EXPLORING PATTERN BLOCKS

Part One: Free Exploration

[30 minutes]

Materials:

- Pattern blocks (multiple sets) You can purchase these online, or download and print out paper patterns here: http://mason.gmu.edu/~mmankus/Handson/manipulatives.htm

Try This:

Build with the blocks and explore what you can make with them.

Part Two: Sorting and Classifying Shapes

[15–30 minutes]

Materials:

- Pattern blocks (multiple sets), excluding the orange squares and white rhombuses
- Shapes Worksheet (included)

Try This:

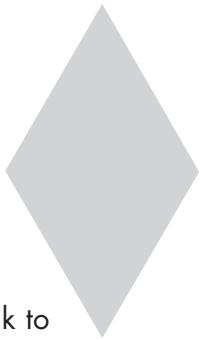
Step 1 Look at the pattern block shapes. Describe each shape: What color is it? How many sides does it have? Are the sides the same length? What does this shape look like to you? How are they similar and different?

Step 2 Definitions of the pattern block shapes:
Green *equilateral triangle*: three sides, equal lengths
Blue *rhombus*: four sides, equal lengths, opposite sides are parallel
Red *trapezoid*: four sides, two sides are parallel
Yellow regular *hexagon*: six sides, equal lengths

Step 3 Use the Shapes Worksheet with outlines of the shapes for this part of the activity. Use your pattern blocks to fill in the shapes as directed.

Shapes Worksheet

Triangle:
Use one block to fill this shape.



Rhombus:
Use one block to fill this shape.

Use two blocks to fill this shape.

Trapezoid:
Use one block to fill this shape.

Use two blocks.

Use three blocks.

Hexagon Challenge:
There are eight different ways to fill this shape. Can you find them all?

From the National Council of Teachers of Mathematics (NCTM)

EXPLORING PATTERN BLOCKS

Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships:

- Recognize, name, build, draw, compare, and sort two- and three-dimensional shapes;
- Describe attributes and parts of two- and three-dimensional shapes;
- Investigate and predict the results of putting together and taking apart two- and three-dimensional shapes.

Understand measurable attributes of objects and the units, systems, and processes of measurement:

- Recognize the attributes of length, volume, weight, area, and time.