

Deep Dive into the Math Shifts: Discussion Questions for Additional Readings

Discussion Questions for the Publishers' Criteria

1. Focus and coherence are the two major design principles of the Common Core State Standards Mathematics. Why are these two principles so important in the selection of instructional material selected at each grade level?
2. Aside from purchasing decisions, in what ways can you use the Publishers' Criteria?
3. Discuss how the shift toward focus in mathematics is evident in the first three criteria. How are the first three criteria similar and how are they different?
4. Discuss how understanding criteria #4 can have an impact on instruction.
5. Criteria #5 and #6 directly address the coherence evident in the Standards. Give examples of ways that some textbooks have previously lacked coherence.
6. The role the Standards for Mathematical Practice should play in materials is described in criteria #7-#10. Using evidence from the Publishers' Criteria, discuss ways in which materials can assist teachers in fully understanding the practices.
7. Which of the criteria present the most significant challenge in your current materials?
8. Which indicators of quality (on pages 17-19) seem most urgent to address for the needs of your students/classroom/district? Why?

In the appendix of the Publishers' Criteria is the essay, "The Structure is the Standards" written by Phil Daro, William McCallum and Jason Zimba. Use this essay to discuss the following questions.

9. According to the essay, is it better to look at the details of the Standards or to try to grasp it as a whole?

10. Suppose you had an app for your phone that put the CCSS in the palm of your hand. The app is set up to show all the individual content standards but does not show the standards under their cluster headings. What would the authors think of this app?

11. Some publishers have issued alignment statements saying that they are well aligned to CCSSM because they embody the practice standards and that the details of the content standards aren't that important. Using the essay for support, how would you argue this point?

12. Other publishers have issued alignment statements saying that they are well aligned to CCSSM because they have done a crosswalk of each topic, and have created a lesson for each standard. In what ways would the authors disagree with this approach?

Discussion Questions for the Progressions Documents

1. In the Progressions document you read, you saw the pervasive use of mathematical language. Why is developing common mathematical vocabulary helpful for teachers and students? Give an example of a mathematical term that was defined in the Progressions Document you read.

2. Locate a standard in your grade band that requires students to build upon previous knowledge. Determine what standards from earlier grades must be mastered in order for students to be successful in this new learning. Refer to the Progressions Document that supports your thinking.

3. Discuss what obstacles are presented when students come to you without the previous knowledge needed to engage in current grade level standards. How do you overcome this?
4. Why is it important for students to have sufficient opportunities to engage in the Standards for Mathematical Practice in the classroom? Give a specific example for your grade band that is illustrated in the Progressions Document you read.
5. The Progressions Documents contain examples of methods and strategies for teachers to use to help students. Find one that you see as particularly interesting or different and share with your colleagues.
6. The Progressions Documents highlight common mistakes or misconceptions students often have. Find one example of this in the document you read and discuss it with your group.
7. Who are the Standards Progressions Documents useful for and in what ways can they be used effectively?

Discussion Questions for “Thinking About Place Value in Grade 2”

1. According to the article, what are the two key advantages of our place value system? Give examples of each.
2. What does it mean to understand place value? What does that look like in Grade 2, and how would it look in other grades?
3. Using the annotated version of the place value exemplar, choose one of the groups of questions and discuss what is unique or interesting about that set. How could that trait be applied to a mathematical topic that you teach or support?

4. How does this article illustrate the importance of coherence both across grades and within a single grade?

5. What are some concerns regarding the place value worksheet on the last page? Think of and describe a worksheet that you have seen that has similar issues.

6. The shift towards rigor in mathematics asks for a balance of time and energy towards conceptual understanding, procedural skill and fluency and application. Explain this in the context of place value in 2nd grade. Explain how this would look in a major topic in a grade that you teach or support.