Algebra I Honors
Unit 5: Writing Linear Equations

Essential Understandings	▪ Writing linear equations is a very important algebraic skill.
Essential Questions	▪ How do you write an equation is slope intercept form? ▪ How do you write an equation given two points? ▪ What is the "standard" form of an equation? ▪ What makes lines perpendicular to each other? ▪ What makes lines parallel to each other? ▪ How can you model data with the best-fitting line?
Essential Knowledge	▪ Slope-intercept form of an equation is y=mx+b. ▪ "Standard" form of an equation is Ax+By =C. ▪ Perpendicular lines have slopes that are reciprocals and opposites. ▪ Parallel lines have the same slopes. ▪ Understand the difference between correlation and causation. ▪ Linear regression creates the line of best-fit. ▪ The line of best-fit can be used for interpolation not extrapolation.

Vocabulary	▪ <u>Terms</u>:
	  o Standard form, slope-intercept form, perpendicular/parallel lines.
	  o Scatter plot, correlation, causation, line of best-fit, linear regression, interpolation, and extrapolation.

Essential Skills	▪ Write the equation for a line given slope and y-intercept. ▪ Write the equation for a line given slope and a point. ▪ Write the equation for a line given slope and y-intercept given two points. ▪ Find slope of a line. ▪ Write an equation for a line in "standard" form. ▪ Write the equation for perpendicular lines. ▪ Write the equation for parallel lines. ▪ Perform and interpret linear regression models using technology.
Related Maine Learning Results	D. Algebra-Equations and Inequalities D. Algebra-Functions and Relations
Sample Lessons And Activities	▪ Students will orally respond to questions. ▪ Students will utilize worksheets and in their notes to demonstrate individual understanding of the concepts.
Sample Classroom Assessment Methods	▪ Quizzes, take-home worksheets, and tests.
Sample Resources	▪ <u>Publications</u>: Algebra 1 Textbook (Larson) ▪ <u>Other</u>: Graphing calculators.
Technology Link	▪ http://www.brunswick.k12.me.us/curriculum