Grades_2-5_Lesson_4 (14:35)

SPEAKER: Welcome to "An Introduction to Nemeth Code Symbols Used in Grades 2 to 5 and Strategies for Supporting Elementary Students in Building Math Skills." This is "Lesson 4: Formatting Materials for Students in Grades 2 to 5." Slide 2 has the objectives. You'll be able to locate and use formatting resources, and then format braille and print page numbers, directions, numbered problems, and tables.

Slide 3 talks about the importance of having predictable materials, regardless of your student's age. Because this way, they can focus on the content, the braille reader is able to use their hands to quickly scan and find out what's on that page to get that overview. Also, they're able to quickly scan several pages to locate specific information. So that could be a print page number or a heading or a set of math problems.

And when things are formatted properly and consistently, it's going to make it much easier for the braille reader to access information, and therefore, will be more proficient. So we want to build efficiency in for our students. They're already struggling sometimes to keep up with sighted peers, so let's not make it any harder on them by having materials that are inconsistent in formatting. Be consistent.

Slide 4 talks about resources. If you're not familiar with what we call Braille Formats, that's "Braille Formats: Principles of Print-to-Braille Transcription," and it's the 2016 version, please go to the braille Authority of North America website and make sure you download that. You will find that even though Braille Formats was written for transcribers, if you're a teacher of students with visual impairment or a paraprofessional with responsibilities for preparing braille material, you need to understand the concepts in this document. So it should be at your fingertips.

As should the document that we talk about on slide 5, which is the "Guidance for Transcription Using the Nemeth Code within UEB Contexts." So this document guides you on how you're going to combine Nemeth code with UEB. I especially want to point out that pages 15 to 21 have very specific examples that will help you know how to format problems and tables. Talking about formatting, it's really important to recognize that by second grade, our students are getting single-spaced braille materials, that BANA has its own vocabulary.

So for example, a title isn't referred to as a title. Instead, it is a centered heading. So when you have a title on a worksheet, aka a centered heading, you're going to put it on the first line and you're going to leave a blank line following it. Make sure that you follow the same punctuation and capitalization that are used in that print version of the title. And please, do not change directions or the wording of problems. If you need to communicate a change to a student, you're going to do this with a transcriber's note.

Let's take a look at a print table on slide 7. So this table says :Mixed Review." And then I have my directions. "Solve each multiplication and division problem." I have six simple problems. The first one is 64 divided by 8 equals. Then I would put my long dash. Second one is 7 times 3 equals, and my long dash and so on. There's also four popsicles shown in a picture. And there is a page number for a print reader, which is page 64.

Let's talk about how I would get this worksheet into braille. The first thing to note, is that my title is centered in braille, just as it is in print. I leave a blank line following that title, and then I have my directions. My directions begin in cell 5 with runover or subsequent lines beginning in cell 3. And then my problems begin in cell 1.

Now let's talk about page numbering. All page numbers are in UEB, so that means the upper part of the cell. You're going to leave three blank cells between the text on the line and the page number. The print page number is always going to be placed at the end of the first line of the page at the very top right corner.

It is not uncommon for a print page to take two or three braille pages. So what I do is I'm extending that print page by putting the letter "a" in front of the page number on the second page. If I go to a third page, I put the letter "b" in front of the number. So I'm extending that print page. braille page numbers, on the other hand, go on the very last line in the last two or three cells of the line. So I want to get them all the way over there to the margin. And they are always consecutively numbered, 1, 2, 3, et cetera.

So if I'm looking at my example, I've got my print page number 64, it's on the same line as my title of "Mixed Review." There's definitely more than three spaces between my end of my title and my page number. My braille page number 1 is down at the bottom of the page on the very last line. Even though my math finishes earlier on the page, my braille page number always goes on the bottom of the page.

Time for you to do Activity 4A on slide 11. Want you to decide if each statement is true or false. When you're done, please come back. All right, slide 12 has the answers for you for your true/false activity. If you missed any, please go back and review the information before you go on. Slide 13 talks about numbered problems with no answer choices. So with these, I'm going to begin in cell 1, with runover in cell 3. Remember, runover is subsequent lines.

So I've looked at the first example. 1, period: "What is the total when 28 is added to 49?" So I begin in cell one with my numeric indicator, 1, period. I happen to get the last word on the line is "added," so when I go to my second line to write to, 49, question mark, I'm going to begin the word "two" in the third cell. So press that space bar two times, and then begin in the third cell.

My next problem is number two. "Three students added their money together. They have $12, $3 and $9. How much do they have altogether?" Notice, I've got dollar amounts, which means I'm going to need to go into Nemeth code. And I want to work to keep my Nemeth indicators on the same line, if at all possible.

So on the first line, I braille 2, period, and then I braille, "Three students added their money together." I happen to be going to the second line for my second sentence of the problem, it just worked out that way. So I'm going to begin the word, "They," in the third cell. "They have." I'm going to open up Nemeth, 4-5-6, 1-4-6, And then I've got $12, comma, $3, comma.

I chose to write the word "and" out. I could have also used my one-word switch indicator, dot 6, dot 3. So I've got the word "and" written out, $9, space, and then I've got my Nemeth terminator

dots 4-5-6, 1-5-6, and then my period. I go to the next line. My runover goes in cell 3. And so I have, "How much do they have altogether?"

Slide 14 talks about when you have number problems that have answer choices. Hint. BANA does not call these answer choices. BANA calls these subdivisions. So if you're looking in your resources, such as Braille Formats, on how to braille a multiple choice problem, you're actually looking for how to do subdivisions. So when I have a problem that has subdivisions or multiple choice answers, no need to begin in cell 1 with any runover in cell 5. It's a little different going to cell 5.

And that's because I begin my choices in cell 3. I begin with my English letter indicator, "a," punctuation indicator, period, 36 in cell 3. And if I happen to have runover for that, which I don't, it would go to cell 5. Notice, because I had a problem that used monetary amounts, I need to be in Nemeth code. So I opened up Nemeth code in this case before the problem number. And then I terminated Nemeth code one space after the $54.

Let's talk about tables on slide 15. When a body of a table requires one page or less, so I can get it onto a page or half of the page, then I want to keep that table all together. Going to make sure that we center my title of my table, because that's a centered heading. I'm going to leave that one blank line underneath.

Now tables themselves actually begin in cell 1. And you use what are called box lines if the table has a box drawn around it. If it doesn't in print, then I don't need my box lines. But if I did need to use a box line, for the top box line I would do dots 2-, 3-, 5-, 6. And for the bottom box line, I would do 1-, 2-, 4-, 5. Let me show you in just a second here what I mean.

First, let me talk to you about the columns. So in a table, I have multiple columns. And I need to make sure that my columns, headings, and entries in a row end on the same braille line. So I need to think about how I'm going to format things. Now underneath the column headings, I have a line. We call that the column separation line. It's dot 5, and then as many cells as 2-5 as I need. And these column separation lines are going to separate the column heading from whatever is in the rows below.

If I have to have my line in braille, my row, I want to make sure my student doesn't go crooked, so I have to use my guide dots. And that's two or more cells of dot 5. And this dot 5 configuration, this guide dot, helps the braille reader maintain spatial awareness, so they don't accidentally end up on the wrong row. If I have words in my table, and that's all there is, there's nothing mathematical, then the whole table is going to be in UEB. But if I mix math and words, then I'm going to have to follow the Nemeth code rules.

On slide 17, we have a table that's called, "Place Value Practice." The directions say, fill in the table. And then we have a three-column table with 10 rows. The label for the first column is standard form. The label for the second column is expanded form. And the label for the third column is word form.

Now in setting this table up for my braille reader, I have to put my title first. It's centered. There is a blank line underneath it. My directions begin in cell 5. If I had runover, it would be in cell 3. This table has a box around it in print, so I put a box around it in braille. And the way I do that, is with my top box line. Goes all the way across. Then I have my three column headings. Underneath those, I have my column separation line, which is dot 5, and then dots 2-5. And my column separation line goes the width of that column. After the column headings everything, else on the table is math.

So if you look after the opening Nemeth indicator, dots 4-5-6, 1-4-6, you'll see I have my first column. So you'll notice that there is one totally blank braille cell between the first and the second column. So that's how the braille reader can tell which column they're in, and what they're reading. If I have any information missing, I use the long dash in Nemeth code, which is dots 3-6 four times.

Let's go all the way to the bottom of the table. I need to close out of Nemeth. So notice, I have my Nemeth terminator, dots 4-5-6, 1-5-6, And then I have my bottom box line. And I want to also point out to you, that the length of the top box line and the length of the bottom box line are the same.

OK, slide 18 lets you go to work. This is Activity 4B. Please go ahead and prepare the worksheet in braille. We want you to separate the table on one page and the questions on the other, so you can think about where to put your braille and print page numbers. Remember, there's a way to continue a print page onto a second page of braille. So when you're ready, come back.

Great! I hope you did well brailling your table for Activity 4B, and then that you did even better brailling your answers to the questions that they asked. Congratulations! You just completed Lesson 4. Now we're done in this course with new braille information. In lessons 5, 6 and 7 we switch gears, going to talk about materials for supporting the braille reader in grades 2 to 5 in Lesson 5.

In Lesson 6, we're going to talk about how to support the braille reader and team members so that the student meets with success. And in lesson 7, our guest, Dr. Ting Siu, is going to talk about the digital workflow. Enjoy!