Cracking the Code (Mathematics) – What Does It Mean for Me?

Grades K – 5

(Prompts)

Now that you have viewed the Cracking the Code Power Point, you will revisit some of the essential points of the presentation in order to expand your learning and create a common vocabulary. To do this, you will engage in an exercise that enables you to interact with the Common Core State Standards (CCSS) for your particular grade span (K-5, 6-8, high school).

With your grade level/span colleagues you will complete and discuss a collection of tasks aimed at contextualizing the information from Cracking the Code. Following this exercise, you will be asked to reflect on your experience and consider actions that you will be able to take as a result of your new learning.

1. The Power Point states that there are three major components to the CCSS for Mathematics: Standards for Mathematical Practice, Standards for Mathematical Content, and a Glossary. The Standards for Mathematical Practice are described on pages 6-8 of the document. They trace their lineage to “processes and proficiencies” from two well regarded sources. **Name these two sources and discuss the “processes and proficiencies” as they currently apply to your practice.**

2. The eight Standards for Mathematical Practice appear repeatedly throughout the document, but are only described on pages 6-8. These descriptions relate “how” mathematically proficient students engage in the study of mathematics. **Skim through the descriptions of these two practices:** “Construct viable arguments and critique the reasoning of others” and “Look for and express regularity in repeated reasoning.” **Cite examples of how the practices may be displayed by an elementary student.**

3. As visually depicted in the Venn diagram in “Cracking the Code”, the Standards for Mathematical Practice and the Standards for Mathematical Content should be intertwined during instruction. The concluding paragraphs of the Standards for Mathematical Practice offer guidance as to when the content standards lend themselves to integration with the practices. **What word in the content expectations signal a prime opportunity to link these two sets of standards? Why do you think this is the case?**

4. Standards for each grade level (K-8) begin with an introductory page. These pages cite several critical areas of instruction for the grade level. **Locate the introduction page for grade 2 and/or your grade level. List the critical areas of instruction. Share your overall impression to this content with your group.**

5. **Domains** are large groups of related standards. Some domains range across grades K-5 like Measurement and Data, while other domains span only a few grades (Number and Operations – Fractions). In the K-5 spectrum, there is one domain that is isolated to a particular grade level. **What is that domain and in what grade level does it appear? What implications does this suggest to you with reference to instruction?**
6. *Cluster Headings* are bolded within the CCSS document. They describe smaller groups of related standards, *clusters*, within a domain. **List the three cluster headings in the domain of Operations and Algebraic Thinking for grade 4.**

7. The *standards* describe what students should know and be able to do. In order to facilitate communication around the standards, a code has been developed. **What can you say about the standard that is coded as 1.NBT.3?**

8. On page 37 of the Common Core State Standards, locate the standard typed below. **How would you code this standard?**
   
   3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement.
   
   a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.

9. **Locate the cluster heading under 3.NBT. Discuss the instructional significance of the footnote.**