### **Reason with Shapes and Defining Attributes**

### **Overarching Student Learning Goals**

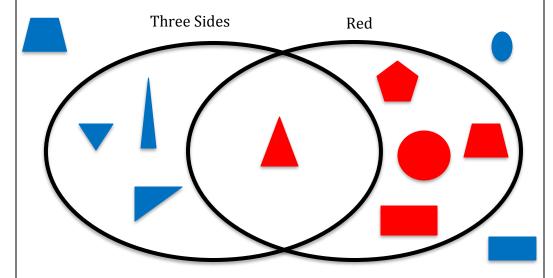
In this unit, your child will work to build an understanding of the following:

# Students can distinguish between defining and non-defining attributes.

**Defining** means an attribute all shapes of this category possess, for example, all triangles have three straight sides and three vertices.

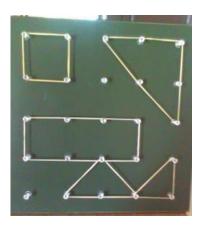
**Non-Defining** means attributes that are not specific to one given shape, for example color or size. "Red" is a non-defining attribute because any shape can be red.

Example:



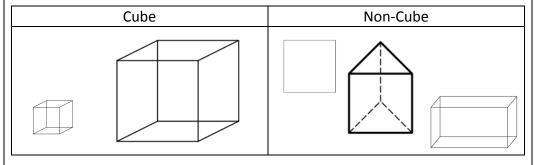
## Resources/Tasks to support your child at home.

- Students can create their own shapes based on defining attributes using online <u>Geoboards</u>. Give your child clues based on attributes such as "I'm thinking of a shape with 4 sides of the same length and 4 vertices."
  <a href="https://www.mathlearningcenter.org/resources/apps/geoboard">https://www.mathlearningcenter.org/resources/apps/geoboard</a>
- Make your own Geoboard at home using cardboard and push pins.



# Students can create and justify examples and non-examples of a shape category.

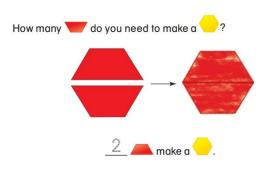
## Example:



- Virtual Manipulates <a href="http://goo.gl/u7R4aP">http://goo.gl/u7R4aP</a> Attribute Blocks This interactive manipulative allows you to sort shapes based on a given attribute.
- Learnzillion Defining Attributes <a href="https://learnzillion.com/lesson\_plans/3863">https://learnzillion.com/lesson\_plans/3863</a> This interactive tutorial focuses defining and non-defining attributes of 2D shapes.
- Name My Shape Describe attributes of a shape while partner tries to name/draw the shape.

# Students can put together shapes to make composite shapes.

### Example:



• Students can create their own <u>Shape Mosaic</u>. Be sure to have your child name the shapes they are using and the shape they are creating.

https://www.education.com/game/create-mosaics-with-shapes/