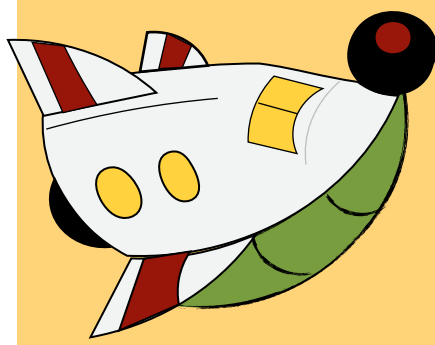
**AUTHOR:**

Stuart J. Murphy

Take an adventure through the galaxy with Sam and his dog, Comet, as they face a meter shower, a cloud of poison gas, an alien ship, and a galactic beast. How will they make use of the space shapes?

**Ages:** 5 to 9 years**ATOS Reading Level:**

2.2

**Lexile:** 510L**ISBN:** 9780064467315**Copyright:** 2001

# Captain Invincible and the Space Shapes

*Will Sam and Comet defeat the galactic beast?*

**Topics:** shapes**Activities To Do Together:**

Use the book *Captain Invincible and the Space Shapes* to explore 3 dimensional shapes.

While reading the book ask your child:

- To identify the shapes they are already familiar with and tell you what they know about the shapes.
- To press the shapes with Comet and Sam as they use them.
- To name the shapes on the pages as you read.

When you have finished reading the story try the following:

- Ask your child if any of the shapes in the story were new to them. If so, look at the shape(s) and their characteristics. Have your child explain to you what make the shape(s) unique.
- Talk about 2-dimensional (2-D) and 3-Dimensional (3-D) shapes with your child. What is the difference between a 2-D and a 3-D shape?
- Ask your child to identify shapes in different rooms inside and/or outside. What shapes did they see? What shape do they see most often? What shape do they see least often?
- Identify the different shapes throughout the book. Can your child spot these shapes around them?
- Gather objects and sort them based on their shape and other characteristics (size, color, use...).
- Ask your child what shape's power was their favorite and why?
- Create a collage using different shapes. Ask you child to describe the shapes they used in creating their design.
- Look at traffic signs. What shape is a stop sign, a yield sign, a pedestrian crossing sign, etc.?

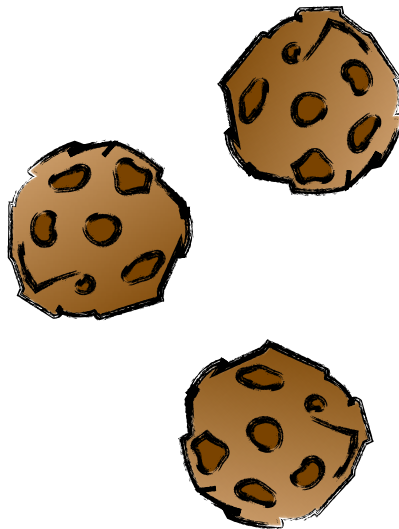
**Questions for Mathematical Thinking:**

1. What makes a shape unique? How can you tell one shape apart from another?
2. Where do you see shapes in your everyday routine? What shapes do you see?
3. What would you make out of shapes? What shapes would you use?
4. What shapes can you make by combining triangles? How would you do it? Try it!
5. If you were faced with a challenge like a galactic beast, how would you use shapes to save yourself?
6. Do you want to go to space? Why or why not?

**Early Math Project Resources:**

Visit [Captain Invincible and the Space Shapes Activities](http://earlymathca.org/captain-invincible) (earlymathca.org/captain-invincible)

Follow this [link](#) or visit earlymathca.org/external-resources for additional online resources.



**Vocabulary for Building Math**

**Concepts:** 4, all, cube, cylinder, first, odd, only, pyramid, rectangular prism, shapes, sphere, square

**Vocabulary for Extending Math**

**Concepts:** attributes, sorting

**Vocabulary for Reading**

**Comprehension:** invincible

**Also available in:** French and Korean

**Related Books:** *Color Zoo and Color Farm* by Lois Ehlert; *Perfect Square* by Michael Hall; *Shape Song Swing Along* by Steve Songs

Click this link to the [World Catalog](#) or enter <https://bit.ly/44NyTgj> to find *Captain Invincible and the Space Shapes* in the public library

**Math Connections:** Use *Captain Invincible and the Space Shapes* to explore shapes with your child. While exploring the galaxy with Sam, your child will be introduced to 3-dimensional (3-D) and 2-dimensional (2-D) shapes.

Shapes that are 3-D are solids, have volume, and have three dimensions: length, width, and height.

Shapes that are 2-D are flat and are distinguished by their sides and vertices (corners).

Before reading, identify the different shapes throughout the book. Can your child distinguish between the 2-D and 3-D shapes? To help support your child's understanding of the differences between 2-D and 3-D, draw a circle on a piece of paper and compare it to a ball. How are they similar and different? Draw an image of a rectangle and compare it to a box of cereal. Notice the similarities and differences.

Many shapes can be made with a combination of other shapes. For example, a rectangle can be created with two triangles. Ask your child to draw a rectangle and to figure out how the rectangle can be divided into two or more rectangles by drawing one or more lines inside the rectangle. Encourage your child to investigate how shapes can be composed from other shapes and to teach you what they found out.

Compare the shapes from the book to the environment around you. What objects around you are made up from the same shapes used in the book? Walk through a room and see what objects you can find together. Look at the exterior of a building. What shapes do you see? Which shapes seem most frequently used?

Playing with shapes gives your child the opportunity to become familiar with shape names and their unique characteristics. This experience will help your child to identify, describe, sort, construct, and reason with shapes and other visual information.

Sort objects by their shapes and characteristics. Gather a group of items and ask your child to sort the objects into groups based on the shape. For example, sort objects into three groups; objects that contain a circle, objects that contain a square, and objects that contain a triangle. Count and see how many objects are in each group. Explore other ways to sort the objects. Ask your child to make group of objects that are composed of more than one shape. What other characteristics can your child use to sort the objects (size, color, use...)?



## DISCOVERING THE MATH: BOOK GUIDE

Age Level	Related <a href="#">Infant Toddler Foundations</a> , <a href="#">Preschool Foundations</a> , and <a href="#">CA State Standards</a>
Kindergarten	<b>Geometry K.G.1</b> Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). <b>K.G.4</b> Analyze, compare, create, and compose shapes.
Grade 1	<b>Geometry 1.G.1</b> Reason with shapes and their attributes.
Grade 2	<b>Geometry 2.G.1</b> Reason with shapes and their attributes.
Grade 3	<b>Geometry 3.G.1</b> Reason with shapes and their attributes.