

Flat or Solid?

Sort figures by whether they are flat or take up space.

4.MG.6 "The student will identify, describe, compare, and contrast plane and solid figures according to their characteristics (number of angles, vertices, edges, and the number and shape of faces), with and without models..."

NAME _____

DATE _____

FLAT FIGURE

A flat figure has length and width, but no thickness. It may have sides, angles, and vertices.

a pentagon

SOLID FIGURE

A solid figure takes up space. It may have flat faces, edges, and vertices, or it may have a curved surface.

a triangular prism

1 SORT _____ 8 items

Part 1: Circle FLAT or SOLID for each item, then Part 2: choose two items and explain how you knew each category.

1. a basketball

FLAT

SOLID

2. a cereal box

FLAT

SOLID

3. a triangle

FLAT

SOLID

4. a party hat

FLAT

SOLID

5. a circle

FLAT

SOLID

6. a square

FLAT

SOLID

7. a die

FLAT

SOLID

8. a rectangle

FLAT

SOLID

2

PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ HOW I KNEW _____

ITEM # _____ HOW I KNEW _____

3

MAKE YOUR OWN

One of each

Part 3: Write one new FLAT example and one new SOLID example.

FLAT _____

SOLID _____

CHALLENGE

Choose one FLAT item and one SOLID item from Part 1. Tell one way they are alike and one way they are different.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	a basketball	SOLID	A basketball is a concrete model of a sphere, which takes up space.
2	a cereal box	SOLID	A cereal box is a concrete model of a rectangular prism, which has faces and takes up space.
3	a triangle	FLAT	A triangle is a flat figure with 3 sides and 3 vertices.
4	a party hat	SOLID	A party hat is a concrete model of a cone, which takes up space.
5	a circle	FLAT	A circle is flat and has no thickness.
6	a square	FLAT	A square is a flat figure with 4 sides and 4 vertices.
7	a die	SOLID	A die is a concrete model of a cube, which has 6 square faces.
8	a rectangle	FLAT	A rectangle is a flat figure with 4 sides and 4 vertices.

PART 2 • PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 • MAKE YOUR OWN (SAMPLE ANSWERS)

- **FLAT:** a hexagon
- **SOLID:** a soup can

Challenge: A triangle and a die both have vertices. A triangle is flat and has 3 sides, while a die is a solid cube with 6 square faces, 12 edges, and 8 vertices.

Accept accurate everyday objects when the student names the figure the object models. In Part 2, look for evidence such as flat versus takes up space, sides, faces, edges, or vertices.