Mathematics
Algebra 1: CP
Unit 6: Solving and Graphing Linear Inequalities

Essential Understandings	▪ Solving and graphing linear inequalities is a very important Algebraic skill.
Essential Questions	▪ How do you solve inequalities using addition and subtraction? ▪ How do you solve inequalities using multiplication and division? ▪ How do you solve multi-step inequalities? ▪ How do you solve inequalities with "and" or "or."? ▪ How do you solve absolute-value equations? ▪ How do you solve absolute-value inequalities? ▪ How do you graph linear inequalities in two variables?
Essential Knowledge	▪ Inequalities can be solved by addition and subtraction. ▪ Inequalities can be solved by multiplying and dividing. ▪ Multi-step equalities can be solved. ▪ Inequalities involving "and" and "or" can be solved. ▪ Absolute value equations and inequalities can be solved. ▪ Linear inequalities in two variables have graphs.
Vocabulary	▪ <u>Terms</u>: ○ single step inequalities, multi-step inequalities, multiplication and division property of inequalities, graph of inequalities, compound inequalities, "AND" inequalities, "OR" inequalities
Essential Skills	▪ Solve inequalities using addition and subtraction. ▪ Solve inequalities using multiplication and division. ▪ Solve multi-step inequalities. ▪ Solve inequalities with "and" or "or." ▪ Solve absolute-value equations. ▪ Solve absolute-value inequalities. ▪ Graph linear inequalities in two variables.

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Related Maine Learning Results	Mathematics
	D. Algebra
	 Functions and Relations
	    D4.Students understand and interpret the characteristics of functions using graphs, tables, and algebraic techniques.
	      a. Recognize the graphs and sketch graphs of the basic functions.
	      b. Apply functions from these families to problem situations.
	      c. Use concepts such as domain, range, zeros, intercepts, and maximum and minimum values.
	      d. Use the concepts of average rate of change (table of values) and increasing and decreasing over intervals, and use these characteristics to compare functions.
	    D5.Students express relationships recursively and use iterative methods to solve problems.
	      a. Express the (n+1)st term in terms of the nth term and describe relationships in terms of starting point and rule followed to transform one terms to the next.
	      b. Use technology to perform repeated calculations to develop solutions to real life problems involving linear, exponential, and other patterns of change.

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	▪ Evaluate homework ▪ Quizzes ▪ Chapter test
Sample Resources	▪ Publications: ○ Algebra 1 - McDougall Littell