Classroom Tip Sheet: Elementary Math

Every month in our email newsletter we ask our instructors to provide us with a classroom-focused teaching tip. Their tips are a reflection of the Teaching for Understanding strategies that are taught in WIDE World courses. We hope these tips prove valuable to you in your own teaching practice.

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Algebraic Thinking in Elementary School

The questions or prompts that we pose to students in mathematics lessons - and the way in which we respond to the answers to those questions - has a powerful impact on students’ dispositions toward math, their thinking about math, and the development of their understanding.

Understanding is deepened when we consistently ask questions that communicate the expectation that students will use reasoning and explain their thinking. Such questions also give us a window into how our students are understanding what we are asking them to do.

Good questions don’t have to be deep or profound. Some of the best are simple and generic – they ask students to show, explain, justify, give examples, or look for generalizations. A few of my favorites are:

- What is a possible answer to this problem? Who has a different possible answer?
- Tell me how you thought about that.
- What might be another way to do/think about that?
- How might you explain/prove that to someone else?
- Tell me how/why you think that is true.
- Why do you think that is so?
- Show me how you did that.
- Do you think that always happens?
- What do you think would happen if...?
- Can you draw a picture/show with models how that works?
- Do you see any patterns?

Often a student response to being asked to justify thinking is to assume that they must be wrong. Questions such as these, posed in response to all manner of answers and ideas, send the message that mathematics is about more than a right or a wrong answer and help to develop a thinking community where students engage in making sense of mathematics.