

SD148 CCSS Summer Portfolio: Math 6th-8th Grade

Activity 6: Investigating Mathematical Understanding

Goals

- The participants will develop an understanding of how mathematics is learned.
- The participants will formulate a philosophy of mathematical understanding

Purpose

- To read and understand the paragraph “Understanding Mathematics” from the CCSS Math Introduction
- To formulate a philosophy of mathematical understanding for student learners

Procedure:

1. Read the paragraph “Understanding Mathematics” from the CCSS Math Introduction on p. 4.
2. Consider an educator’s approach to teaching to promote a learner’s understanding of mathematics based on the reading. What must a teacher do to ensure mathematical understanding? Use the reading to guide your thinking and your written response. Complete the graphic organizer for this piece.
3. Determine the difference between a student who can use a mathematical process and a student who can explain the mathematical process. Use the reading to guide your thinking and your written response. Complete this piece of the graphic organizer.
4. Identify the relationship between procedural skills and mathematical understanding. How do the two co-exist in a math classroom? Complete this piece on the graphic organizer.
5. In your view, what is “mathematical understanding”? Develop your own philosophy based on all you have done with this portfolio. Complete this piece on the graphic organizer.
6. Place the completed graphic organizer in your portfolio

Timeline:

Read the paragraph “Understanding Mathematics” from the CCSS Math Introduction and complete the graphic organizer

1 hour

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(use CCSS introduction p.4)

Educator's approach to teaching to promote a learner's understanding of mathematics

Using a mathematical process vs. explaining a mathematical process

Relationship between procedural skills and mathematical understanding

Philosophy of "Mathematical Understanding" (use the back of this page if necessary)