Project INSPIRE Lesson 1 (10:05)

SPEAKER: Pre-kindergarten, First Grade students-- Nemeth Code within UEB Contexts and Strategies for Supporting the Student in Building Math Skills. Lesson 1, Numbers and Linear Problems. Slide 2 contains the objectives for this lesson. You'll be able to read and write Nemeth symbols, number math problems, and read and write linear problems.

Slide 3 is an important reminder that as of January 4th, 2016 in the United States, we use Nemeth Code within UEB context. We also use UEB technical. But as we focus on Nemeth Code within UEB context, it's important for you to recognize that if you have resources prepared before 2016, these are not accurate, and that is because the braille in these resources is in English Braille American Edition and not in UEB.

It's important if you have not already downloaded the document Guidance for Transcription Using the Nemeth Code within UEB Contexts from the braille Authority of North America web page, that you go ahead and do this. This document explains how to prepare braille materials in Nemeth Code within UEB context. Let's get started with the numbers on slide 4.

Slide 4 talks about the numbers from 0 to 120, which is our focus at the prekindergarten, first grade level. As I'm sure you recognize, the numbers are in the lower part of the cell. And do you know why? If you said it's because you want to keep your numbers separate from your letters, you're absolutely right.

Now, numbers always begin with a numeric indicator if the number comes after a space. So the numeric indicator is dots 3, 4, 5, 6. And if I'm brailling the number 12, for example, I'll do my numeric indicator. That's 3, 4, 5, 6, my 1, which is dot 2, and then my 2, which is dot 2, 3. There's no space between those cells. So it takes three cells to braille the number 12 in Nemeth Code. Activity 1A on slide 5 is for you to practice interlining numbers. Please pause your video and interline the numbers. When you are ready, resume the video.

Slide 6 is the answer key for activity 1A. Check to make sure that you interlined all the numbers properly. Slide 7 gives you an opportunity to braille the numbers. There are four lines of numbers in activity 1B on slide 7. Please pause and braille these numbers. When you're ready, resume the video. Slide 8 is the answer key for activity 1B. Did you braille your numbers properly, with a space after each number and a numeric indicator to begin the number?

All right, let's go on and talk about the mathematical comma on slide 9. The mathematical comma is dot 6, and this comma differs from the UEB comma, which is dot 2. And the reason is because dot 2 is the number 1. So the braille reader needs to recognize it's a comma and not a 1.

Let's look at the example of how to braille 7 comm 8 comma 9. To do so, I brailled the numeric indicator 7, the mathematical comma, which is dot 6 space numeric indicator 8 mathematical comma space 9. So the mathematical comma is dot 6.

Now let's have you try using the mathematical comma on slide 10 by doing activity 1C. braille the following as shown, and you have four lines in numbers that have commas within those numbers. So please do activity 1C and then resume the video.

Slide 11 has the answer key for activity 1C. Did you make sure that you used your mathematical comma? All right, I hope you did. Let's go on now to slide 12 and talk about the punctuation indicator. I have a graphic on the screen of a stop sign with a palm facing out. So we're saying, hey, stop.

And what are we stopping exactly with our punctuation indicator, which is dots 4, 5, 6? We're stopping math to begin punctuation, and the reason being because both numbers in Nemeth Code and punctuation are in the lower part of the cell.

I have three examples here. The first one is 1 period 37. So I do numeric indicator 1, punctuation indicator, which is dots 4, 5, 6, period space 37. Second example, 7 period 45. Numeric indicator 7, punctuation indicator period, space 45. The last one is 35 period 6 comma 8 comma 10. So I do numeric indicator 35, punctuation indicator period, numeric indicator 6, mathematical comma, space, numeric indicator 8, mathematical comma, space, numeric indicator 10. If I were to take these punctuation indicators away, my examples would read one, 14, 37; the second, 74, 45; and the third, 354, 6 comma 8 comma 10. So you can see why the punctuation indicator is so important.

Let's go on to slide 13, which talks about the general omission symbol, which is braille using the full cell. That's 1, 2, 3, 4, 5, 6. The general omission symbol is used when a question mark or blank space in print shows a missing number. I have two examples here on slide 13. The first one is 98 question mark 100 question mark 102. So 99 and 101 are missing, and those are both shown with the general omission symbol.

So to do this, I braille 98, space, general omission symbol, space, 100, space, general omission symbol 102. My second example uses commas, 14, comma, 15, comma, question mark, comma, 17. So obviously, the number 16 is missing. Now, when I have a number followed by a comma, there's no space. So in my example, there's no space between the general omission symbol and the comma. So my example reads numeric indicator 14, mathematical comma, space, numeric indicator 15, mathematical comma, space, general omission symbol, mathematical comma, space, 17.

All right, we're ready to get down to actually Brailling math problems. So let's talk about signs of operation and signs of comparison on slide 14. Sign of operation, there are two that students learn at this level, the plus sign, dots 3, 4, 6, and the minus sign, dots 3, 6.

Three signs of comparison that our prekindergarten, first grade students learn are the equal sign, which takes two cells. That's 4, 6, 1, 3. The greater than sign, which takes two cells as well. That's 4, 6, 2. And the less than sign, again, two cells, dot 5, 1, 3.

Slide 15 introduces you to the rules for linear problems. The problem begins with the numeric indicator. And I like to think of that numeric indicator carrying all the way through to the space.

There is no space on either side of a sign of operation, however, there always is a space on either side of a sign of comparison.

Four sample problems here on slide 15. The first one reads 45 minus 25 equals 20. So I begin with my numeric indicator, 45, minus dots 3, 6, 25, space equals, which is 4, 6, 1, 3 space, 20.

My second example has the plus sign missing, as I have 89, question mark, 6 equals 95. I'm going to braille numeric indicator 89, general omission symbol, which is the full cell, 6, space, equal sign, 4, 6, 1, 3, space, 95.

My third example is 100 plus 11 is less than 120. So numeric indicator 100, plus sign, 11, space, dot 5, dot 1 3 for my less than sign, space, 120. And my third example shows the minus sign. Numeric indicator 68 minus, which is dots 3, 6, 54, space. I have my greater than sign, which is 4, 6, 2, space, 12.

This is going to be your last activity for lesson 1. On slide 16, you have to interline the problems in activity 1D. Once you've interlined the eight problems, please come back to check your work. And slide 17 has the answer key for activity 1D. Ensure that you have brailled the eight problems correctly. If you have not, please go back and review this video. When you are ready, move on to lesson 2. Thank you.