Algebra II

Objective	Cover sections 3.1 through 3.3 with complete understanding of how to graph a straight line from and equation and determine an equation from a graph of a straight line.
Standards	**Mathematical Reasoning and Problem Solving** Students need a strong set of problem solving skills in order to increase their understanding of mathematics. By proving mathematical laws, using counterexamples, and learning about inductive and deductive reasoning, students can increase their problem solving abilities. **Equations and Inequalities** This knowledge area teaches students to graph and solve equations and inequalities in order to solve word problems. They learn to solve systems of equations and inequalities to model data and make predictions. Students derive the quadratic formula and use it and other methods to solve equations. They learn how to deal with radical expressions and complex numbers that appear in equations as well as how to graph quadratic functions.
Students	Students will be in their freshman sophomore or junior year in high school, and have previously taken Algebra I and passed with a C- (70%) or higher.
Materials	A ruler or other type of straight edge, lined paper, graph paper, and a pencil, directions retrieved from the Stixy class website.
Procedures	• Explain through lecture to use a point and "plug it in" to a given equation and get the matching point on the line. Graph the coordinates on the graph paper and connect them using the straight edge. • Students will be expected to follow along in their directions printed from the website and add additional notes if necessary. • Explain through lecture to use the y-intercept and determine the slope of the line and "plug them in" to the formula $y=mx+b$.
Evaluation	Have a game for the last 20 minutes of the class where students are placed on teams and one person goes to the board at a time and is asked to complete a question. The student that answers correctly first will receive a point for their team. The team in the end with the most points will receive 5 bonus points on the next test.