

# Glossary of Manipulatives

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>Algebra Tiles™</b> These tiles involve students in learning algebraic concepts, including adding and subtracting polynomials, factoring trinomials, and the Zero Principle. Each tile represents the positive and negative of a quantity: <math>\pm x</math>, <math>\pm x^2</math>, and <math>\pm 1</math>. The set of 32 pieces includes 4 squared variables, 8 variables, and 20 constants.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|    | <p><b>AngLegs®</b> AngLegs enable students to study polygons, perimeter, area, angle measurement, side lengths, and more. The set includes 72 snap-together AngLegs pieces (12 each of six different lengths) and two snap-on View-Thru® protractors.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|    | <p><b>Centimeter Cubes</b> These plastic cubes come in 10 colors. They can be used to teach counting, patterning, and spatial reasoning. They are suitable for measuring area and volume and also may be used to generate data for the study of probability.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|   | <p><b>Color Tiles</b> These 1" square plastic tiles come in four different colors: red, blue, yellow, and green. They can be used to explore many mathematical concepts, including those associated with geometry, patterns, and number sense.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|  | <p><b>Folding Number Line</b> This manipulative was created to help students understand the concept of rational numbers and their order on a number line. The Folding Number Line helps build an understanding of rational numbers between 0 and 1 and between 1 and 2 on a linear model. One side of the Folding Number Line shows the order of decimal numbers; the other side shows the order of fractions. Students gain an understanding of rational numbers and can extend their understanding of larger mixed numbers. On the decimal side, the Folding Number Line first shows numbers from 0 through 2 in tenths; when expanded, it shows decimal numbers in order by hundredths. When expanded, the fraction side of the Folding Number Line shows in order fractions between 0 to 1 and between 1 to 2 that correspond to, or are equivalent to, the decimals on the other side.</p> |



**Pattern Blocks** Pattern Blocks consist of six shapes, each a different color: yellow hexagons, red trapezoids, orange squares, green triangles, blue parallelograms (rhombuses), and tan rhombuses. The versatile blocks can be used to teach concepts from all strands of mathematics. Pattern Blocks can be used to illustrate algebraic concepts such as patterning and sorting; geometry and measurement concepts such as symmetry, transformations, and area; and number and fraction concepts.



**XY Coordinate Pegboard** The XY Coordinate Pegboard can be used to graph coordinates in one, two, or four quadrants; to show translations of geometric figures; to display data in various forms; and to demonstrate numerous algebraic concepts and relationships.

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XY Coordinate Pegboard

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