


Algebra II Curriculum Bundle #5

Title		Suggested Dates
Exponents		November 16 – December 4 (12 days)

Big Idea/Enduring Understanding	Guiding Questions
Properties of exponents can be used to solve equations, simplify roots and rationalize denominators	<ol style="list-style-type: none"> 1. What do negative exponents mean? 2. What happens with the exponents when the same bases are multiplied or divided?
Rational exponents provide a way to use the properties of exponents to simplify radical expressions which are otherwise hard to simplify.	<ol style="list-style-type: none"> 1. What do rational exponents mean? 2. What does it mean to “rationalize” the denominator? 3. What is a conjugate and how can it be used to rationalize a denominator?

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the District Curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See note above)	
<p>2A.2 Foundations for Functions. The student understands the importance of the skills required to manipulate symbols in order to solve problems and uses the necessary algebraic skills required to simplify algebraic expressions and solve equations and inequalities in problem situations.</p> <p>2A.2A The student uses tools including factoring, and properties of exponents to simplify expressions and to transform and solve equations.</p>	<ul style="list-style-type: none"> • Properties of Exponents including: • Powers of Zero ($a^0 = 1$) • Negative exponents ($a^{-b} = 1/a^b$) • Product Property/ Multiplying common bases ($a^x * a^y = a^{x+y}$) • Quotient Property/ Dividing common bases ($a^x/a^y = a^{x-y}$) • Power to power ($(a^x)^y = a^{xy}$) • Rational exponents ($n^{\frac{a}{b}} = \sqrt[b]{n^a}$) • Solve equations and inequalities with radical functions • Solve problems with rational exponents • Solve inequalities with rational exponents • Rationalize the denominator • Write all solutions using only positive exponents. 	<p>Text Algebra II Holt, Reinhart, Winston 1-3 Square Roots p.21-26 1-5 Properties of Exponents p. 34-41 8-6 Radical Expressions and Rational Exponents p. 610-617</p> <p>Discovery Advanced Algebra 5.2 Properties of Exponents and Power Functions p. 245-251 5.3 Rational Exponents and Roots p. 252-260</p>	