

Project INSPIRE Lesson 4 (16:37)

SPEAKER: Prekindergarten and first grade students-- Nemeth code within UEB contexts and strategies for supporting the student in building math skills. This is lesson four-- formatting materials for students in the early grades.

Slide two has the objectives for this lesson. You're going to be able to locate and use formatting resources, format centered headings, braille page numbers, directions, and problems, and make decisions on when to use Nemeth numbers and manipulatives.

Slide three really focuses on why it's important to format materials for our students. They need predictable materials that allow them to develop proficiency. If I'm busy looking for something on the page, how am I going to be efficient building my math skills, building my braille reading skills? They need skill to focus on the content.

When things are predictable, then you're able to focus on the material that you're learning. You've noticed that each of our videos in this course are predictable. They follow the same pattern. And that way, you can focus on the skills you need to be learning.

Formatting in braille also allows the user to scan the page with their hands and learn what is included in the document. So headings are always in the same place, directions are formatted the same way. If I know where to look for my indicators, it's going to help me be able to do that quick hand scan.

Slide four talks about resources that you can use in formatting materials for young students. The most important one that you need to be aware is Braille Formats-- the principle of print to braille transcription. And this is the 2016 version. We refer to this document as Braille Formats and it is available on the Braille Authority of North America's web page.

The thing to keep in mind with Braille Formats is that it was prepared for transcribers, not for teachers or students with visual impairments. However, even though it's very technical, as a TSVI, it's really important that you have a good understanding of this document, are able to find things in it so that you can check and make sure that you are doing things correctly, and that you make sure those who are preparing materials for your student are using Braille Formats.

Also, as of March 20, BANA has approved new guidelines for transcribing early education materials, so you'll want to be checking the BANA website regularly for when those materials are posted.

All right. Let's talk about line spacing here on slide five. For our young learners-- our prekindergarten, kindergarten, first-grade students-- we double-space materials. As our students get near the end of first grade, we might start to introduce single-spaced materials.

Now, regardless of grade level, there are exceptions for when you do not double-space and instead single-space. These include puzzles, spatially aligned problems, tables, and titles of tactile graphics.

Now, on slide six, you see that I have a very simple worksheet. It says addition practice worksheet one. We would refer to this as the title. Then it says add period. And we refer to this as directions.

There's another blue arrow. There's one that says title and one that says directions pointing to each of these. On this particular worksheet, we have a row of vertically aligned math problems such as $3 + 2$ and $1 + 0$. But it's the title and the directions that I want to talk to you about and how to format those.

On slide seven, let's talk about that title or what we call a centered heading. Many worksheets have titles and you're going to be centering those. So you want to put the title on the first line of the page and then leave two blank lines after that title or that centered heading.

When you have a long title, you're going to divide that centered heading across multiple lines. You're not going to change capitalization. You're going to follow the same capitalization that we have in the print version of any headers.

Now often, headings on worksheets are pretty, they've used bold, they use italics, different colors. Unless there's meaning associated with that change in print, you're going to ignore it in your headings.

Slide eight talks about how to center a heading. You're going to begin by counting the number of cells needed to transcribe the title in braille. Count everything-- letters, contractions, spaces, punctuation, capital indicators or other indicators.

Then you're going to take the number that you get, your total for the title, and you're going to subtract it from the number of cells in the line. So you may be using a 32-cell line or a 40-cell line. Once you do that subtraction, you're going to divide by 2.

Slide nine lets me illustrate for you what I mean here by this process. So we have that little worksheet that says addition practice worksheet one as the title. So you're going to see that the title is centered on my braille copy. I've left two blank lines after the final part of the title, which is the second one-- it reads worksheet one-- and before my directions.

And I followed my print capitalization. But how did I know how to center that? Well, I started out by counting. So I counted one space for the capital. Then I added five more spaces for the word addition, so that gave me six. My space made seven. My capital indicator for practice made eight.

And then I counted up my letters in the word practice, and voila, I ended up with 17. I'm using a 40-cell line. So $40 - 17 = 23$. 23 divided by 2 equals 11.5. And so this lets me know I need to begin in cell 12.

Slide 10 lets you think about what you know about using centered headings. So this is a true/false activity. When you're done, please come back.

Slide 11 is the answer key for activity 4A. Did you get them all correct? Slide 12, we're going to now start talking about directions. And these are directions that come in front of or precede a number of problems.

So when I have directions that are followed by a number of problems, I'm going to use 3-1 formatting. So I have a little arrow that came across. It's pointing to add period with a 3-1. And that's reminding me that I start in cell three. And if I have to run over, I go in cell five.

Since I have my directions in this case followed by my spatial problems, I've left a blank line after the directions to indicate, hey, I've got spatial problems coming. So you'll see I've actually double-spaced-- one blank line for the directions and one blank line for the spatial problems.

On slide 13, directions preceding number problems. So, there's a difference here. In this case, my directions begin in cell five with my runover in cell three with my blue arrow to remind me.

I am going to again leave two blank lines between the title and the directions. But there's only one blank line after the directions and before the problem. And that's because I have problems that are linear, so I don't need a blank line above them as I do in spatial problems that have to have a window around them.

Slide 14 talks about numbered problems with no subdivisions. So these are just straight problems that don't have multiple-choice answers. For these problems, we're going to begin in cell one with runover in cell three.

Our first example is one period. How many tens are in 45? Just braille that on out starting in cell one. It doesn't go to a subsequent line, so there's no runover.

Problem two-- what is the sum of 2 comma, 5 comma, 10 comma, and 15? In this problem, I begin in cell one. And when I end the line, I'm going to have the word and. But now what do I do with my 15, question mark? Simple-- I go to the second line, which is my runover, and I begin in cell three.

Problem three is, which is more, 9 - 6 or 11 - 5? This all fits on one line. I do want to remind you that because I have 9 - 6, I need to open up Nemeth with my Nemeth opening indicator-- my space, 9 - 6, space-- I've made a decision on this worksheet to use my one-word switch indicator in front of the word or-- space, 11 - 5, space, and then my Nemeth code terminator followed by a question mark.

Slide 15 talks about when we have subdivisions or multiple-choice answers. So my problem will begin in cell one with any runover in cell five. And then my answer choices will begin in cell three with any runover in cell five.

Let's look at the simple problem here. I have 1, period, $7 + \text{line} = 12$. And my answer choices are A, period, 6; B, period, 7; C, period, 5; and D, period, 9.

I'm making the assumption that my problem begins right after directions, so I'm going to open Nemeth with my Nemeth opening indicator in cells one and two, a blank line. Then I braille my problem starting in cell one. Each of those answer choices begin in cell three.

I want you to look down at the bottom where I have answer choice D. So I do my D, period, 9, and then a space. And in this case, I'm closing Nemeth because whatever comes next is in UEB.

If I had more multiple-choice problems like this, I wouldn't close Nemeth. But in this case, I want to show you where you close Nemeth. So I put my Nemeth terminator after the 9 so that this problem is formatted properly.

Now, you're probably wondering, OK, well, what happened to this runover? Let me show you on slide 16.

Here's my print problem. My cousin made cupcakes, Marie made six cupcakes, and Jorge made three. Which equation shows how many cupcakes they made altogether?

So our answer choices problem four here are A, $6 + 3 = 8$; B, $3 + 8 = 11$; C, $6 + 3 = 10$; and D, $6 + 3 = 9$. We're not going to check your math skills. But I sure hope that you picked D.

So let's look at this from the braille perspective on slide 17. I would double-space this problem for a young student. Just to get it on the slide, we went ahead and single-spaced it for you. But I do want to make you aware of that.

Again, the problem begins in cell one. So you'll notice that I started my four periods in cell one. The runover, the three subsequent lines, all begin in cell five.

Now, I have my answer choices that are in Nemeth. So in cell three, I opened up Nemeth. And that's because that opening Nemeth indicator is with the multiple choice answers, so that's why it opens and three and four.

Then I brailled my problems. And again, when I got to choice D, that bottom one, after I brailled my problem, 6 plus 3 equals 9. I did a space and I terminated Nemeth. If I were to continue on and my next item was a Nemeth item, I wouldn't need to terminate it.

Slide 18-- I want to talk to you about braille page numbering. Regardless of whether you are making materials that are literary based or math/science-based, your page numbers are always, always, always going to be in UEB. It's very important that you leave three spaces between the text of the material and the braille page number.

Your braille page number is always put on the last line of the page all the way to the right. And braille page numbers, folks, are consecutive-- one, two, three. And the reason we do this is you drop those braille pages, you can go to that bottom-right corner and it's going to help you find your page numbers to put them back together.

Let's look at slide 19 where we have an example showing page numbering. First, let's take a look at the print. I have a worksheet that it's titled, What Number is Missing? Followed by four problems-- $50 + 4 =$ line, $30 + 6 =$ line, $10 + 9 =$ line, and $70 + 8 =$ line.

Notice in my braille that I've centered my heading. I have followed it by two blank lines. I open Nemeth with my Nemeth opening code indicator in cell one. I then have my first blank line and my first problem; a blank line, my second problem; a blank line, third problem; blank line, my fourth problem. That is because I've double-spaced the materials for young students. After my fourth problem, I again have that blank line and then I terminate Nemeth in cells one and two.

But we're really here to talk about the page numbers. So let's look down way at the bottom of the page. In the last two cells of the line, I have my braille page number. And there's a blue arrow pointing to it. My braille page number is in UEB. So notice that that braille page one is a UEB one.

Now that you've had a chance to learn about some basic formatting, I urge you to be consistent with your student but at the same time, also give them opportunities to see other ways that materials are formatted.

For example, with this worksheet I'm showing you, I placed my Nemeth code terminator on a line by itself. It would have equally been right, after that fourth problem that reads 70 plus 8 equals line, to have put a space after that long dash and to put my terminator there.

Lesson 20 is activity 4B. Please pause and prepare the worksheet for a child who is a young braille reader. Please follow the rules that you've been taught in this lesson. When you're ready, come back and check your work.

Slide 21 is the answer key to activity 4B.

On slide 22, we have some special consideration. In Nemeth code within UEB context, whole numbers are written in the upper part of the cell in UEB.

However, when you're preparing materials for young learners, it's permissible to put your numbers in the lower part of the cell so all numbers on the page will be in Nemeth code.

For our young students, rather than making the pictures tactile, we recommend that you give the child manipulatives if its a counting activity. So for example, counting bears-- base 10 blocks, digi-blocks. You do want to make tactile shapes for the student and not use the general omission symbol because we really want our students to see lots of shapes at this age.

Slide 23 talks about interlining, which is so important. Our students at this level are learning. And so those who are supporting them need to see what their braille says. So you'll notice in the picture that the print is written above the braille. And this is so when the child's fingers are on the braille, that somebody who is sighted can see what that braille says.

I hope the information you've learned about formatting will be valuable to you as you prepare materials for young braille readers. Thank you.