Video Summary

Interviews with three students

The video for Session 2 has clips from three interviews with a first-grade student, a fourth-grade student, and a sixth-grade student.

Student Chris, interviewer Jill Lester *(3 minutes 40 seconds)*

There are two parts to this segment. The first part begins with first grader Chris saying he knows how to write one thousand. Jill suggests he do that. After he has written 1,000, Jill asks him how he knows it is a thousand, and Chris responds by saying it has three zeros. When Jill asks whether a thousand always has three zeros, Chris replies no, that sometimes it has numbers like 5 or 6 or 10. Jill asks him where the 5 would go to make one thousand five. At first Chris points to the ones place, and then to the tens. Jill asks if it could go in the hundreds place. Chris decides it would go in the tens place.

In the second part, Chris writes numbers that Jill dictates. They have a conversation about how to write 102 and 110.

Student Cole, interviewer Deborah O'Brien *(4 minutes 20 seconds)*

Fourth grader Cole answers the question, "How many tens are in 341?" First he says 4; then changes his mind and says 40. Deborah asks how many tens in 300, and he says 30. Deborah points out the base-ten blocks and Cole builds 341. He explains that 10×30 is 300 because you "add a zero" when you multiply by 10. Then he explains how the blocks also show there are 30 tens in 300. Deborah asks about the original number, 341. Cole first says there are 70 tens in 341, then corrects himself by saying 34. He explains why there are 34 tens in 341 as well as why he first said 70.

Student Jenna, interviewer Virginia Bastable *(5 minutes)*

Jenna, a sixth grader, builds 462 with 4 hundreds-blocks, 6 tens-sticks, and 2 unit-cubes. Virginia asks what this collection of blocks would be worth if a particular unit-cube is 10. Jenna responds 471. Virginia clarifies her question by asking what the collection would be worth if *all* the unit cubes were worth 10. Jenna says the whole number would be worth 4,080. As she explains this, she changes her mind and says, "Four thousand six hundred twenty." Jenna explains why she said four thousand eighty previously.

Virginia asks, "What if the unit cube were worth 100?" Jenna writes $100 \times 100 = 10{,}000$ and then says, "Forty thousand plus six thousand plus two hundred." She writes 46,200. Virginia asks her to write the number if the unit cube were worth 10. Jenna says "Four thousand, six hundred and twenty" and writes 4,620. Virginia asks what the number was when the cube was 1, and Jenna replies 462. Virginia asks, "Why does it work like that?" Jenna replies, "You are adding zero to the value of one of these, so you add zero to the value of all."