**Family Letter**

**5th Grade Classifying Quadrilaterals**

Dear Family,

During the week of <date> we will begin a new math unit focused on classifying quadrilaterals based on their properties. The purpose of this letter is to provide background information about our new unit.

**Focus of the Unit**

This unit focuses on using the properties of quadrilaterals to sort them into categories and subcategories. Students also classify quadrilaterals in a hierarchy, based on their properties.

**Building on Past Mathematics**

In previous grade levels, students classified figures based on various properties. Specifically in fourth grade, students classified two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. In third grade, students sorted shapes with shared attributes (number of sides, relative side lengths, types of angles) into different categories, with an emphasis on work with quadrilaterals.

**Strategies that Students Will Learn**

In fifth grade, students use their previous understanding of classifying shapes and continue their work with quadrilaterals. Students describe and compare the attributes of shapes and understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

Students will also learn that two-dimensional figures can be arranged in a hierarchy based on their properties:

Quadrilateral – a polygon with 4 sides

Kite – a quadrilateral with 2 pairs of adjacent, congruent sides

Trapezoid – a quadrilateral with one pair of parallel sides with 4 right angles

Parallelogram – a quadrilateral opposite sides that are parallel

Rhombus– a parallelogram with 4 equal sides

Rectangle – a parallelogram with 4 right angles

Square – a rectangle with 4 equal sides

**Ideas for Home Support**

When classifying shapes, encourage your child to explain his/her reasoning. Pose new shapes and debate why they would or would not fit into the categories. Examine various shapes and discuss what is true about shapes and categories. Ask, “What are ways to classify triangles? Is this attribute true of all quadrilaterals? Why can’t be classified as a parallelogram?”

**Thank you for serving as partners in your child’s success as a mathematician!**

**<signature>**