

Nemeth_Symbol_Library_Resource (11:18)

SPEAKER 1: This is a demonstration of the Nemeth Symbol Library, available from accessibility.pearson.com. Sara Larkin, one of the developers, narrate the video as she used NVDA to move through the symbol library.

SARA LARKIN: Welcome to the Nemeth Curriculum Materials page. I'm going to be showing you how to access the Nemeth Symbol Library, using NVDA as your screen reader. So we're going to start by opening NVDA. I'll do that by hitting the "Windows key" and typing NVDA and hitting "Enter." My screen reader is open now.

NVDA SCREEN READER: Nemeth Curriculum Accessible Assessments, Pearson, Google Chrome.

SARA LARKIN: And then I want to find on this page how to get to the Nemeth Symbol Library. The easiest way to do that is to use the Find feature. So, Control-F, and I'll start typing Nemeth symbol.

NVDA SCREEN READER: Find in page result, res-- result one of three.

SARA LARKIN: And I do want the first result on the page. So, I'll hit "Escape."

NVDA SCREEN READER: Nemeth Curriculum Accessible Assessments, Pearson document. Skip link.

NVDA SCREEN READER: Nemeth Symbol Library.

SARA LARKIN: Enter to go to that actual link. And now I'm on the Nemeth Symbol Library page. So now I'm going to navigate through the headings, by just typing the letter "h" for heading.

NVDA SCREEN READER: Main landmark, welcome to the Nemeth Symbol Library, heading level one.

SARA LARKIN: And then I mean I do "h" again to go to the Introduction.

NVDA SCREEN READER: Introduction, heading level two.

SARA LARKIN: And I'll just read the first sentence here, the Introduction. But you could actually use the down arrow to read through the whole thing. But I'll just do the down arrow a couple of times to read through the beginning,

NVDA SCREEN READER: The purpose of this Nemeth Symbol Library is to allow individuals to look up any math symbols and math related terms, using the words a student is accustomed to hearing. These symbols and terms are listed after this Introduction. Once you--

SARA LARKIN: Now, I actually I'm just going to type the "h" again to go to the next heading.

NVDA SCREEN READER: List of symbols and math terms, heading level two.

SARA LARKIN: So now I've gotten to my list of terms. And I'm going to arrow down, kind of see what's in the list.

NVDA SCREEN READER: List with 240 items, link absolute value.

SARA LARKIN: Oh, did you hear that? There's 240 in this list. So, I could keep arrowing down and find the term I want, or I can just go into the links list and start typing the term I want, so that I can go directly to that. So again, I could use the arrows, or let's just open up the link list. I do that by typing Insert-- F7 or Caps Lock-- F7, if you switched that for your NVDA.

NVDA SCREEN READER: Elements List dialog.

SARA LARKIN: So now my Elements List dialog is up, including all of the links there. And now I can just start typing what I want to look up. So, let's look up divided by.

NVDA SCREEN READER: Divided, divided by, visited 102 of 690--

SARA LARKIN: All right. Now when I hit "Enter" at this point, it's actually going to take me to a definition for divided by. So, I'm going to hit "Enter."

NVDA SCREEN READER: Nemeth Symbol Library, Accessible assess-- the divided by sign, dots 4-6, dots 3-4, called the obelus, is a horizontal line with a dot above and below it in print. It is used between two numbers, variables, or other symbols to represent division. In a linear format, there should not be a space on either side of the divided by sign.

Also, a numeric indicator is not used after the divided by sign if a number does follow it.

SARA LARKIN: So, I just used the arrow keys have it read that definition to me, the down arrow. And at the end of each definition, there are links to examples of the division sign being used. The first link is the Nemeth in EBAE, which is the old braille code. The second link is Nemeth within UEB Contexts, the new braille code. And then the third is Nemeth in Print and Simbraille. And that's for those teachers and parents that do have sight, so that they are able to look at the print at the same time that their students look at the braille.

So let's start by going to the braille file. And I can go to those links by just hitting the "Tab" key. So, Tab. The first time we'll go to the first example file.

NVDA SCREEN READER: Nemeth in EBAE, BRF, link.

SARA LARKIN: Tab the second time will take me to the Nemeth within UEB Contexts. And that's the one I'm going to select by using "Enter."

NVDA SCREEN READER: Nemeth within UEB Contexts, BRF, link.

SARA LARKIN: Now I'll hit "Enter." And that's going to open up a braille file. In this case, I have it defaulting to Duxbury.

NVDA SCREEN READER: Import file dialog. Template list.

SARA LARKIN: So I'll just hit "Enter."

NVDA SCREEN READER: The Duxbury Braille--

SARA LARKIN: Now at this point, I actually have the braille. But as a student who doesn't have sight, I wouldn't be able to see what's on the screen. So what I would really want to do at this point is use a braille display attached to that computer, so the braille is right under my fingertips. This also works in note takers or braille displays that are attached to iOS devices. So you can use it on whatever device you want. I'm using it on a computer with a braille display attached.

So then I can just arrow down and not worry about--

NVDA SCREEN READER: Blank.

SARA LARKIN: So I'm just hitting the "control" keys, rather than having it read what's there. I want to actually read that braille right under my fingers.

Now we're actually going to look at the print file, too, to see what is in this file in braille. The print file and the braille file say exactly the same thing. So, I'll get out of it.

NVDA SCREEN READER: Nemeth Symbol Library--

SARA LARKIN: I'm going to hit "Tab" to go to the print file.

NVDA SCREEN READER: Nemeth in Print and Simbraille.

SARA LARKIN: Now in this file, remember that I'm someone who has vision for the print and Simbraille file. And you'll be able to see that in this file, which again is the same as what it would be in the braille file, the problems are numbered. They start with the easiest examples for the youngest kids first, and gets to the older examples later. So, this particular one starts with a basic one digit division equation, $62 = 3$. The second example is a two digit 4812. The third example has money, \$8.204. And then there's a division of fractions, and a division of fractions that have variables in it.

So the examples always go from those younger kids to those older kids. And that's because for those younger kids, when it gets out of the examples that apply to them, they can just stop. For the older kids, they can simply fly through the ones they already know and get to the examples that they really want to find.

NVDA SCREEN READER: Doc to top. Doc to--

SARA LARKIN: I'm going to go ahead and go back to the Symbol Library again. And at this point, we're going to look up just a couple of others, just so you can kind of see how I can go back. Wherever I am on this page, I can go back to that links list again by just typing my caps-F7.

NVDA SCREEN READER: Elements List Dialog, tree--

SARA LARKIN: And again, I can type in another one. So let's say I'm one of the decimal point. This time. I could start typing decimal point and hit "Enter."

NVDA SCREEN READER: Nemeth Symbol Library Accessible Assessments, Pearson, Google Chrome. The decimal point dots 4-6.

SARA LARKIN: And notice right away, it tells me what the dot configuration is for that. And again, I can Tab to those sample files, either the BRF files for the student who reads braille or the print file for a teacher or parent who reads print.

Well, let's look up the print for that one. I'm going to go ahead and Tab.

NVDA SCREEN READER: Nemeth in print and Simbraille.

SARA LARKIN: I'll go ahead and [INAUDIBLE] the braille code.

NVDA SCREEN READER: Nemeth in Print and Simbraille. Embedded--

SARA LARKIN: I'll go ahead and look at this example. This one is decimal point examples, so it starts out with some money. Because the money starts really early. And then some other decimal values, and then it gets into some repeating decimals. So again, it's going to increase in complexity. Every example always starts out with how to say it in words, and then has the words is written, and then how it shows up in Nemeth.

And that's done so that even a teacher or parent who doesn't know how to read it mathematically would know how. Same thing with the student. They're able to read what it's going to be saying, and then read what it says in Nemeth Code.

So I'd go ahead and go back to my web page.

NVDA SCREEN READER: Nemeth--

SARA LARKIN: And let's go ahead and look up another example. This one will be braces. So, I'm going to go, again, either "Insert-- F7" or "Caps Lock-- F7." This time--

NVDA SCREEN READER: Elements List Dialog. Tree, bard brackets 41 of-- radical, other than square root, bard, braces, visited 48 of 691 level zero.

SARA LARKIN: That's my braces. I'll hit "Enter" to go to the definition.

NVDA SCREEN READER: Nemeth Symbol Library, Accessible Assessments, Pearson Google Chrome.

SARA LARKIN: I can use the arrows to read the definition where or the tabs to go to--

NVDA SCREEN READER: Nemeth in EBAE.

SARA LARKIN: Google Document.

NVDA SCREEN READER: Nemeth, Nemeth in Print and Simbraille. Embedded object unavailable.

SARA LARKIN: And in this case, we start with an example for those middle school kids that has braces used for order of operations. And then for the older kids, it gets into other ways that those braces are used. So, we'll go ahead and go back to the--

NVDA SCREEN READER: Nemeth--

SARA LARKIN: I'm going to go through one more, and that's degrees. So again, we'll do our "Insert-- F7," our "Caps Lock-- F7," go to the links list.

NVDA SCREEN READER: Elements list dial.

SARA LARKIN: And then I'm going to type in degrees this time.

NVDA SCREEN READER: Decimal, degree symbol. Visited 79 of 600.

SARA LARKIN: There we go. And then we'll go ahead and hit "Enter" to go to that definition.

NVDA SCREEN READER: Nemeth Symbol Library, Accessible Assessments, Pearson Google Chrome. Nemeth degrees, dots 4-5, dots 4-6.

SARA LARKIN: So notice, right away, I know now what the dot configuration is for degrees. And then I can go to that sample braille file or that sample print file, depending on whether I'm a braille user or a print user.

So, can hit "Tab."

NVDA SCREEN READER: Nemeth, Nemeth in Print and Simbraille. PDF visited. Embedded object unavailable.

SARA LARKIN: And then in this case, we have, start out with degrees Fahrenheit, degrees Celsius, and then get into degrees for angle measure and arc measure. So again, we're starting with the younger kids and working into examples for the older kids.

So, we just wanted to give you a few examples of how you might use that with your students to look up some symbols, while also getting a chance to learn about how to use screen readers at the same time. Thanks a lot.