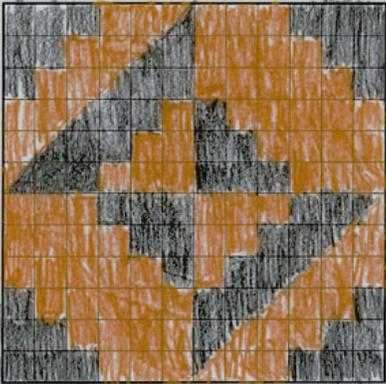


Unit Title: Geometry Through Acoma Ceramics

Math Goals: Understanding geometric shapes, angles, lines, fractions and symmetry

Artistic Goals: Manipulate colors, shapes, lines and patterns to create symmetrical designs

Lesson	1. The Acoma Potter: Artist as mathematician Find math in a design	2. Creating a Design with Math: Mapping a design on graph paper making connections to concepts and good design	3. Making a Ceramic Tile Slip decorated clay project using plan created on paper
Curriculum Context	acute angle centimeter congruent equilateral triangle hexagon obtuse orientation parallel parallelogram pentagon polygon quadrilateral rectangle right angle square symmetrical symmetry trapezoid vertices fraction half, quarter, third, sixth	4.G.1 Compare and analyze attributes and other features (e.g., number of sides, faces, corners, right angles, diagonals, and symmetry) of two- and three-dimensional geometric shapes. 4.G.2 Describe, model, draw, compare, and classify two- and three-dimensional shapes, e.g., circles, polygons-especially triangles and quadrilaterals-cubes, spheres, and pyramids. 4.G.3 Recognize similar figures. 4.G.4 Identify angles as acute, right, or obtuse. 4.G.5 Describe and draw intersecting, parallel, and perpendicular lines. 4.G.7 Describe and apply techniques such as reflections (flips), rotations (turns), and translations (slides) for determining if two shapes are congruent. 4.G.8 Identify and describe line of symmetry in two-dimensional shapes. 4.N.18 Use concrete objects and visual models to add and subtract common fractions	Describe and classify 2D shapes -Draw 2D representations showing different perspectives of a 3D object. -Identify quadrilaterals as any four sided – closed shape -Identify and describe line symmetry in two dimensional shapes -Describe and draw intersecting, parallel and perpendicular lines -Know that a right angle measures 90 degrees and use this as a landmark to find angles of 30, 45, and 60. -Recognize congruent shapes and create design using flips, turns and slides
Arts content/ extensions	Colors, clay sources, story held in each shape, acoma culture	Using color to create balance and emphasis, line, shape,	Slab technique, slip decoration, scrafitto,
Sample		 <p>I SEE: RIGHT ANGLES, VERTEX, RIGHT TRIANGLES, PARALLEL LINES, DIAGONAL LINES, FLIP, TURN, SYMMETRY</p>	