

Hands-On Activity

Lesson 5: Slopes and Curves

In this activity, students will visualize, draw, and represent shapes with slopes and curves.

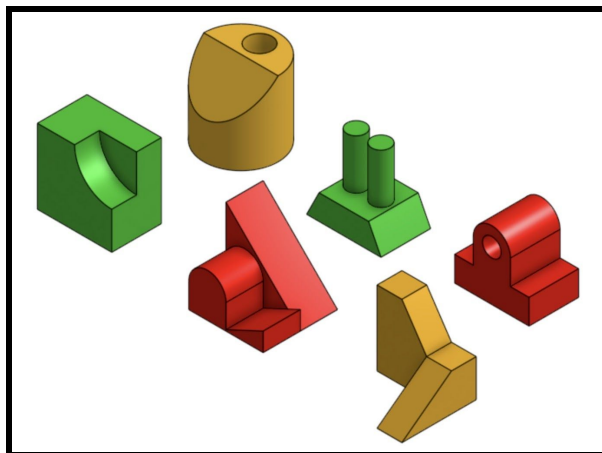
Integration with the Spatial Vis™ App

- This activity goes with Lesson 5: Slopes and Curves.
- The activity can be done at the end of the [Lecture on Slopes and Curves](#).

Preparation Before Class

Items Needed:

- 3D printed shapes. Print at least one of each shape. Multiple for a larger class.
 - Find the downloadable 3D printing stl files for the shapes [here](#).
 - For a general guide on 3D printing, go [here](#).
- Print isometric and orthographic paper at the end of the document.


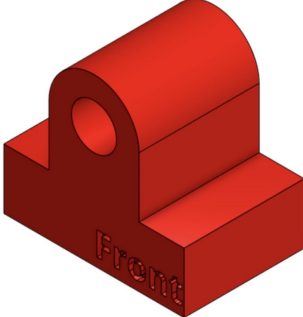
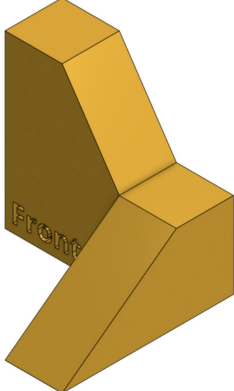
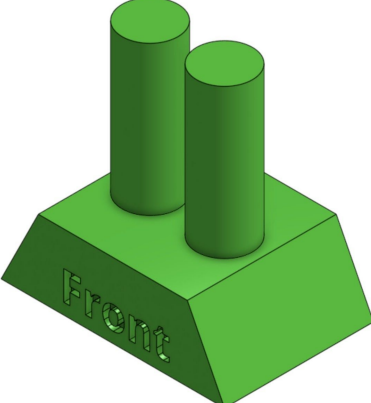
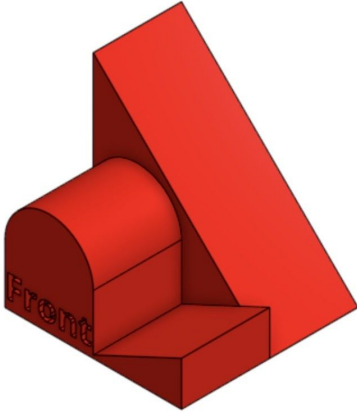



Activity

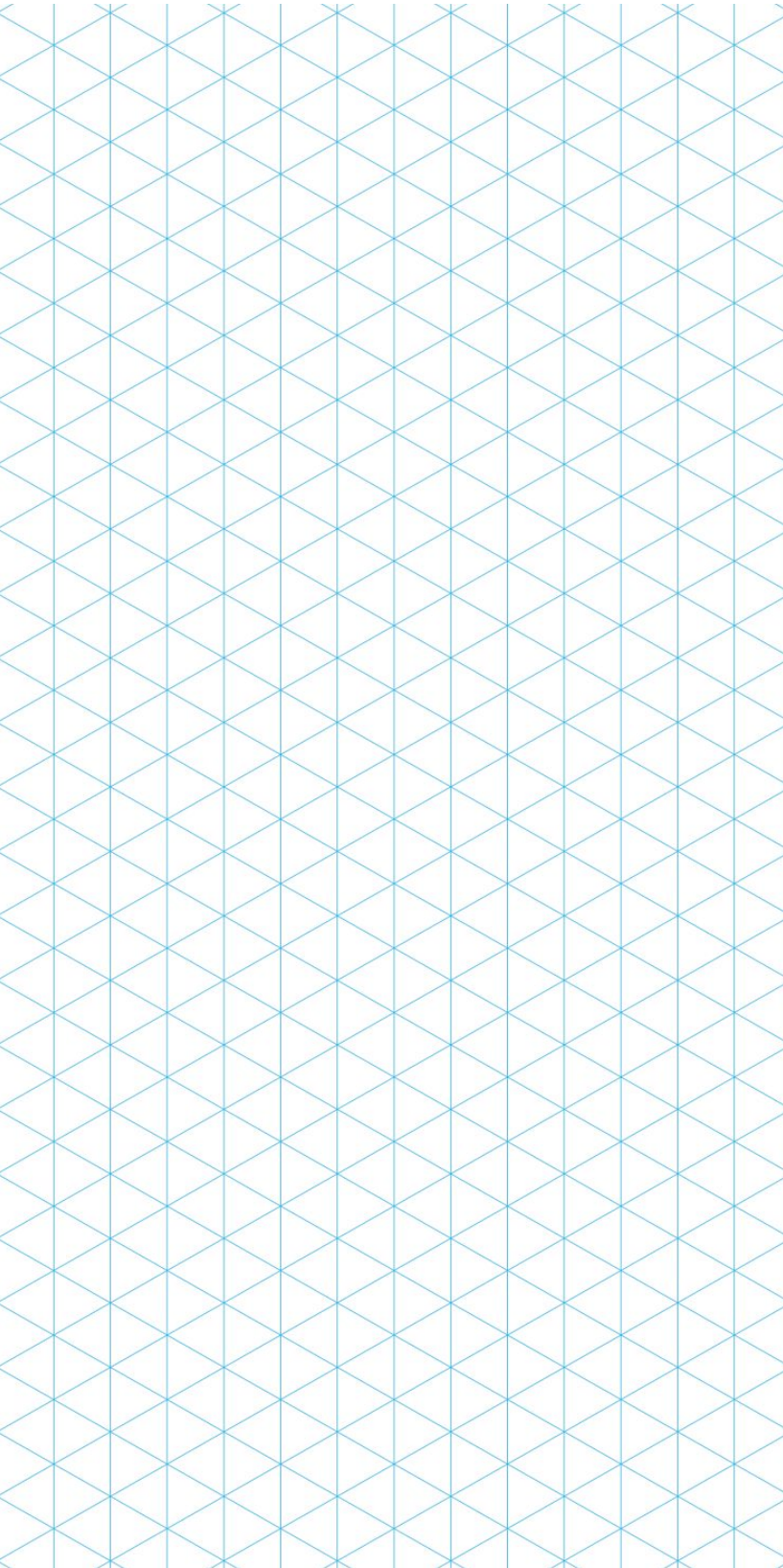
- Divide the class into groups and give each group a different 3D printed shape.
- Students draw the isometric of the 3D printed shape
 - Note: One of the sides on each shape is labeled Front or Top. Students need to use this to help orient their isometric drawing.
- After drawing the isometric of the 3D shape, students draw the orthographic views of the shape.
- After a group is done with the drawings of their 3D shape, they can switch 3D shapes with another group.

If you don't have access to a 3D printer in your institution, refer to the following pages for pictures of each shape. With this option, the isometric drawing will simply consist of copying what they see in the picture. However, the orthographic views might be a bit more challenging. We recommend getting the shapes 3D printed whenever possible.

For solutions, refer to the end of the document.

5.1	5.2
	
5.3	5.4
	
5.5	5.6
	

Isometric



Orthographic

