute, then observe their teacher and guess which attribute she is using to sort the shapes.

### Lesson Evaluation

Rate the lesson's effectiveness (1 = not effective; 5 = very effective), and use your results to facilitate discussion and reflection.

1. Student learning targets were clearly communicated.

1 2 3 4 5

2. Instructional activities led students toward meeting the objectives.

1 2 3 4 5

3. Students were actively engaged.

1 2 3 4 5

4. Teacher differentiated instruction.

1 2 3 4 5

5. Assessments effectively monitored student progress.

1 2 3 4 5

### Post-viewing Discussion Prompts

1. If you were the instructional coach observing this classroom, what 2-3 strengths in this lesson could you help the teacher identify?
2. What evidence of critical thinking and problem solving did the students demonstrate?
3. What constructive feedback could you give this teacher?

### More Resources on Edviate

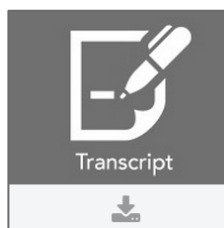
Answer Reflection and Follow-Up Questions about this segment.

They will guide you to implement the lesson's effective practices in your own teaching.

Download the transcript of this segment. You can use it to evaluate and reflect on the teacher's use of direct instruction, questioning, and other strategies, and to identify evidence of learning in students' responses and discussions.

#### Reflection Questions

How could you include visual or experiential components in a lesson to build foundational reading skills?



# Learning About the Attributes of Shapes

Standards-Focused Classroom

Lesson Plan

<b>Teacher:</b> Lisa Mahanna	<b>Grade/Content Area:</b> 3rd Math
<b>School:</b> Marc Kahre Elementary, Clark County, Nevada	<b>Lesson Duration:</b> 50 min.



## Lesson Objectives

Students will be able to identify shapes by the number of their sides and identify the attributes of shapes such as number of angles and number of sides.

## Key Concepts and Vocabulary

(See following page for online resources that support content knowledge)

- Triangle, square, rectangle, pentagon, hexagon
- Polygon, trapezoid, quadrilateral
- Attributes of shapes: angles and sides

## Standard Addressed in the Lesson

Understand that shapes have different and shared attributes including number of sides and number of angles.

## Assessment

Students complete an exit ticket at the end of class. They select and circle one quadrilateral from a variety of shapes. Then they must give the name of the quadrilateral and explain how it differs from the other quadrilaterals on the exit ticket.

## Prior Knowledge and Skills

**Knowledge:** An understanding of how many sides each shape has (triangle = 3, quadrilateral = 4, etc.), and what an angle is.

## Materials

- Set of shapes for each student group (variety of polygons)
- Set of shapes for the teacher demo (variety of polygons)
- Rulers
- Pencils
- Highlighters
- Student whiteboards

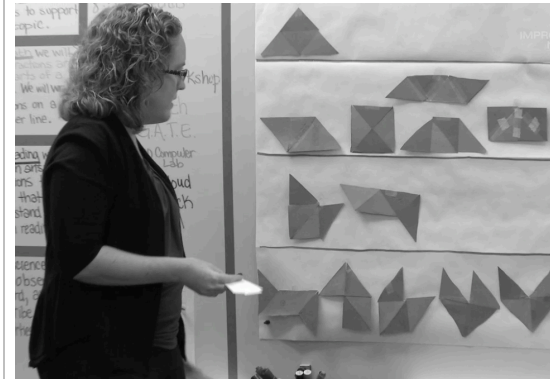


Lesson plan continues on next page

## Lesson Plan – Learning About the Attributes of Shapes (cont.)

### Lesson Procedures

1. Begin with class discussion to review shape attributes (size, shape, number of sides, and number of angles).
2. Divide class into groups of three or four and give each group a set of shapes with varying sides and angles. Ask each group to select an attribute (shape, number of sides, or number of angles) and sort the shapes according to that attribute. (All shapes with three sides go in this pile; all shapes with four go in that pile, etc.)
3. Once students have sorted all of their shapes, allow each group to present and explain their work to the class.
4. Reassemble the class. Invite the students to watch as you sort a set of shapes and guess what attribute you are using to separate and sort the shapes. This activity can be repeated.
5. Introduce/review vocabulary terms for the next geometry lesson (triangle, square, rectangle, pentagon, hexagon, etc.).
6. Hand out exit ticket. (See description on previous page.)



### Resources to Support Content Knowledge

Math Is Fun. Activity: Sorting shapes. Retrieved August 31, 2015, from <http://www.mathsisfun.com/activity/shapes-sorting.html>

Education.com. (n.d.). Second grade geometry worksheets and printables. Retrieved August 31, 2015, from <http://www.education.com/worksheets/second-grade/geometry/>.

### Related Video Lessons and Resources

4th grade: Introducing perimeter and area. Edivate. <https://www.pd360.com/#resources/videos/5485>

2nd grade: Measuring the space inside a shape. Edivate. <https://www.pd360.com/#resources/videos/5497>