

Workshop 7.

Next Steps

(required for those seeking graduate credit)

You have completed a series of six video workshops in which you observed teachers and students of all ages working on a variety of mathematical problems, and have worked on the same problems yourself. Many of these investigations may have looked different from the mathematics often seen in classrooms. Workshop 7 is intended to help you bring these activities into your mathematics classroom.

Guiding Questions

Philosophy

1. What similarities and/or connections did you notice between the parts of the video involving the pre-K children and those focusing on students in elementary and secondary grades?
2. What similarities and differences for solving the Towers problems did you observe across the various segments: (a) for the children and the adults and (b) for the children over time?
3. What issues may have come up for the teacher/researchers working with the children?

Students

4. How do students use notation as a problem-solving tool?
5. When and how do we see students connecting meaning to the symbols that they use?
6. How might the students' early building be reflected in the work they did in later investigations?
 - a. Is it a direct application of ideas built in early grades?
 - b. Is it in the way they reason and demand careful explanation?
 - c. Is it in the way they rethink, reformulate, and then rebuild what they have done before?
 - d. Is it in the way they listen to each other?
7. What might you say about the "flow of ideas" as the students study and work together?

Guiding Questions

Teachers

8. What part does the teacher/researcher play in the building of students' mathematical ideas?

9. How might the task design contribute to:
 - a. the building of ideas by learners?

 - b. the teacher's role in fostering the building and sharing of ideas?

10. What ideas and issues raised by the video relate to local, regional, or national standards?

11. What implications do you see for your own teaching?

12. Think about and discuss:
 - a. something you will change in the way you introduce the next unit you are going to teach.
 - b. what you will do to get your students to work together, to share their solutions, and to justify those solutions to one another.
 - c. how you will work together with one of your colleagues who has also participated in the workshop.
 - d. how you will share your work with other colleagues and your principal.

Notes
