

Mathematics
Algebra 1: Academic
Unit 1: Connections to Algebra

Essential Understandings	<ul style="list-style-type: none"> ▪ Connecting pre-algebra to algebra is a very important step in learning Algebra. These are essential understandings that are prerequisites to Academic Algebra 1 and students are expected to have these skills prior to taking this class.
Essential Questions	<ul style="list-style-type: none"> ▪ How do you evaluate complex expressions and powers? ▪ What is the order of operations? ▪ How do you check solutions of equations and inequalities? ▪ How do you translate words into mathematical symbols? ▪ How do you model and solve real-life equations? ▪ What are the different types of tables and graphs and how do I use them? ▪ What are functions and how do I represent them? ▪ Which vocabulary terms will help me be successful in the future?
Essential Knowledge	<ul style="list-style-type: none"> ▪ Expressions and powers can be evaluated. ▪ Order of operations need to be performed in a specific sequence. ▪ Equations and inequalities are different but both have solutions. ▪ Words can be written as mathematical symbols. ▪ Models of real-life problems make them easier to solve. ▪ There are different types of tables and graphs. ▪ Functions are a large part of Algebra.
Vocabulary	<ul style="list-style-type: none"> ▪ <u>Terms:</u> <ul style="list-style-type: none"> ○ arithmetic operations (sum, difference, product, & quotient), grouping symbols, order of operations, variable, expression, evaluate, equation, solve, inequality, solutions, power, base, exponent, factors, terms, substitute, simplify
Essential Skills	<ul style="list-style-type: none"> ▪ Evaluate complex expressions and powers using substitution. ▪ Correctly follow the order of operations. ▪ Check solutions of equations and inequalities. ▪ Translate words into mathematical symbols. ▪ Model and solving real-life problems. ▪ Use tables and graphs to organize data. ▪ Identify functions.
Related Maine Learning Results	<p><u>Mathematics</u> B. Data Measurement and Approximation B1.Students understand the relationship between precision and accuracy. a. Express answers to a reasonable degree of precision in the context of a given problem.</p>
Sample Lessons And Activities	<ul style="list-style-type: none"> ▪ Students will orally respond to questions. ▪ Students will utilize worksheets and in their notes to demonstrate individual understanding of the concepts.

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Sample Classroom Assessment Methods	<ul style="list-style-type: none">▪ Quizzes▪ Take-home worksheets▪ Tests
Sample Resources	<ul style="list-style-type: none">▪ <u>Publications:</u><ul style="list-style-type: none">○ <u>Algebra 1</u> - Foerster