

Lesson Study Teams' Topic Focus with Rationale

Topic Focus: Two-digit addition problem with regrouping, applying what they know about place value to make sense of what to do with a new ten (Grade 1)

We have noticed as a school-site that students struggle in their understanding of place value, meaning they struggle to understand that ten can be counted as a unit. While place value concepts begin to be developed in kindergarten, some students leave first grade without a strong sense of place value and continue to struggle as they move into later grades. Some, even in upper grades, don't see 10 as a friendly number and count numbers individually to add or subtract. We decided to slow down our launch of place value and really break down our lessons into more meaningful pieces to more intentionally build students' development of the place value concepts. (Acorn Woodland School, Oakland)

Topic Focus: Building a Conceptual Understanding of Multiplication (Grade 3)

Most students at our school enter 3rd grade already familiar with some of the multiplication facts. This familiarity is limited to understanding multiplication as another way of writing repeated addition sentences. Student may be able to write $5 + 5 + 5 + 5 = 20$ as $4 \times 5 = 20$ and skip count by 5 four times to find the product (e.g., "five... ten... fifteen... twenty"). Indeed, when asked about the nature and purpose of multiplication, most students respond that multiplication is like "times"; in other words, one must skip count certain number of times in order to find the product of two factors. In all, the students' understanding of multiplication is limited to procedural knowledge. Clearly, this is not a deep enough level to claim that the students truly understand the concept of multiplication. (Chavez School, Chicago)

Topic Focus: Division with Remainders (Grade 4)

Division has always been a difficult topic for us to teach and for our students to understand. Students at our school learn about multiplication before they are introduced to division, so it makes sense to build upon their existing experience and understanding of multiplication. While we want students to understand the inverse relationship between addition and subtraction, and to use that information when calculating mentally, we also want students to see this relationship with multiplication and division. Many students in this class are not fully comfortable with multiplication yet, which makes introducing division even more difficult.

