

Mentoring Instructions and Help

You are in this mentoring program (Freshman Mentoring Academy?) to help students better understand and solidify pre-algebra concepts. It is hard to not take over when a student is struggling so I thought I would pass along some helpful questioning techniques that you can use to re-direct the thinking back in the students direction.

Teaching (or helping) through questions:

To help students build confidence and rely on their own understanding, ask ...

- ...Why is that true?
- ...How did you reach that conclusion?
- ...Does that make sense?

To help students learn to reason mathematically, ask...

- ...Is that true for all cases? Explain.
- ...How would you prove that?

To check student progress, ask ...

- ...Can you explain what you have done so far? What else is there to do?
- ...Why did you decide to use this method?
- ...Can you think of another method that might have worked?
- ...Is there a more efficient strategy?
- ...What do you notice when...?
- ...Do you think this would work with other numbers?

To help students collectively make sense of mathematics, ask...

- ...What do you think about what _____ said?
- ...Do you agree? Why or why not?
- ...Does anyone have the same answer but a different way to explain it?
- ...Do you understand what _____ is saying?
- ...Can you convince the rest of us that your answer makes sense?

To help students explain their strategies, ask...

- ...How did you solve this problem? How did you think about this problem?
- ...What did you do (think about) first?
- ...How would you explain what you did to a younger child?

To help students who are stuck during problem solving, ask...

- ...What is the problem asking? Tell me what happens in the story?
- ...Tell me one thing you know about the problem.
- ...What could you do first?
- ...Does what you did make sense with the story?

To encourage flexible use of strategies, ask...

- ...Remember how the other day you solved the _____ problem using _____?
Could you use that strategy with this problem? (Could be in reference to a strategy we used in class a different day)
- ...How could you write down how you solved your problem?

Other questions you could ask if a student is stuck...

- ...What do you think?
- ...Is it similar to something else we've done in class?
- ...How could you double-check your answer?
- ...Could you try _____ ?
- ...Tell some more about what you're thinking.
- ...Does anyone have a question for...?

Also, remember...

- ...Don't take over the students pencil, have them write down what you are explaining. It is o.k. to write it down to show them (like on a scratch paper or white board).
- ...Don't do it for them; they won't learn. If they just can't get it, do a few examples similar to one they don't understand (call me over, I can help with that!).

...Encourage questions! Someone will be glad they asked it. If you notice that everyone in your group is struggling with the same problem (or concept) please make me aware of it.