Graphing Points on the Coordinate Plane
Geometry

Concept	To graph points on the coordinate plane to solve real world and mathematical problems
Materials needed	Each student will need: • a geoboard • rubberbands • a dry erase marker • coordinate grid paper • a ruler
Directions	• Each student will first label a geoboard. The student will label the x-axis and the y-axis with a dry erase marker on the geoboard. • Next, the student will create a polygon on the geoboard by using rubber bands. (Using approximately 3-6 rubber bands). • The student will then note or say aloud the coordinates that they have created with their polygon. • The student will use the coordinate grid paper to plot the points and then connect the points with lines. The student should find that the polygon that they created with their rubber bands will match the polygon plotted on the coordinate grid paper. • When the student concludes that they look identical, the student will begin again by creating a new polygon with rubber bands.
Differentiate	To differentiate instruction for students struggling with plotting points and then connecting the points with lines, the teacher could partner students and make this a "Math With Someone" activity. Therefore, students would have a peer to 'assist' and then 'check' their plots. Struggling students could have pre-created polygons with only 3 sides, and then practice plotting and connecting the points. To differentiate instruction for advanced students, teachers could have students create more complex polygons, and then plot and connect the lines on the coordinate grid paper. Advanced students could also be given the coordinates, then plot and connect lines, and finally create the polygon based on the coordinates.
CCSS	Fifth Grade - Geometry (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 conventions that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y- coordinate). .

This math activity could also be used for Math with Someone and Writing in Math. For Math with Someone, students could have a partner assist in plotting the points, then switch roles. For Writing in Math, students could explain the process of plotting points on the 'x' and 'y' axis.