

MASTERY LEARNING 2013 - 2014

High School Mathematics Department

How it is utilized in Algebra IA

Communications

- Teacher gives students a list of objectives
- For example: Algebra IA Unit 1
 - Objective 1 – Define number sequence, constant difference, term, variable, expression, and equation
 - Objective 2 – Use differences to identify patterns and make predictions in number sequences
 - Objective 3 – Use variables to represent unknown quantities in real world situations
 - Objective 4 - Evaluate expressions using order of operations
 - Objective 5 – Substitute values into algebraic expressions
 - Objective 6 – Express large and small numbers in scientific notation
 - Objective 7 – Express numbers from scientific notation to standard notation

Strategies

- Teach objectives using various techniques
 - Cooperative Learning strategies
 - Jigsaw puzzle for vocabulary
 - Four corners
 - Journal writing on understanding of a concept
 - Selecting students at random
 - Posting ideas on paper at different locations around the room
 - Use of document camera to give notes
 - Worksheets

Consistency

- Common Assessment- students take the first test on the unit material
- Algebra IA Unit 1
 - Objective 1 - 4 questions and 10 points total
 - Objective 2 - 5 questions and 10 points total
 - Objective 3 - 5 questions and 10 points total
 - Objective 4 - 5 questions and 10 points total
 - Objective 5 - 5 questions and 10 points total
 - Objective 6 - 5 questions and 10 points total
 - Objective 7 - 3 questions and 10 points total

Remediation

- Remediation
 - For each objective not mastered, less than 80% correct, students will complete remediation. They will have time in class and extensions to get help
- Algebra IA Unit 1 examples:
 - Make a set of flashcards for all of the vocabulary terms.
 - Watch a video on evaluating expressions using order of operations
 - Complete a study guide on identifying patterns using differences in a number sequence.
 - Watch a PowerPoint on writing numbers in scientific notation

Another Chance

- Remediation is collected
- Students take a second test completing only the problems that match the objectives they remediated on.
- Consistency from test A to test B
 - Each test has the same number of questions
 - Each test has the same directions
 - Each test has the same look and feel
- Test C – a third chance for the students that have completed all homework and remediation on time

Success

- Enrichment
 - Special topics to enhance learning
 - Opportunities to delve deeper into a concept
- Algebra IA Unit 1 Examples:
 - Complete the order of operations Enrichment Worksheet
 - Complete Modeling Real World Scenarios Worksheet
 - Complete the using scientific notation Worksheet

Grading

- Grading in all of the Algebra IA classes is broken down into the following sections
 - 70% Tests
 - 15% Study Island
 - 5% Enrichment
 - 10% Homework
- Students and parents can keep track of the mastery for each objective on the home access center (HAC)