



Recognizing Symmetry

Lesson Plan

Lesson Overview: In this lesson, students will recognize lines of symmetry and identify the number of lines of symmetry in a given figure. TEKS: 4.6B

	Procedures	Facilitation Questions	Advance Preparation
Engage	<ul style="list-style-type: none"> • Arrange students in pairs. • Provide each pair of students with a set of objects from the Engage Activity Master. • Play the video. • Facilitate students in sorting the shapes into two categories: shapes with symmetry, and shapes with no symmetry. • Use the video to guide a class discussion about which shapes have symmetry and which shapes do not. As the video asks if the shape has symmetry, encourage students to answer “yes” or “no.” 	<ul style="list-style-type: none"> • Can you fold the object in half so that both sides line up exactly on top of each other? • What other letters can you think of that have symmetry? • What other polygons can you think of that have symmetry? • What other polygons can you think of that do not have symmetry? 	<ul style="list-style-type: none"> • Make one copy of the Engage Activity Master for each pair of students. • Cut out and package the objects on the Engage Activity Master for each pair of students to use. • Access to Math Journals
Explore	<ul style="list-style-type: none"> • Provide each student with the Explore Activity Sheet. • Provide each pair of students with one copy of the Explore Activity Master and a pair of scissors. • Play the video for the class. • Facilitate students as needed. • Resume the video to discuss the debriefing questions as a whole class. • Display the Explore Activity Answers if desired. 	<ul style="list-style-type: none"> • How can you fold the shape in half so that both sides line up exactly on top of each other? • What patterns do you see in which shapes have symmetry and which shapes do not? • What patterns do you see in the number of lines of symmetry that a shape has and the type of shape it is? 	<ul style="list-style-type: none"> • Make one copy per pair of students of the Explore Activity Sheet. • Make one copy of the Explore Activity Master for each pair of students. • Scissors for each student pair
Explain	<ul style="list-style-type: none"> • Make sure students have the objects from the Explore Activity Master. • Play the video. • Facilitate as students sort the objects. • Continue the video to see which objects have certain lines of symmetry. • Play the video to show the Journal Entry Questions. • Answer the Trajectory Check questions. 	<ul style="list-style-type: none"> • What patterns do you see in the objects that have 1 line of symmetry? • What patterns do you see in the objects that have 4 lines of symmetry? • What patterns do you see in the objects that have no lines of symmetry? 	<ul style="list-style-type: none"> • Access to Math Journals • Objects from the Explore Activity Master that were cut out in the previous phase of the lesson
Elaborate	<ul style="list-style-type: none"> • Provide each student with the Elaborate Activity Sheet and a Geoboard and bands. • Play the video for the class. • Facilitate students as needed as they complete the activity sheet. • Resume the video to discuss the debriefing questions as a whole class. 	<ul style="list-style-type: none"> • Could you make a hexagon that does not have any lines of symmetry? 	<ul style="list-style-type: none"> • Make one copy per student of the Elaborate Activity Sheet. • Geoboards and geo-bands
Evaluate	<ul style="list-style-type: none"> • Display the questions or provide a printed copy of the Evaluation Questions for each student. • Have students solve the problems in their Math Journal. 		<ul style="list-style-type: none"> • Access to Math Journals • If desired make a copy of the Evaluation Questions for each student.

