



Student Learning Outcomes for MATH 210

College Math Preparation Level 1: Pre-Algebra

Team Members:

Team Leader:

[Richard Lopez](#) (5661) in MATH

Other members:

1. [Richard Lopez](#) (x5661) MATH

Additional team members/notes about team:

Barbara Illowsky, Kathy Plum, Janice Hector

Additional Notes:

Outcomes:

Outcome 1 Phase I: Statement

Demonstrate and apply a systematic and logical approach to solving arithmetic and geometric problems.

Outcome 1 Phase II: Assessment Strategy Used:

Assessment Quarter: Winter 2011

Assessors: Richard Lopez Janice Hector

Assessment Tools: *No tools assigned.*

Outcome 1 Phase III: Reflect & Enhance

Number of people involved in Phase III: 3

Changes:**Methods:**

Various problems involving percentages -Using data from the internet, worksheets were created, giving students access to real-world problems. With every attempt to assess this outcome, we made changes to provide students with a clearer understanding of the 5 steps used to solve real-world problems: diagram, variable with definition, equation, solution and

written executive summary. In particular, variables are now expected to be a part of the original diagram illustrating the underlying concept and processes of the problem. Emphasis is given to the detailed definition of a variable, making sure appropriate units are included. More attention is given to written standards as well, so that students understand that college level standards require the use of capitals and periods with well-structured sentences.

Findings and Conclusions:

Students tend to be wary of working with real world scenarios. Students don't want to think. They just want formulas that they can memorize, not realizing that they need to assess each situation in its own context and modify their solution strategies as needed. Students need to better understand that a variety of methods can be used to investigate the solution of problems. With a well-labeled diagram, students easily created an equation to reach the solution of a percentage problem. While some students exceeded expectations, most don't take responsibility for their own learning at this level.

Enhancement (Planned Actions)**Part I:**

Additional current events will be introduced into the classroom to illustrate to students the power of logical thinking when applied to problems that don't start out in a math book.

Part II:

Outcome 2 Phase I: Statement

Demonstrate and apply the knowledge and skills required to select the correct introductory formulas, procedures, and concepts from algebra and geometry and use them to solve problems.

Outcome 2 Phase II: Assessment Strategy Used:

Assessment Quarter: Winter 2011

Assessors: Janice Hector

Assessment Tools: • worksheets

Outcome 2 Phase III: Reflect & Enhance

Number of people involved in Phase III: 4

Changes:**Methods:**

Various problems involving concrete geometric shapes -Using real-life scenarios, worksheets were created, giving students access to everyday uses of geometric formulas. With every attempt to assess this outcome, we made changes to provide students with a clearer understanding of the 5 steps used to solve real-world problems: diagram, variable with definition, equation, solution and written executive summary. In particular, variables are now expected to be a part of the original diagram illustrating the underlying concept and processes of the problem. Emphasis is given to the detailed definition of a variable,

making sure appropriate units are included. More attention is given to written standards as well, so that students understand that college level standards require the use of capitals and periods with well-structured sentences.

Findings and Conclusions:

Students needed to take more care with their drawings to accurately reflect the geometric shapes. Students can improve with regard to using their own thought processes instead of relying on others to generate a strategy and solution to a problem.

Enhancement (Planned Actions)

Part I:

Edit worksheets to include more situations that will spark student interest.

Part II:

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