**Classroom Connection Activity**

Please engage in the following activities and bring resulting responses or materials with you to our next session. Feel free to engage with colleagues in these activities; however, it will be helpful for each participant to bring or upload responses and materials for the next session.

1. *Explaining mathematics in your curriculum*

Identify one key mathematical concept, process, or idea that will need to be explained in the unit that you are currently working on. Anticipate features of the explanations that students might provide for this concept/process/idea and consider an explanation that you might provide.

Specifically:

* 1. Student explanation: How do students typically explain this concept/process/idea? What points do students typically include in their explanations? What is typically missing from student explanations and/or what is hard for students to describe or represent? What is challenging about supporting students in explaining?
  2. Teacher explanation: When you explain this concept/process/idea, what are the key components you make sure to include? What representations do you use (and why)? What terms do you try to use (or make sure to avoid)? What examples do you use (and why)?
  3. What CCSS-M mathematical practices, aside from explanation (mathematical practice #3), will students need to be engaging in when they share their reasoning about this concept/process/idea? Describe how each is key when explaining the particular concept/process/idea. Be selective as not all, or perhaps not many, will apply in the situation.

Write your responses and bring them to the next professional development session.

1. *Extending your thinking about reasoning in mathematics teaching*

Read the Reasoning Standard from the Principles and Standards for School Mathematics (NCTM, 2000). Consider how the four main sections of the standard connect with the work you have been doing with your students using the problems from our professional development work. Also, consider how the ideas described in the standard connect to the Mathematical Practices.

National Council of Teachers of Mathematics (2000). *Principles and standards for school mathematics*. Reston, VA: National Council of Teachers of Mathematics.