

## Exploring 2-D Shapes

**WebQuest Description:** This WebQuest will explore two-dimensional shapes. Students will learn how to recognize and describe shapes by their attributes. Students will also learn how to partition shapes into halves, thirds and quarters.

**Grade Level:** K-2

**Curriculum:** Math

**Keywords:** Geometry, Shapes, Two-Dimensional, Fractions, Partitioning

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### Introduction

Congratulations! You have been chosen by a major toy company to create a robot. The robot must be created using shapes or parts of shapes. After completing this WebQuest, you will have all of the information you need to know to create your robot.

### Tasks

Look around the room. Shapes are everywhere. Shapes can be combined or partitioned to create new shapes. Things we use everyday are made up of one or more shapes. In this WebQuest, you will be learning about the different ways we describe or classify shapes. You will also learn how to split up or partition shapes into equal shares. Once you have practiced identifying and partitioning shapes, you will create a shape robot of your own from shapes and fractions of shapes.

### Process

Learn1. Use the link to listen to the book, The Greedy Triangle by Marilyn Burns and fill out worksheet A while you listen. <https://www.youtube.com/watch?v=aE0yle-z5uE2>. Watch the video describing shapes by KhanAcademy <https://www.khanacademy.org/math/early-math/cc-early-math-geometry-topic/cc-early-math-properties-shapes/v/recognizing-shapes>. Visit the website Math is Fun to help you complete worksheets B and C. <https://www.mathsisfun.com/shape.html>. Watch a lesson about partitioning shapes into equal shares. [https://learnzillion.com/lesson\\_plans/4818-partition-a-shape-into-equal-shares](https://learnzillion.com/lesson_plans/4818-partition-a-shape-into-equal-shares). Listen to a song about fractions. <https://www.youtube.com/watch?v=DnFrOetuUKg>. Visit the website Math is Fun to help you complete worksheet D. <http://www.mathsisfun.com/fractions.html>. Practice what you have learned by completing the following activities; Identify 2-D shapes <https://www.ixl.com/math/grade-2/identify-2-dimensional-shapes> Count Sides and Angles <https://www.ixl.com/math/grade-2/count-sides-and-angles> Equal Parts <https://www.ixl.com/math/grade-2/equal-parts> Halves, Thirds and Fourths <https://www.ixl.com/math/grade-2/halves-thirds-and-fourths> Evaluate Now that you have learned about shapes and partitioning shapes, it's time to show what you know by creating a Shape Robot. Create a shape robot using the construction paper shapes your teacher has provided using the following criteria; The shape robot must be created with shapes and partitioned shapes. It must be created with at least 4 different shapes. It must include at least 2 different partitioned shapes. Remember, you can partition shapes to create other shapes. Once you have created your robot, fill out a Shape Robot Data Sheet.

### Evaluation

Category and Score	Working Below Grade Level Standards	Basic Working At Grade Level with Teacher Assistance	Proficient Working At Grade Level Independently	Advanced Performing Above Grade Level	Score
Participation	WebQuest was not completed.	WebQuest was completed with teacher assistance. (6 or more questions, redirected 2 or more times)	WebQuest was completed with some teacher assistance. (3-5 questions, redirected 1 time)	WebQuest was completed with minimal teacher assistance.(1-2 questions. No redirection)	10

Category and Score	Working Below Grade Level Standards	Basic Working At Grade Level with Teacher Assistance	Proficient Working At Grade Level Independently	Advanced Performing Above Grade Level	Score
Worksheets	Worksheets not completed. Or student scored 69% or less overall.	Worksheets completed. Student scored 70-79% or less overall.	Worksheets completed. Student scored 80-89% overall.	Worksheets completed. Student scored 90% or more overall.	20
Shape Robot	Shape Robot did not follow established criteria.	Shape Robot only followed one of the three established criteria.	Shape Robot only followed two of the three established criteria.	Shape Robot followed all three of the established criteria.	40
Shape Robot Data Sheet	Data Sheet not completed. Or sheet completed with 69% or less correct.	Data Sheet completed with 70-79% or less correct.	Data Sheet completed with 80-89% correct.	Data Sheet completed with 90% or more correct.	30
				Total Score	100

## Conclusion

## Teacher Page

This WebQuest was created for use in teaching 2nd grade Common Core Geometry standards. &nbsp;It can be completed individually or roles may be assigned for group work. &nbsp;Please provide students the documents below to be used with the WebQuest activities.&nbsp;

### Standards

Georgia Standards of Excellence:

MGSE2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

MGSE2.G.2 Partition a rectangle into rows and columns of same-size squares to find the total number of them.

MGSE2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

### Credits

### Other