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How and why is it useful to use big ideas in K-12 math?

This seminar will explore, with examples attending to both elementary and secondary curriculum, the following issues:

Although we could, from a strictly academic perspective, develop a set of big ideas to encompass K-12 mathematics, the real issue is whether and/or how this is of value in the classroom setting.

- Is it the teacher who is assisted by this focus, the students, or both?

Is the main value of focusing on big ideas to provide rich enough connections for students that new content related to those big ideas becomes more accessible? Or is the main value to streamline the curriculum? Teachers are often concerned that there is too much to teach and they see a focus on big ideas as a way to have less to teach.

- How would classroom practice be affected?

Would it really change the way in which instruction is offered to students? Is it more about the problems that are posed or the questions that are asked about those problems? Or would it simply be a change in optics?

- Should big ideas be the "content equivalent" of processes, i.e. those content ideas that are revealed repeatedly in different guises throughout the curriculum or should the big ideas be the processes themselves? Is it enough for the big ideas to be just the processes?