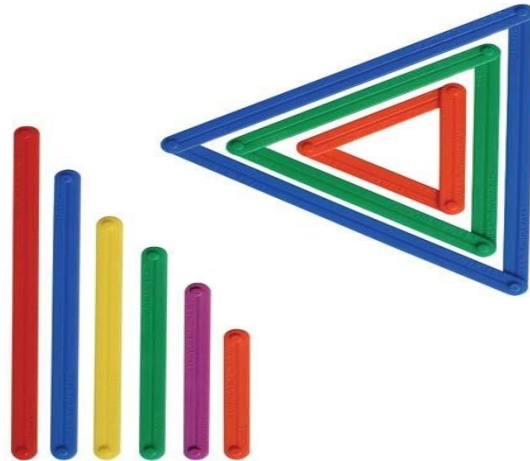


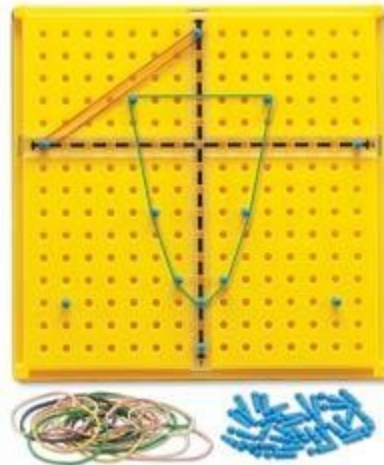
Hands-On Geometry
Kevin Dykema
kdykema@mattawanschools.org



Some ideas:

- **Triangle Sum Theorem**
 - Use 3 different colors of AngLegs for the side lengths and make 3 copies of the triangle.
 - Then snap the triangles together so that you get each angle lined up
- **Triangle Inequality**
 - Record side lengths for combinations that make a triangle and for combinations that don't make a triangle.
 - Then look for a pattern of how to determine without using AngLegs.
- **Properties of Quadrilaterals**
 - Adjacent angles sum
 - Opposite angles sum
- **Parallel Lines and Angle Measures**
 - Use notebook paper to help lines stay parallel
- www.etacuisenaire.com

Hands-On Coordinate Graphing
Kevin Dykema
kdykema@mattawanschools.org



Some Ideas:

- Graphing Ordered Pairs
 - Activity #1
 - Start at the origin. Move left 6 spaces, up 5 spaces. Place peg 1.
 - Down 9 spaces, right 2 spaces. Place peg 2 and connect to peg 1.
 - Right 4 spaces, up 3 spaces. Place peg 3 and connect to peg 2.
 - Right 4 spaces, down 3 spaces. Place peg 4 and connect to peg 3.
 - Right 2 spaces, up 9 spaces. Place peg 5 and connect to peg 4.
 - What figure is formed?
 - Activity #2
 - Start at the origin. Move positive x 4 spaces, positive y 4 spaces, Place peg 1.
 - Positive x 1 space, negative y 6 spaces. Place peg 2 and connect to peg 1.
 - Negative x 5 spaces, negative y 4 spaces. Place peg 3 and connect to peg 2.
 - Negative x 6 spaces, positive y 7 spaces. Place peg 4 and connect to peg 3.
 - Positive y 4 spaces, positive x 4 spaces. Place peg 5 and connect to peg 4.
 - What figure is formed?
- Graphing Linear Inequalities
 - If line is solid, use rubber band. If line is dotted, don't use rubber band.
 - To show the half-plane which should be shaded, place several pegs on that half.
- Graphing Systems of Equations
- Discovering Rules for reflections over x- axis or y-axis
 - Make a triangle in Quadrant 1 and record the coordinate pairs.
 - Place GeoReflector on x-axis and look through to find reflections of points of original triangle and record new coordinate pairs.
 - Look for patterns in the coordinate pairs to determine the rule.
- www.etacuisineaire.com

Fraction Resources

- *Hands-on Standards* series by ETA/ Cuisenaire (www.eta-cuisenaire.com)
- Free ideas via blog: mark-at-eta.blogspot.com
- *FractionWorks* series by ETA/ Cuisenaire

Algebra Resources

- *Hands-on Standards* series by ETA/ Cuisenaire (www.eta-cuisenaire.com)
- Free ideas via blog: mark-at-eta.blogspot.com
- *AlgebraWorks* series by ETA/ Cuisenaire
- AlgeBlocks from ETA/ Cuisenaire