Classify Two-Dimensional Figures
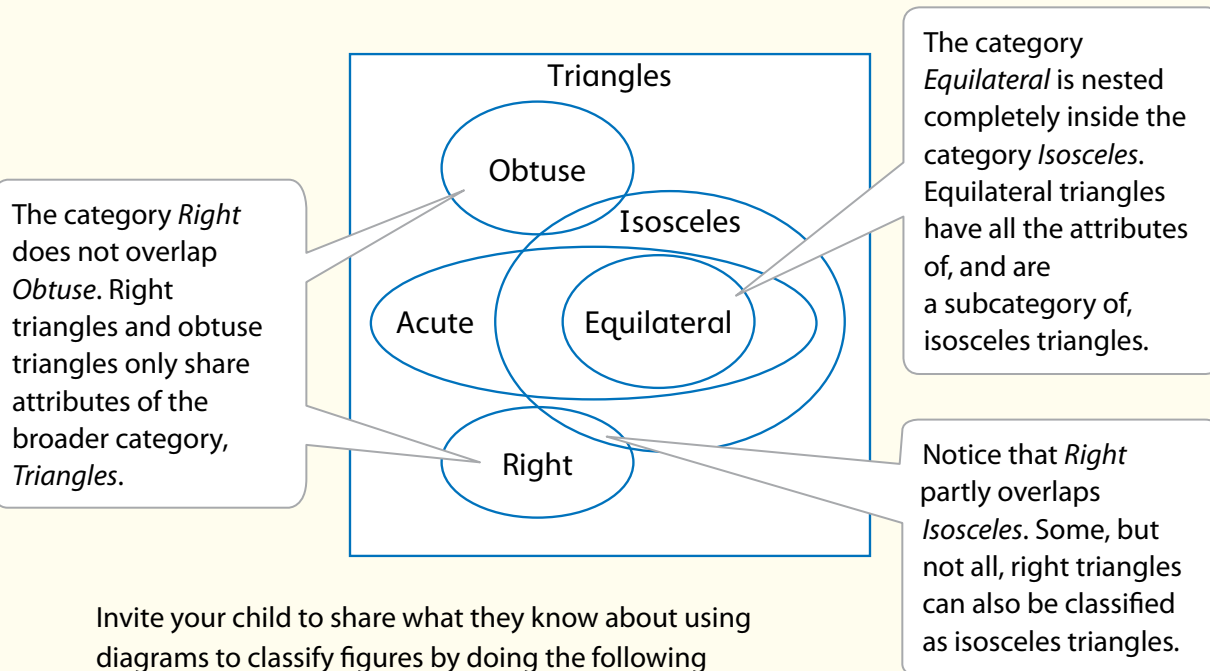
Dear Family,

This week your child is continuing to make diagrams to classify two-dimensional figures.

Your child will continue to explore how Venn diagrams and tree diagrams can be used to show relationships among categories of two-dimensional figures.

Figures can be grouped into categories by their attributes or properties, such as the number of their sides and angles, the length of their sides, and the measure of their angles. Your child knows that all figures in a category share at least one attribute. While subcategories share the attribute(s) of the broader category, figures in subcategories have additional specific properties.

Your child knows how to use Venn diagrams or tree diagrams to show that one category is a subcategory of another. Now your child will use more complex diagrams to classify figures. The Venn diagram below shows "Triangles" as the broader category. The labeled ovals represent subcategories of triangles.

The category *Right* does not overlap *Obtuse*. Right triangles and obtuse triangles only share attributes of the broader category, *Triangles*.

The category *Equilateral* is nested completely inside the category *Isosceles*. Equilateral triangles have all the attributes of, and are a subcategory of, isosceles triangles.

Notice that *Right* partly overlaps *Isosceles*. Some, but not all, right triangles can also be classified as isosceles triangles.

Triangles — Obtuse, Isosceles, Acute, Equilateral, Right

Invite your child to share what they know about using diagrams to classify figures by doing the following activity together.

ACTIVITY CLASSIFYING TWO-DIMENSIONAL FIGURES

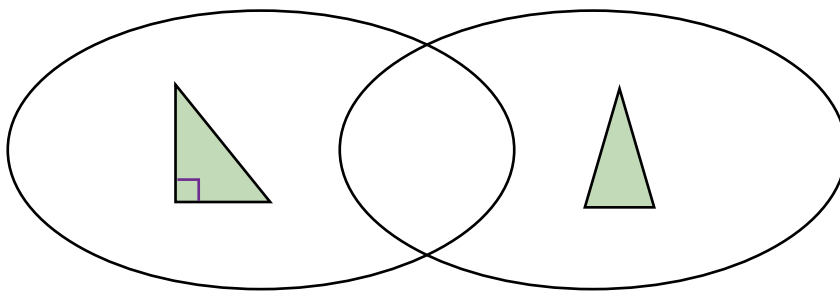**Do this activity with your child to classify two-dimensional figures.**

Work together with your child to describe how figures are classified in Venn diagrams.

- Look at the figures in the Venn diagrams below and talk about how the figures are related to each other.

- Work together to describe the attributes of the figures. Tell what attributes the figures do and do not share. The words in the box describe some attributes of figures that you might use in your discussion.

three sides	equilateral	isosceles
right angle	acute angle	obtuse angle
equal side lengths	different side lengths	

- Write category names in each oval to classify the shapes.

Venn Diagram A

Venn Diagram B

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