

Congruent Triangles

CLASS QUILT

1. Take three sheets (different colors) of construction paper. With these you will make three to five hexagons for the class quilt using the following directions. *When forming the hexagon, tape the pieces so that all the tape is on the same side of the hexagon.*
 - a. Use a ruler, compass, and protractor to draw an isosceles triangle with a 4-inch base and 30° base angles.
 - b. Cut out a total of twelve isosceles triangles (six in one color and six in another color).
 - c. Use a ruler and compass to construct an equilateral triangle with sides congruent to the legs of the isosceles triangle.
 - d. Cut out a total of twelve equilateral triangles using the third color.
 - e. Form a quadrilateral by taping together the bases of two isosceles triangles of different colors. Repeat this process for each pair of isosceles triangles.
 - f. Tape the six quadrilaterals together to form a six-pointed star.
 - g. Tape two equilateral triangles together to form a quadrilateral that is congruent to the quadrilaterals formed in part e. Repeat this process to form six quadrilaterals.
 - h. Tape the six quadrilaterals onto the six-pointed star to form a hexagon.
2. Describe the geometric properties, definitions, and construction techniques you need to help make the class quilt.