



WEST SHORE SCHOOL DISTRICT

Precalculus Module 1

Title of Module	Prerequisite Concepts	Grade Level	9 – 12
Curriculum Area	Mathematics	Time Frame	18 days

Desired Results

Best Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure (Deductive Reasoning)
8. Look for and express regularity in repeated reasoning.

Transfer Goals

Students will be able to independently use their learning to...

- Connect old problem solving techniques to new curriculum.
- Connect new material to real world applications.
- Create viable mathematical arguments and use them to critique the arguments of fellow classmates.

Key Learnings/Big Ideas

Students will recall and use fundamental terms and concepts from Algebra II.

Content and Reading and Writing Standards

CC.2.2.HS.C.1

Use the concept and notation of functions to interpret and apply them in terms of their context.

CC.2.2.HS.C.2

Graph and analyze functions and use their properties to make connections between the different representations.

CC.2.2.HS.C.5

Construct and compare linear quadratic, and exponential models to solve problems.

Essential Questions

Vocabulary (Best Practices)

Utilize concepts & competencies to add to vocabulary

<p>Unit EQ: How will concepts of Algebra II help prepare you for Precalculus.</p> <p>LEQ:</p> <ol style="list-style-type: none"> 1. How do you convert between decimals and fractions? 2. How do you write inequalities in interval notation.? 3. What are the power properties? 4. How can absolute value and distance formula used to solve real world problems? 5. Do you remember the standard form for the equation of a circle? 6. How do you solve linear equations and inequalities in one variable? 7. What is the connection between complex numbers and the roots of polynomial function? 	<p>Rational, Irrational, and Complex numbers Bounded and Unbounded Rationalizing Quadratic Formula Completing the Square</p>
<p>Concepts Students will know...</p>	<p>Skills/Competencies (I Can...) Based on LEQs Students will be able to...</p>
<ol style="list-style-type: none"> 1. To which set(s) does a number belong. 2. Translation between interval notation and inequality notation. 3. Radicals are not allowed in the denominator of a fraction. 4. Solving a quadratic using the quadratic formula. 5. Solving a quadratic by completing the square. 	<ol style="list-style-type: none"> 1. I can determine to which set(s) a number belongs. 2. I can translate between interval notation and inequality notation. 3. I can eliminate radicals in the denominator of a fraction. 4. I can use the quadratic formula to solve a quadratic equation. 5. I can solve a quadratic by completing the square.

Assessment Evidence

Formative Assessment

Questioning, Think Pair Share, Graphic Organizers, Visual Representations.

Summative Assessment

Common Assesment

Best Instructional Practices

Subject Specific Best Practices (example: Science Processes)

DO NOT DO- Dr. Whye will fill this in...

Extended Thinking

Summarizing

Vocabulary in Context

Advance Organizers

Non-verbal Representation

Integration of Webb's Depth (examples)

Integration of 21st Century Skills (examples)

Reading and writing across disciplines (examples)

Differentiated options (examples)

Resources

Student	Teacher

Adapted from Wiggins, Grant and J. Mc Tighe. (1998). Understanding by Design, Association for Supervision and Curriculum Development, ISBN # 0-87120-313-8 (ppk)