

Unit Plan 5: Mathematics - Geometry (Grade 5)

Content Area: **Mathematics**
Course(s): **Math 5**
Time Period: **Marking Period 3**
Length: **March to April**
Status: **Published**

Established Goals/Standards

MA.5.G	Geometry
MA.5.G.A	Graph points on the coordinate plane to solve real-world and mathematical problems.
MA.5.G.A.1	Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x -axis and x -coordinate, y -axis and y -coordinate).
MA.5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.
MA.5.G.B	Classify two-dimensional figures into categories based on their properties.
MA.5.G.B.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.
MA.5.G.B.4	Classify two-dimensional figures in a hierarchy based on properties.
MA.5.MD.B.2	Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots.
MA.5.NF.B.7	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.
MA.5.NBT.B.5	Fluently multiply multi-digit whole numbers using the standard algorithm.
MA.5.NBT.B.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Essential Questions

Please add your Essential Questions by clicking on the Lists tab above.

- How are points graphed?
- How can angles be measured and classified?
- How can polygons, triangles, and quadrilaterals be described, classified and named?
- How can we show the relationship between sequences on a graph?

Enduring Understanding

Please add your Enduring Understandings by clicking on the Lists tab above.

- a graph of a rule contains all of the points on the coordinate grid whose x- and y coordinates satisfy the rule.
- Classify two dimensional shapes into categories based on their properties.
- Plane shapes have many properties that make them different from one another. Polygons are classified and named by their sides and angles.
- The coordinate system is a scheme that uses two perpendicular lines intersecting at 0 to name the location of points in the plane.
- The ordered pairs of the end of points of vertical and horizontal line segments can be used to find the length of the segments.

Content

Students will be able to:

- identify and classify polygons, triangles, quadrilaterals.
- learn about the properties of special quadrilaterals.
- sort a variety of quadrilaterals to develop the hierarchy or "family tree" for quadrilaterals.
- make and test generalizations of patterns in different examples.
- identify and graph points on a coordinate grid.
- find the distance between two points by using ordered pairs.
- find the distance between two points not on straight line by solving a simpler problem first.
- create and interpret coordinate graphs.
- use coordinate graphs to explore the relationship between two rules.
- work backward to solve a problem.

Vocabulary students will know:

polygon

regular polygon

triangle

quadrilateral

pentagon

hexagon

octagon

equilateral triangle

isosceles triangle

scalene triangle

right triangle

acute triangle

obtuse triangle

parallelogram

trapezoid

rectangle

rhombus

square

generalization

coordinate grid

x-axis

y-axis

origin

ordered pair

x-coordinate

y-coordinate

Resources

Envision Resources

- www.pearsonsuccessnet.com
- textbook
- student online resources
- Daily Common Core Review
- Quick Checks
- Reteaching/Practice
- Math Centers

Unit lesson flipcharts

Tangrams

Simon Says Geometry

Battleship Game

Solid Figures

Online Games from teacher website

Quizmo Geometry

Mad Minutes

Literature: *The Greedy Triangle* by Marilyn Burns;