Grade 2 - Unit E - Name It, Make It, Shape It, Break It, Build It, Move It and Compare It

Unit Focus

In this unit students reason with shapes and their attributes. Students will identify, describe, construct, draw, compare, contrast, and sort various types of triangles and quadrilaterals, as well as other shapes. They partition shapes into equal shares. In addition, they relate halves, fourths and skip counting by 5's to tell time and solve problems involving money.

Stage 1: Desired Results - Key Understandings

Standard(s)

Standards
- Common Core
  - *Mathematics: 2*
    - Work with equal groups of objects to gain foundations for multiplication.
    - Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. *(CCSS.MATH.CONTENT.2.OA.C.4)*
    - Work with time and money.
    - Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. *(CCSS.MATH.CONTENT.2.MD.C.7)*
    - Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have? *(CCSS.MATH.CONTENT.2.MD.C.8)*
    - Reason with shapes and their attributes.
    - Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.1 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. *(CCSS.MATH.CONTENT.2.G.A.1)*
    - Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. *(CCSS.MATH.CONTENT.2.G.A.2)*
    - Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. *(CCSS.MATH.CONTENT.2.G.A.3)*
    - Mathematical Practices
    - Construct viable arguments and critique the reasoning of others. *(CCSS.MATH.MP.3)*
    - Model with mathematics. *(CCSS.MATH.MP.4)*
    - Look for and make use of structure. *(CCSS.MATH.MP.7)*

Transfer

Students will be able to independently use their learning to...
T1 Construct viable arguments using clear and appropriate mathematical language and critique the reasoning of others.
T2 Identify and generalize patterns and structure in numbers, expressions, data and objects.
T3 Apply models to solve problems.

Meaning

Understanding(s)	Essential Question(s)
Students will understand that... **U1** Mathematicians construct viable arguments to explain problems, solutions, and mathematical representations. **U2** Mathematicians create or use models to generalize, represent, and solve problems. **U3** Mathematicians see patterns to make generalizations about structures and relationships.	*Students will keep considering...* **Q1** Have I sufficiently supported my answer and shown my work? **Q2** How can the model created be tested and improved? **Q3** What generalizations can be made from this pattern?

Acquisition of Knowledge and Skill

Knowledge	Skill(s)
Students will know... **K1** Vocabulary: sides, angles, equilateral, congruent, vertex **K2** Sides and angles help to define a shape **K3** How to determine area of a shape using a smaller shape **K4** Equal parts of identical wholes do not have to be the same shape (for example a square can be split into two rectangles or two triangles)	*Students will be skilled at...* **S1** Recognizing and drawing shapes having specified attributes **S2** Identifying and naming triangles and quadrilaterals including: (squares, rectangles, trapezoids, & rhombuses), pentagons, and hexagons

Stage 1: Desired Results - Key Understandings

Madison Public Schools Profile of a Graduate o Analyzing: Examining information/data/evidence from multiple sources to identify possible underlying assumptions, patterns, and relationships in order to make inferences. *(POG.1.2)* o Product Creation: Effectively use a medium to communicate important information. *(POG.3.2)*	**K5** Attributes of two-dimensional shapes. **K6** Value of a quarter, dime, nickel and penny	**S3** Using pattern blocks to create composite shapes, solve puzzles, and practice drawing shapes **S4** Partitioning circles and rectangles into halves and fourths **S5** Telling time to the quarter and half hour **S6** Finding the value of a set of coins **S7** Finding the area of various rectangles