

Surface Sleuth Sort

Sort solid models by their surfaces.

4.MG.6.a "Identify concrete models and pictorial representations of solid figures (cube, rectangular prism, square pyramid, sphere, cone, and cylinder)."

NAME _____

DATE _____

FLAT FACES ONLY

These solids have flat faces only. A face is a flat surface.

A drawing of a triangular prism.

HAS A CURVED SURFACE

These solids have at least one curved surface. They may also have flat faces.

A smooth marble.

1 SORT _____ 8 items

Part 1 SORT: Circle FLAT or CURVED for each item, then in Part 2 PROVE IT, choose two items and explain what surface feature helped you sort each one.

- | | | |
|---|----------------------------|------------------------------|
| 1. A drawing of a cone | ☐ FLAT | ☐ CURVED |
| 2. A wooden cube block | ☐ FLAT | ☐ CURVED |
| 3. A picture of a square pyramid | ☐ FLAT | ☐ CURVED |
| 4. A smooth ball shaped like a sphere | ☐ FLAT | ☐ CURVED |
| 5. A cereal box shaped like a rectangular prism | ☐ FLAT | ☐ CURVED |
| 6. A picture of a sphere | ☐ FLAT | ☐ CURVED |
| 7. A model of a cylinder | ☐ FLAT | ☐ CURVED |
| 8. A drawing of a rectangular prism | ☐ FLAT | ☐ CURVED |

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 MAKE YOUR OWN: Write one new example of a solid in each category, one FLAT example and one CURVED example.

FLAT _____

CURVED _____

CHALLENGE

Draw a solid with a curved surface and at least two flat faces. Label the curved surface and the flat faces.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	A drawing of a cone	CURVED	A cone has one curved surface and one flat circular face.
2	A wooden cube block	FLAT	A cube has six flat square faces and no curved surface.
3	A picture of a square pyramid	FLAT	A square pyramid has flat triangular faces and one flat square base.
4	A smooth ball shaped like a sphere	CURVED	A sphere has one curved surface and no flat faces.
5	A cereal box shaped like a rectangular prism	FLAT	A rectangular prism has only flat rectangular faces.
6	A picture of a sphere	CURVED	A sphere has a curved surface.
7	A model of a cylinder	CURVED	A cylinder has one curved surface and two flat circular faces.
8	A drawing of a rectangular prism	FLAT	A rectangular prism has flat faces only.

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 cube-shaped sugar cube.
- **CURVED:** A sphere-shaped ornament.

Challenge: A drawing of a cylinder. Its side is labeled "curved surface," and its two circular ends are labeled "flat faces."

Part 2 explanations should name only flat faces for FLAT items or at least one curved surface for CURVED items. Accept different real-object examples in Part 3 when the solid and its surface type are correct.