

Face Finder Sort

Sort solid figures by their faces.

2.MG.4.c "Given a concrete or pictorial model, name and describe the solid figure (sphere, cube, and rectangular prism) by its characteristics (e.g., number of edges, number of vertices, shapes of faces)."

NAME _____

DATE _____

HAS FLAT FACES

Cubes and rectangular prisms have flat faces.
Their faces meet at edges and vertices.

A shoebox belongs in FLAT FACES because
it has flat faces.

NO FACES

A sphere has no flat faces, edges, or vertices.
Its surface curves all around.

A soap bubble belongs in NO FACES
because its surface curves.

1 SORT _____ 8 items

Circle the category for each solid, then choose two item numbers and tell which clue helped you sort each one.

1. A cube with 6 square faces, 12 edges, and 8 vertices.

FLAT FACES

NO FACES

2. A rectangular prism with 6 flat faces.

FLAT FACES

NO FACES

3. A sphere with no flat faces, edges, or vertices.

FLAT FACES

NO FACES

4. A cube. Every face is a square.

FLAT FACES

NO FACES

5. A sphere that is round all around.

FLAT FACES

NO FACES

6. A ball-shaped solid with no corners or edges.

FLAT FACES

NO FACES

7. A rectangular prism with 8 vertices and 12 edges.

FLAT FACES

NO FACES

8. A cube with 8 vertices.

FLAT FACES

NO FACES

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

Write one new example for FLAT FACES and one new example for NO FACES.

FLAT FACES _____

NO FACES _____

CHALLENGE

A solid has 6 faces. Each face is a rectangle. It has 12 edges and 8 vertices. Name the solid and tell its category.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	A cube with 6 square faces, 12 edges, and 8 vertices.	FLAT FACES	A cube has 6 flat square faces.
2	A rectangular prism with 6 flat faces.	FLAT FACES	A rectangular prism has flat faces.
3	A sphere with no flat faces, edges, or vertices.	NO FACES	A sphere has no faces, edges, or vertices.
4	A cube. Every face is a square.	FLAT FACES	Each face of a cube is flat and square.
5	A sphere that is round all around.	NO FACES	A sphere has a curved surface and no flat faces.
6	A ball-shaped solid with no corners or edges.	NO FACES	This describes a sphere, which has no faces.
7	A rectangular prism with 8 vertices and 12 edges.	FLAT FACES	A rectangular prism has 6 flat faces, 8 vertices, and 12 edges.
8	A cube with 8 vertices.	FLAT FACES	A cube has flat faces and 8 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 FACES:** a brick
- **NO FACES:** a beach ball

Challenge: It is a rectangular prism. It belongs in FLAT FACES.

For Part 2, students should name a clue such as flat faces, no faces, edges, or vertices. Accept real-world examples in Part 3 when the object clearly models the correct solid.