eGrove Education

# Hands On Activity
# Lessons 7 and 8: Rotations about 1 and 2 axes

In this activity, students can use either soma cube pieces or shapes built out of snap cubes to visualize rotations about 1 and 2 axes.

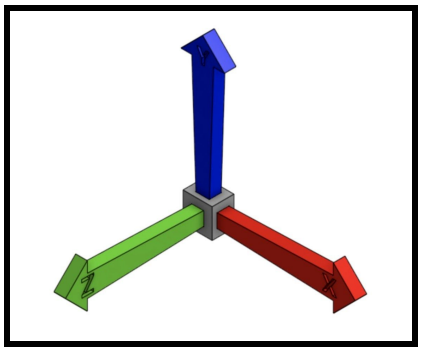
## Integration with the Spatial Vis™ App

- This activity goes with Lessons 7 and 8: Rotations about 1 and 2 axes
- The activity can be done at the end of the Lecture on 1 and 2 Axes Rotations.

## Preparation Before Class

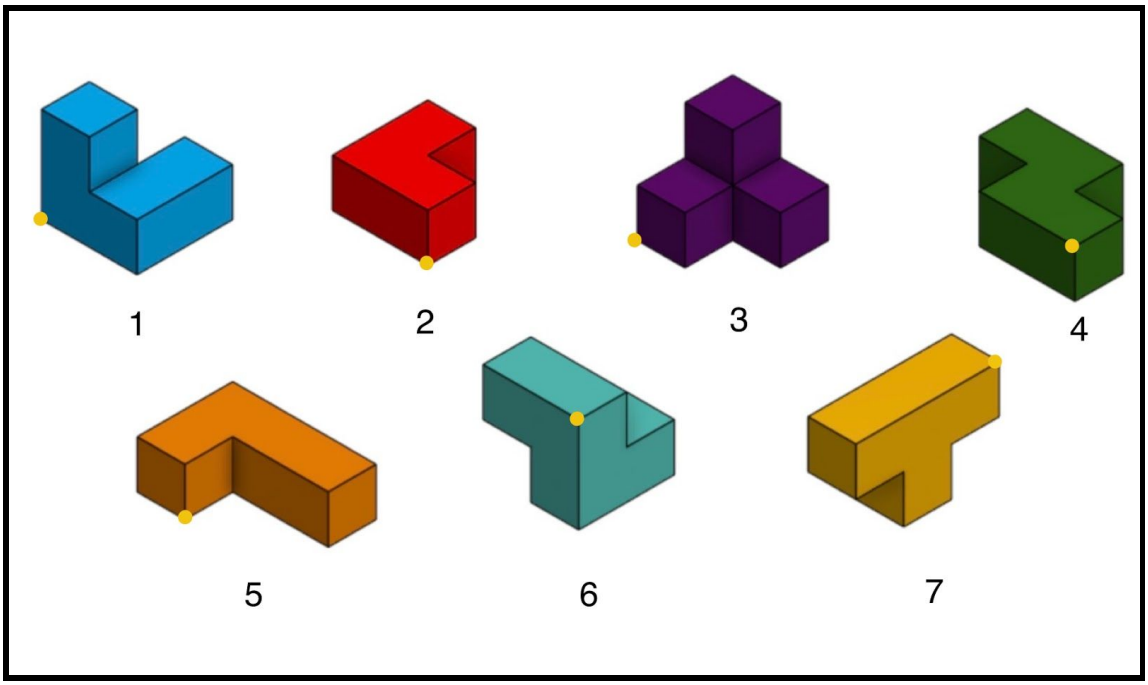
**Items Needed: Select one of the following approaches**

- Purchase Soma Cube Pieces, OR
- Snap Cubes assembled to look like each of the 7 soma cubes pieces
- Isometric Paper



## Activity

- Take the Soma piece in your hand and orient it the same way as pictured below.
- Each time, rotate the object about the axis specified.
- Draw the rotated object on isometric paper, indicating the reference dot.
- NOTE: Recall that a positive rotation is COUNTERCLOCKWISE, and a negative rotation is CLOCKWISE!



## Rotations about 1 Axis:

**A.** Rotate shape (1) +90° about the y axis
**B.** Rotate shape (2) +180° about the x axis
**C.** Rotate shape (3) -90° about the z axis
**D.** Rotate shape (4) +270° about the y axis

## Rotations about 2 Axes:

**A.** First, rotate shape (5) +90° about the z axis, then, rotate it +90° about the x axis
**B.** First, rotate shape (6) +180° about the x axis, then, rotate it -90° about the y axis
**C.** Rotate shape (7) +270° about the y axis, then, rotate it +180° about the x axis

**Use this isometric paper to draw the rotated figures:**