## MA 3110 : Advanced Mathematics 6

Advanced Mathematics 6 is a course for sixth grade students who are transitioning from the emphasis placed on whole number arithmetic in elementary school to the foundations of algebra. The course focuses on the development of problem-solving skills and the acquisition of mathematical vocabulary and symbols. The active engagement of students along with the use of manipulatives (i.e. number lines, fractions circles, algebra tiles, and two-color counters) and technology, such as the Desmos calculator and Chromebooks, will allow students to develop an understanding of the mathematical principles they are learning. Facility in the use of technology will not be a substitute for students' understanding of quantitative concepts and proficiency in basic computations.

Subject Area Mathematics Level Middle School Parent Docs Advanced Mathematics 6 Parent Doc 2021-2022

## Storyboard

**Essential Questions:** How do I become a mathematical problem solver to better understand the world around me? In what ways can I communicate and represent my mathematical thinking?

Number Sense: Navigating the Negatives

Unit 1 & 2 (8 weeks)



How do I use mathematics on a daily b	basis?
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## Focus of

the	We begin our journey by becoming stewards of the environment through building number sense and
Story	computational skills of integers, as well as developing an understanding of exponents, perfect squares and
	scientific notation.

	•	Apply: Utilize efficient strategies, processes, and tools to model new situations and/or real world
Transfer		experiences.
Goals	•	Explain: Communicate mathematical thinking by justifying solutions using multiple representations while
		attending to precision.

I can represent and perform all operations with integers in practical situations.

Learning I can represent and compare rational numbers written in various forms.

Targets I can identify and determine the positive square root of a perfect square from 0 to 400.

I can simplify expressions.

How do I use mathematical relationships predictions?

Next, we utilize number sense and comput investigate and determine patterns and patterns relationships in the world around us. We b understanding of proportional relationship the steepness of a line (slope) as it is illus equation, set of ordered pairs, and a graph

- Apply: Utilize efficient strategies, pr • to model new situations and/or rea experiences.
- Explain: Communicate mathematic • justifying solutions using multiple r while attending to precision.

I can identify and represent proportional re

I can determine and use the unit rate to fin values of a proportional relationship.

I can determine the slope as a rate of char proportional relationship and graph a line proportional relationship.