

Pre-Kindergarten Introduction

This is a Nemeth curriculum that will support math instruction, but not replace the math curriculum.

Modules

- Full Braille Cell and Numeric Indicator
- Numerals 1-3
- Numerals 4-5
- Numerals 6-7
- Numerals 8-9
- Numerals 0-10

Symbols and Concepts

- Counting
- Braille cell
- Dot numbers
- Numeric indicator
- Numerals 0-10
- Concepts of "before" and "after"
- Represent a number from 0-10 by producing a set of objects with concrete materials
- Numerical order

Objectives

The student will be able to:

- Tactually identify the braille cell, numeric indicator, and numerals from 0-10
- Use the braillewriter to write a full braille cell, numeric indicator, and numerals 0-10 with assistance
- Use concrete materials and/or number cards placed in order numerically and then determine what number comes before or after a specific number from 0-10
- Match written numerals with concrete representations from 0 to 10
- Represent a number ranging from 0-10 by producing a set of objects with concrete materials and Nemeth numerals, including 0 representing a count of no objects

- Place the number cards in order from 0-10

Other ECC Skills Addressed

Note: ECC stands for Expanded Core Curriculum

- Listening skills
- Following directions
- Taking turns
- Concept development
- Tactual discrimination
- Left-to-right tracking
- Hand positioning
- Light touch (as opposed to scrubbing)

Curriculum Documents

- Teacher guide
- Module content (available for download as a PDF document)
- Student braille materials
- Answer key for exercises within module
- Teacher materials for administering check-up
- Student braille materials for check-up
- Answer key for check-up
- Teacher recording sheet
- Cumulative checklist
- Review activities
- Pretest and posttest

It is recommended that the pretest be used to establish a baseline of Nemeth skills. It is also recommended that the check-ups, pretest, and posttest be completed across multiple sessions. Once a student misses 3 questions in a row within a part of an assessment, it is suggested that you move to the next part at that point.

Required Materials

- Braillewriter
- Braille paper
- Two swing cells and pegs
- Index cards
- Sorting tray with dividers
- Timer

- Unifix cubes (or other cubes that can be snapped together)
- Brightly colored construction paper
- Bin or bucket
- Glue stick or glue
- Textured paper/material/small objects that remind student of a train
- Homemade cube labeled with Nemeth numerals 2, 3, 4, 4, 5, 5 on the 6 faces, possibly using the Nemeth Feel 'n Peel stickers
- Outline/pattern of train cars available within the curriculum
- Fruit cut up into various shapes
- Plastic cup
- Craft sticks
- Assortment of foam stickers
- Two or more shoeboxes
- String
- Scissors
- Book entitled *Locomotive* by Brian Floca
- At least 7 stuffed animals and/or small toys
- Graham crackers
- Vanilla wafers (or other small circular cookies)
- Cheerios (any flavor)
- Six bowls
- Book made of poster board or cardboard
- Variety of small objects

Optional Materials

- Two half dozen muffin tins and 12 small balls
- Teddy bear manipulatives or other small objects that can be counted
- Double-sided tape or sticky tack
- Scented stickers, Wikki Stix®, buttons, or textured paper
- Nonslip surface such as rubber shelf liner
- Blocks of various shapes instead of fruit
- Material, buttons, foam stickers in the shape of circles, shoelaces, and rope
- Hook and loop sticky-back strips and circles of Velcro so the circles will connect to the strips
- Hard copy of Nemeth numerals 0-10 in order

Teaching Tips

- Before opening any BRF files in Duxbury,
 - Go into the Global menu.
 - Select "**Formatted Braille Importer.**"
 - Select the box for "**Read formatted braille without interpretation**" at the top of the window. This will ensure that nothing is changed when opening the BRF files.
- Teach the student to use both hands to move across the braille line. Their fingers should be slightly bent.
- Encourage a light touch. This will help in tactile identification and increase reading speed.
- Pay attention to the child's hand movements. Give help and model tracking if the student does not use both hands or if the student does not move both hands smoothly from left to right.
- The swing cell from the American Printing House for the Blind is used in each of the modules. It provides a concrete model of the relationship between the dots in a braille cell and the keys on a braillewriter. It would be helpful to have two swing cells when completing the modules.
- Provide frequent breaks and keep lessons short.
- Use a nonslip surface such as rubber shelf liner so braille pages and flashcards will not move as much.
- If you are using hard copy braille, the student can also do the following:
 - Stomp a foot
 - Underline or circle the number with a grease marker or crayon
 - Place a small sticker on top of the number
- It is very important to use the correct finger on each key when learning new Nemeth symbols. This will help the student become accurate in their writing.
- Using the braillewriter for most of the writing activities is encouraged as it facilitates the development of motor memory.
- If your student is using a refreshable braille display, explain about the additional keys on the far right and far left.

Planning of Lessons

- It is recommended that each module be completed across multiple sessions.
- Provide frequent breaks and keep lessons short.
- As needed, supplement with other materials.

- You may use alternative materials as needed. For example, if you do not have a swing cell, use a half dozen muffin tin and 6 balls. If the student has residual vision, you may want to use brightly colored balls.
- If you elect to emboss the braille materials, you will notice that the pages are numbered and contain approximately 8 lines of braille. You are welcome to bind the pages with a comb-binder if you would like.
- Most modules include activities for enrichment and/or additional practice.
- Use half sheets of braille paper when using the braillewriter with young students. These sheets will be easier for the student to handle.
- Nemeth Code switch indicators are not introduced in the Pre-Kindergarten modules so that students may focus on learning the Nemeth numerals 0-10.