UNIT OF STUDY

Title:"Radically Repetitive" (Unit 19) **Subject/Course**: Integrated Algebra B Part 2 **Length:** 1 week

Topic: Absolute Values/ Radical Expressions **Grade:** 9 **Designer:** Foresee/Phipps

UNIT GOALS AND EXPECTATIONS

IMPORTANT CONCEPTS/UNDERSTANDINGS:	**ESSENTIAL QUESTIONS:**
• Absolute value equations usually produce two answers • There must be a matching pair of integers in order to bring it outside of a square root when simplifying • Radicals can only be simplified by adding or subtracting if they are the exact same radical • Two of the same square roots multiplied together will equal the number underneath the square root sign	• Why are absolute values always either zero or positive? • How are absolute value equations solved? • When can numbers be brought out from under a radical sign when simplifying? • When can radicals be added or subtracted?
STUDENT LEARNING EXPECTATIONS: • LA.1.AI.1 Evaluate *algebraic expressions*, including radicals, by applying the order of operations • LA.1.AI.8 Simplify *radical expressions* such as $\frac{3}{\sqrt{7}}$	• LA.1.AI.9 Add, subtract, and multiply simple radical expressions like $3\sqrt{20}$ + $7\sqrt{5}$ and $4\sqrt{5} * 2\sqrt{3}$ • SEI.2.AI.4 Solve and graph simple *absolute value equations* and *inequalities* Ex. $\lvert x\rvert = 5$, $\lvert x\rvert \leq 5$, $\lvert x\rvert > 5$
SPECIFIC DECLARATIVE KNOWLEDGE – What I know Vocabulary • Absolute Value Expressions • Radical Expressions • Distributive Property • Order of Operations	**SPECIFIC PROCEDURAL KNOWLEDGE – What I need to do** • Solve absolute value equations • Solve double absolute value equations • Simplify radicals • Add, subtract, multiply, & distribute radicals

UNIT ASSESSMENTS
(Include tasks related to Dimensions 3 and 4 and Bloom's Taxonomy)

- 1 Open Response prompt requiring students to create and draw conclusions from a double bar graph.
- 2 Open Response prompts requiring students to translate points/ geometric figures on a coordinate plane.

Traditional Assessments:	**Other Evidence of Learning:**
• Warm-Up Quizzes • Unit Test	• "Homelearning" • Classwork • Warm-up exercises

ACTIVITIES AND LEARNING EXPERIENCES	**Resources**
• Introduce Vocabulary using 4-Step Vocabulary Strategy • Use Mastery Math materials to practice concepts • "Slap the Board" • "Absolute Throw" Activity	• Vocabulary List • 4-Step Vocabulary Worksheet • Mastery Math materials

Career Connections

Engineering, Architects, Fast Food Industries, Mechanics, Carpenters, Construction, Land Surveyors