

# Pre-Kindergarten – 1<sup>st</sup> Grade Students: Nemeth Code within UEB Contexts and Strategies for Supporting the Student in Building Math Skills

## Lesson 6: Supporting the Student in Learning Nemeth Code and Math Concepts



University of South Carolina Upstate, Spring 2020

# Lesson 6 Objectives

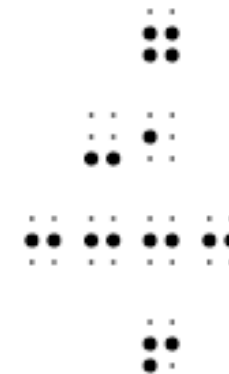
Participants will be able to:

1. Describe the importance of pre-teaching Nemeth symbols
2. Locate and use resources for teaching math concepts
3. Identify and use hands-on materials and manipulatives to support student learning

# Pre-Teach Nemeth Code Symbols and Formatting

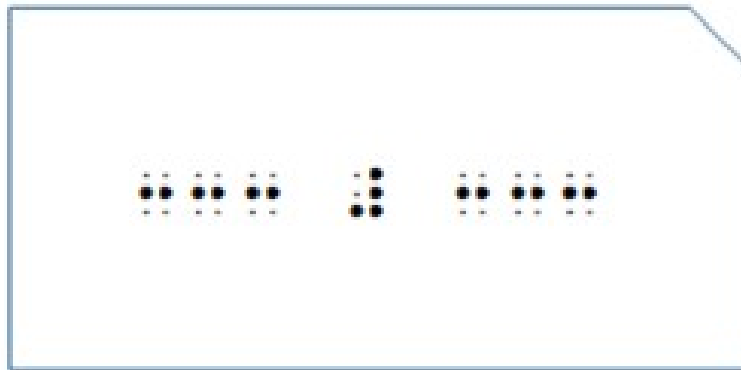
- New Nemeth symbols for example:
  - General omission symbol
  - Tally marks
  - Signs of comparison
- New formats for example:
  - Spatially aligned problems
  - Centered headings
  - Format of multiple choice problems

$$\begin{array}{r} 7 \\ - 1 \\ \hline 6 \end{array}$$



# Teaching New Symbols

- Use a 3-cell line of dots 2-5 and a space before and after the symbol.
- This method identifies the position of the symbol in the braille cell.



# Consistency with Switch Indicators

- Be consistent in formatting materials, regardless of grade level
- For PK-1 students:
  - Opening Nemeth Code indicator = “start” or “begin math”
  - Nemeth Code terminator = “stop” or “end math”

# Correct Finger Placement

- Teach correct finger positioning.
- Have students use the thumb for spacing.
- Develop individual memory cues.



# Brailleing the Equals Sign (=) ⠠⠶

- Begin brailleing using two fingers of the right hand.
- Then follow with two fingers of the left hand.
- Memory cues:
  - Two fingers are “equal to” two fingers.
  - Two dots are “equal to” two dots.



# Brailleing the Greater Than Sign (>) ⠠⠗

- Begin with two fingers of your right hand.
- Follow with one finger of your left hand.
- Memory cues:
  - Two fingers are “greater than” one finger.
  - Two dots are “greater than” one dot.



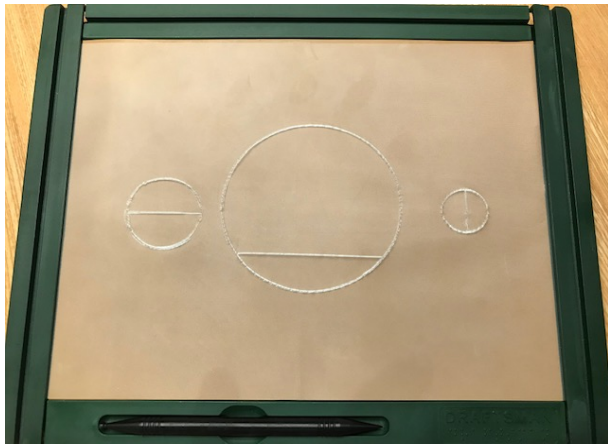


# Brailleing the Less Than Sign (<) ⠠⠨⠠

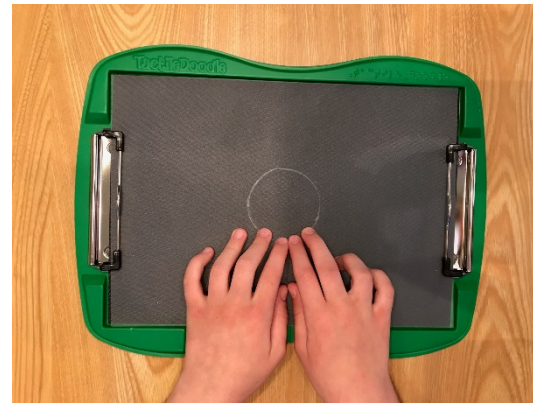
- Begin with one finger of the right hand.
- Follow with two fingers of the left hand.
- Memory cues:
  - One finger is “less than” two fingers.
  - One dot is “less than” two dots.



# Pre-Teach Abstract Concepts and Use of Manipulatives – APH Products



DRAFTSMAN:  
Tactile  
Drawing  
Board



Tactile  
Doodle



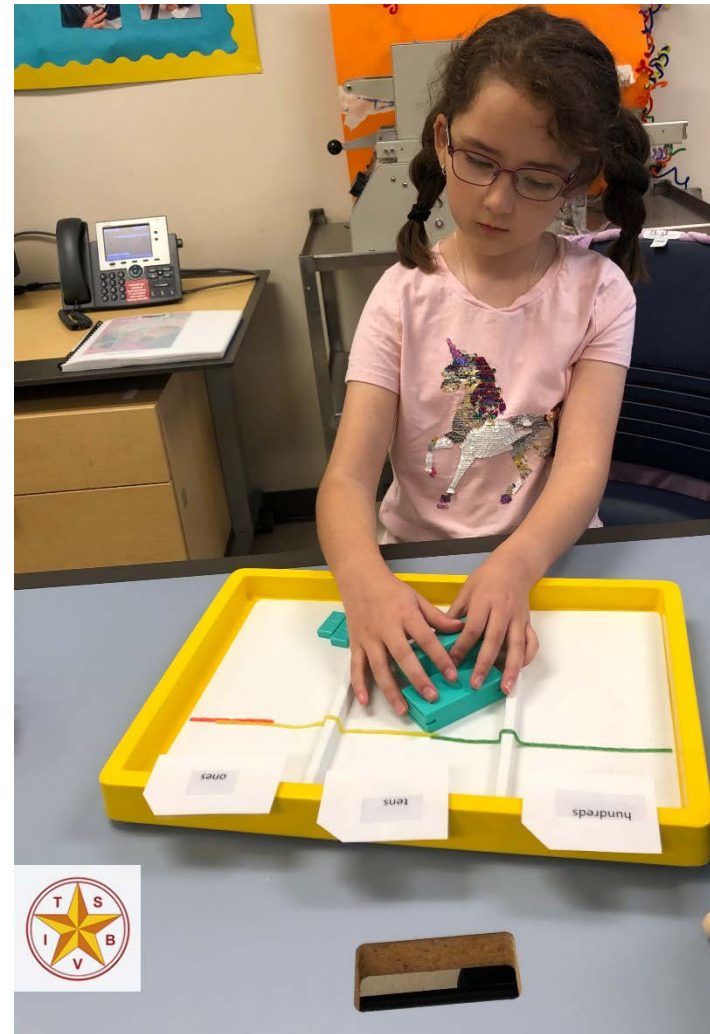
Five and  
Ten Frames



Individual  
Calendar  
Kit

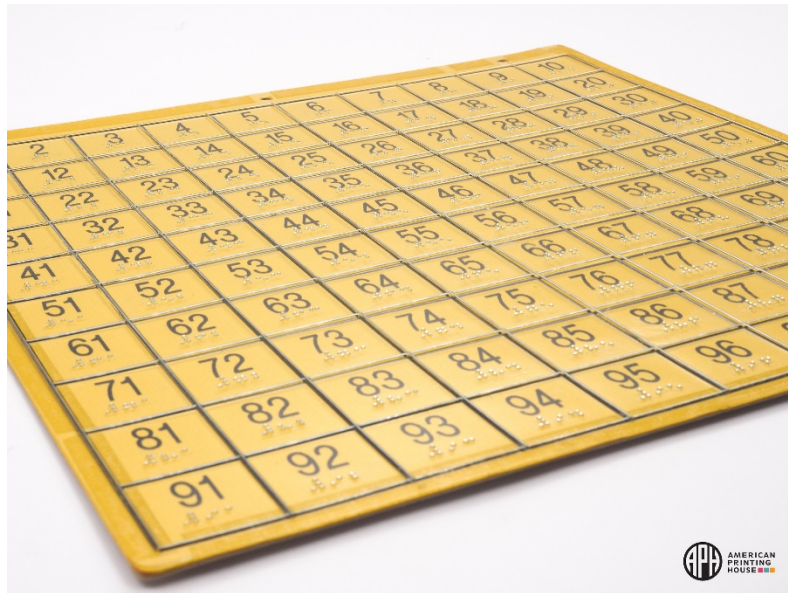
# Teach Organization

- Sorting trays
- Storage boxes
- Baskets
- Labels
- Nonslip surface such as rubber shelf liner





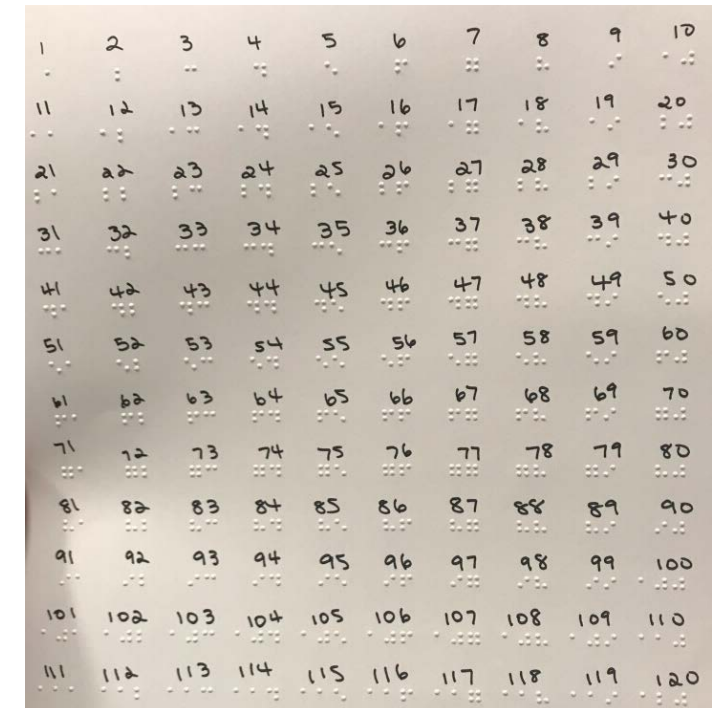
# Building Understanding of Number Relationships



APH Hundreds chart



Base 10 blocks



Counting to 120 chart

# HANDS ON Kit: Functional Activities for Visually Impaired Preschoolers (APH)

- Montessori based activities
- Guidebook for teachers

“Helps children develop skills such as concentration, hand and visual coordination, ability to complete a cycle of activity, and socialization skills. Also helps develop a sense of order and a positive self-image.”



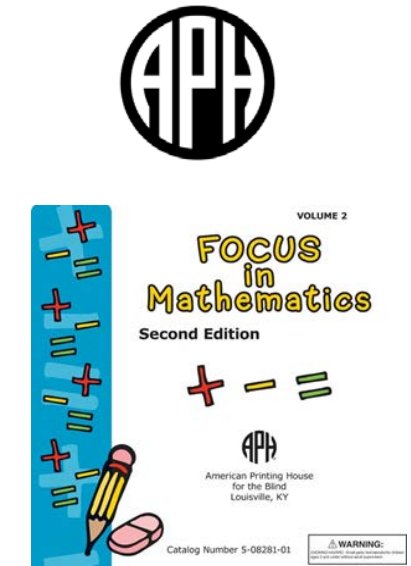
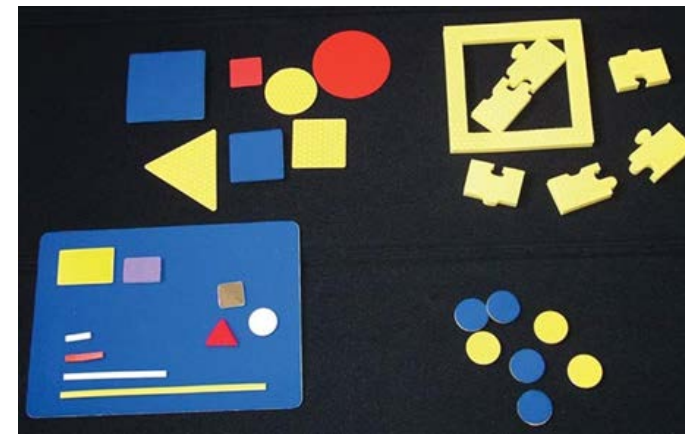
# FOCUS in Mathematics Kit, Second Edition (APH)

## Topics:

- Numbers and Operations
- Geometry
- Algebra
- Measurement
- Data Analysis

## Includes:

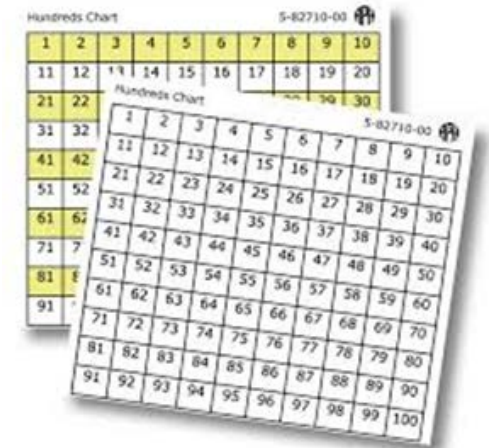
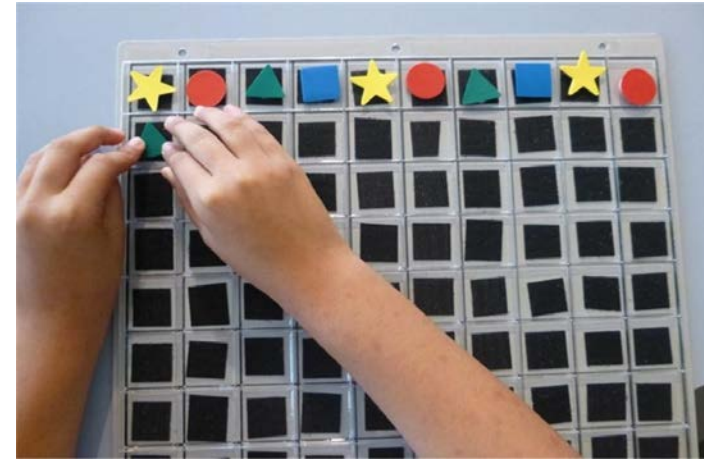
- Small Work-Play Tray with Dividers
- Base Ten Blocks: Units
- Base Ten Blocks: Rods
- Base Ten Blocks: Flats
- Teacher materials





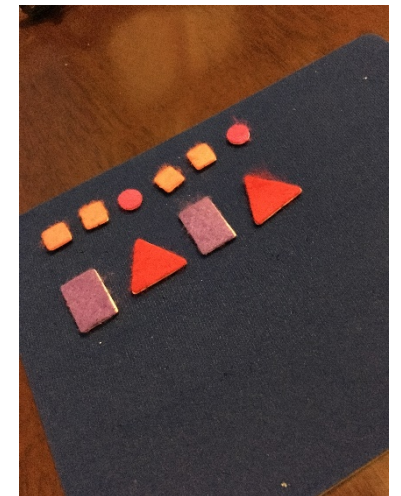
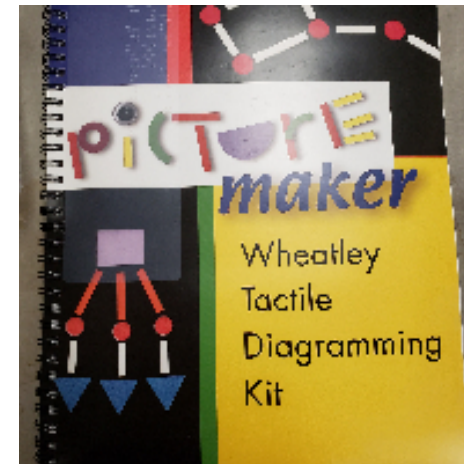
# Numbers and Algebraic Reasoning Products from APH

- Feel 'n Peel Stickers: Nemeth Braille-Print Numbers 0-100
- Hundreds Boards and Manipulatives Kit
- Consumable Hundreds Chart
- MathBuilders Unit 1: Matching, Sorting, and Patterning



# Geometry and Graphing Products from APH

- MathBuilders, Unit 6: Geometry Kit
- Feel 'n Peel Point Symbols or Stars
- Feel 'n Peel Sheets: Carousel of Textures
- Shape Board
- Textured Sorting Circles and Shapes
- Embossed Graph Sheets: 1 inch Squares, 10 x 10 Grid
- Picture Maker Wheatley Tactile Diagramming Kit





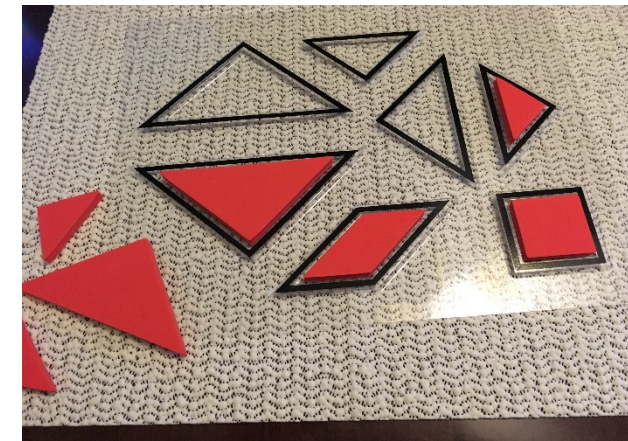
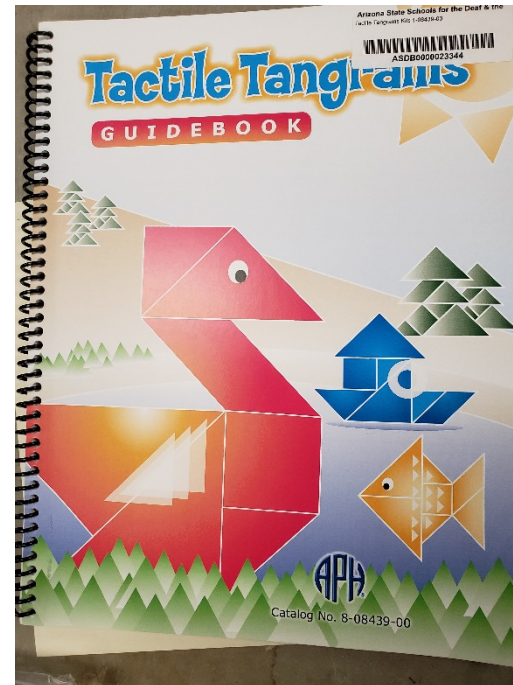
# Addition and Subtraction Products from APH

- Math Drill Cards in Braille and Large Print: Addition Cards
- Math Drill Cards in Braille and Large Print: Subtraction Cards
- Quick Pick Math: Addition
- Quick Pick Math: Subtraction
- Addition and Subtraction Table



# More APH Products

- Game Kit: Materials Bag with 4 Dice, 6 Game Tokens
- Graphic Art Tape
- Puzzle Form Board Kit
- Fractional Parts of Wholes: Circles
- Tactile Tangrams Kit



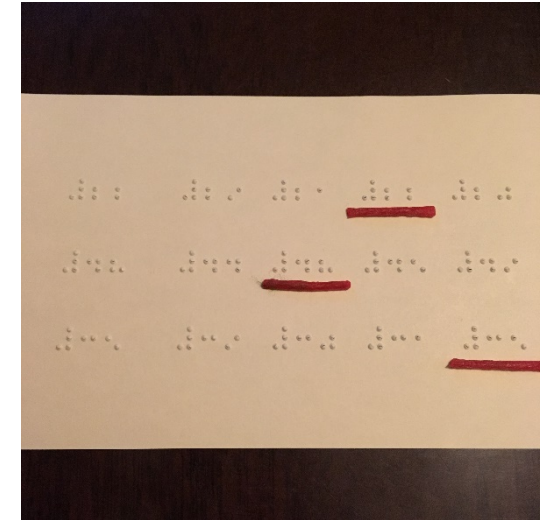
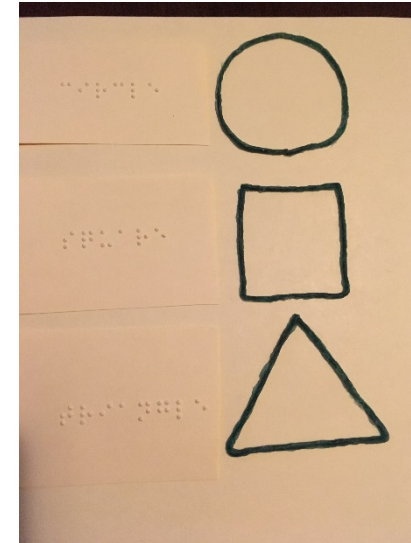
# Even More APH Products

- MathBuilders, Unit 7: Fractions, Mixed Numbers, and Decimals Kit



# Hands-on Materials and Manipulatives for Math and Science

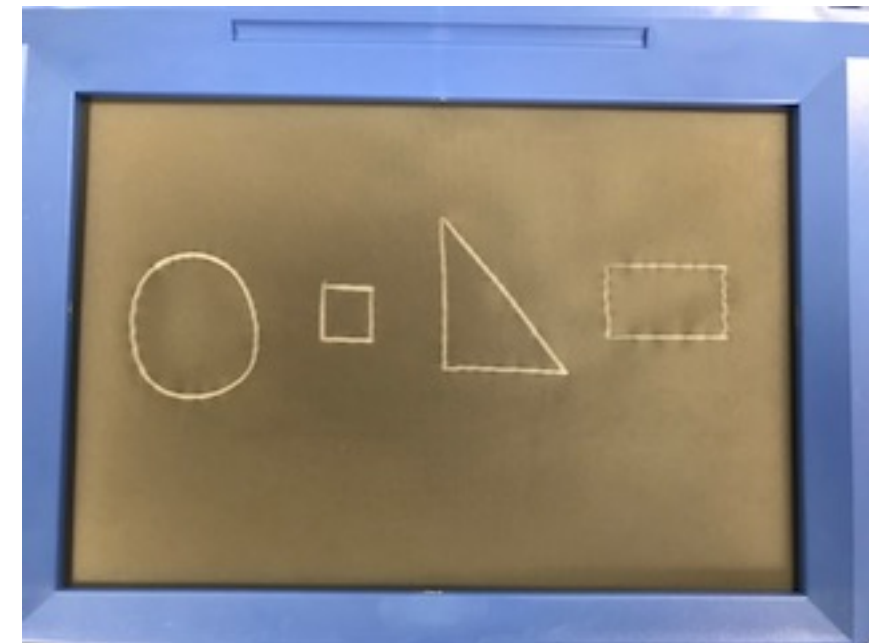
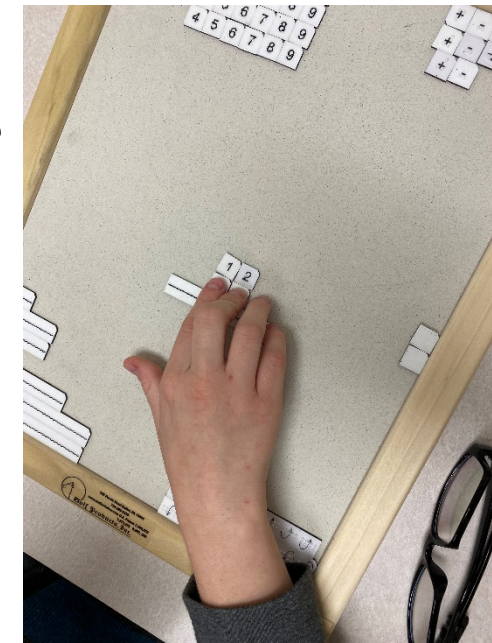
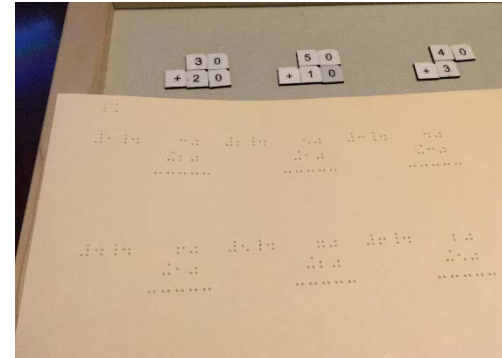
- Wikki Stix®  
<https://www.wikkistix.com/>
- Digi-Block Store  
<https://www.digiblock.com>
  - Classic Block-of-100
  - Power Block-of-100





# Hands-on Materials and Manipulatives for Math and Science (continued)

- Math Window  
<https://mathwindow.com/>
  - Math Window Braille Basic Math Kit in Nemeth
- Didax <http://www.didax.com/teddy-bear-counters-96.html>
  - Teddy Bear Counters
  - Unifix cubes
- E.A.S.Y. LLC.  
[www.easytactilegraphics.com/intact-products/](http://www.easytactilegraphics.com/intact-products/)
  - inTACT Sketchpad



# Pearson Nemeth Braille Code Curriculum

<http://accessibility.pearson.com/nemeth/>

- Teaches students to read and write Nemeth Code within UEB Contexts
- Pre-K, kindergarten, first grade, and second grade materials
- Aligned with the Common Core State Standards (CCSS Initiative, 2010)
- Hands-on games and activities
- Includes teacher scripts, braille ready files for student worksheets, answer keys, data recording sheets, review activities, and assessments

# More Hands-on Materials and Manipulatives for Math and Science

The Nemeth Braille Code Curriculum

<http://accessibility.pearson.com/nemeth/>

- Place Value Charts
- Templates for BINGO cards
- Template for Five Frame
- Template for Ten Frame
- Mazes
- Connect Four Game Cards and Problem Sets
- Flash Cards
- Find the Path Activity
- Roll and Race Game Cards
- Shapes Activity
- What Am I Activity
- Counting to 120 Chart

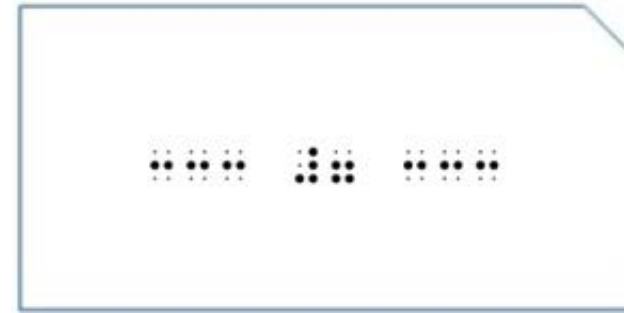
# Pre-Kindergarten – Building a Train

## Materials

- Foam stickers
- Craft sticks
- Flash cards labeled 1- 7

## Steps

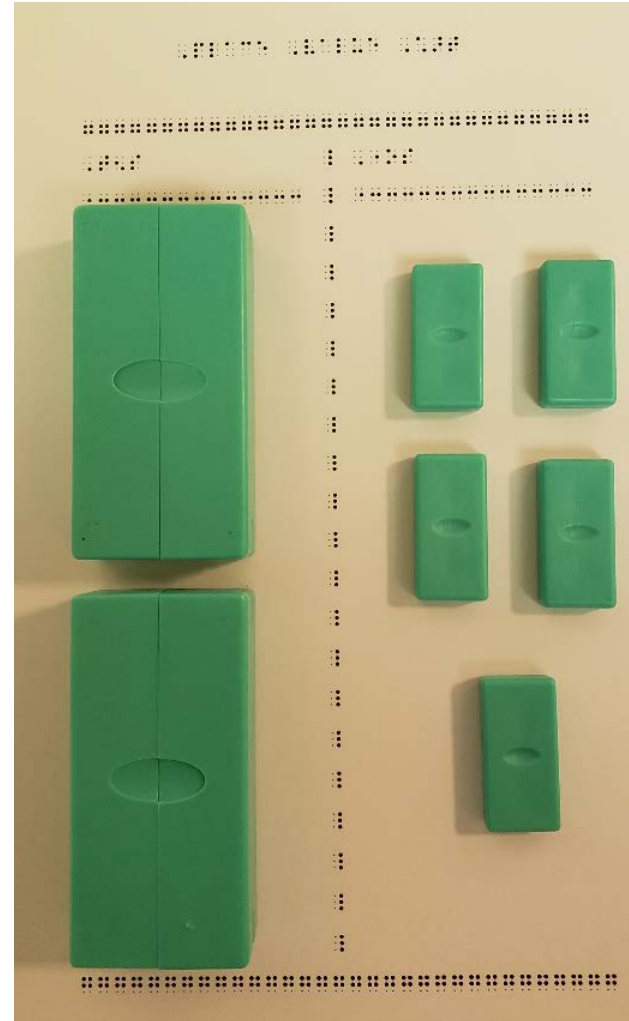
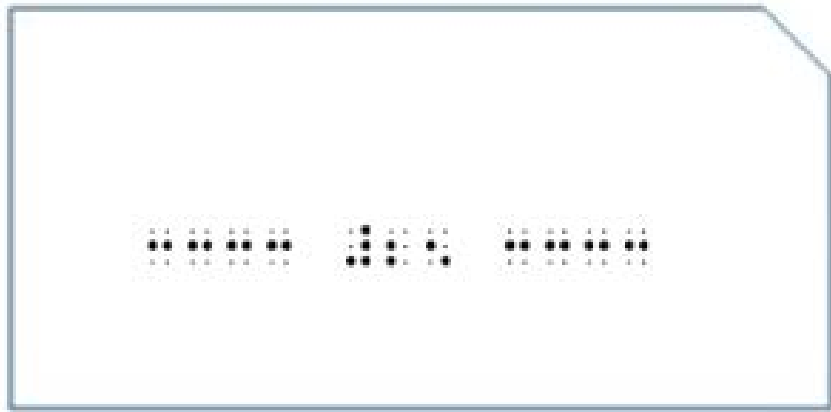
- Student shuffles flash cards
- Student draws a card and reads the numeral on the card
- Student uses stickers to “build” the train



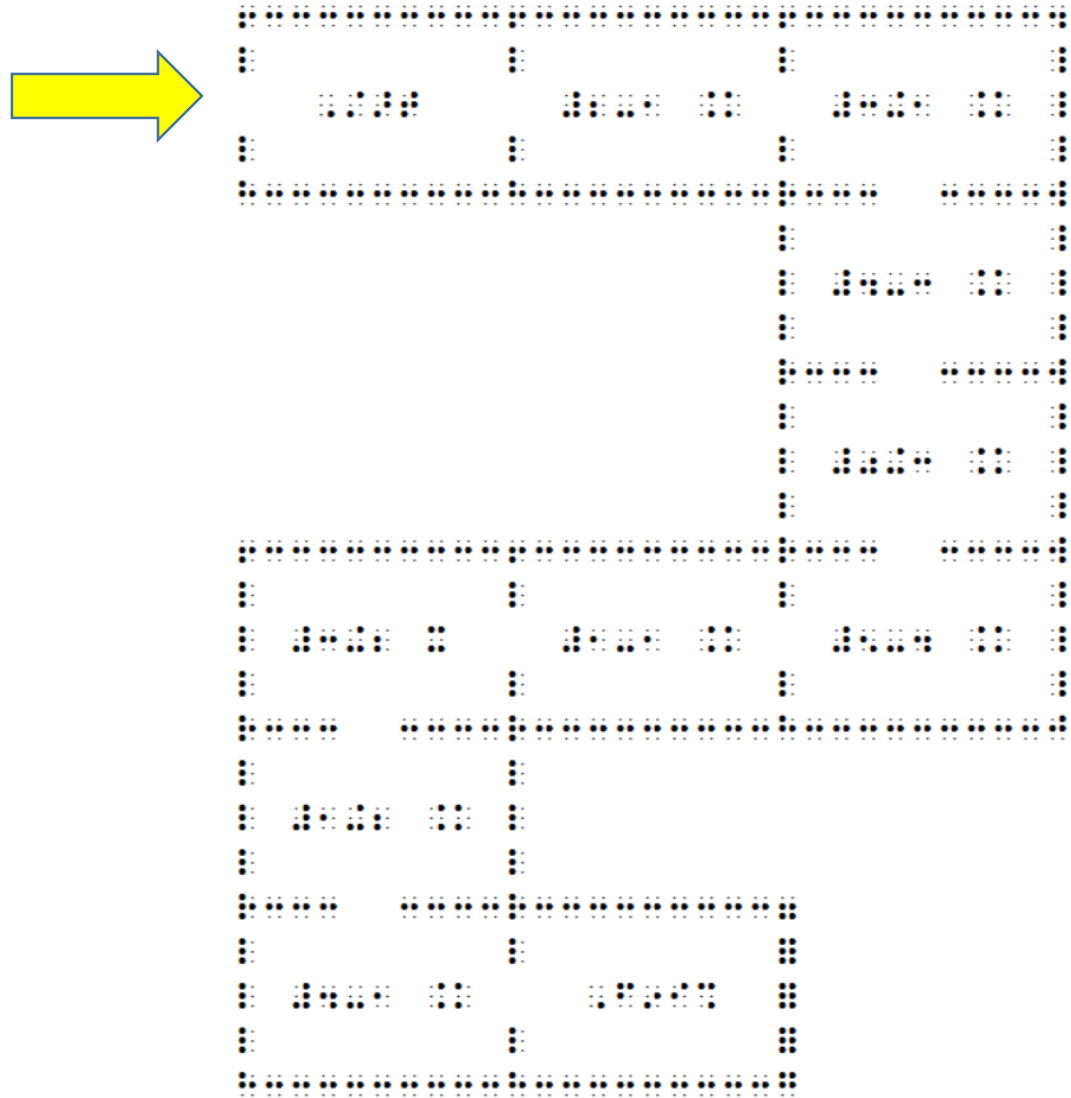
If you add print numbers to the flash cards, your student can do the activity with a friend.



# Kindergarten – Tens and Ones



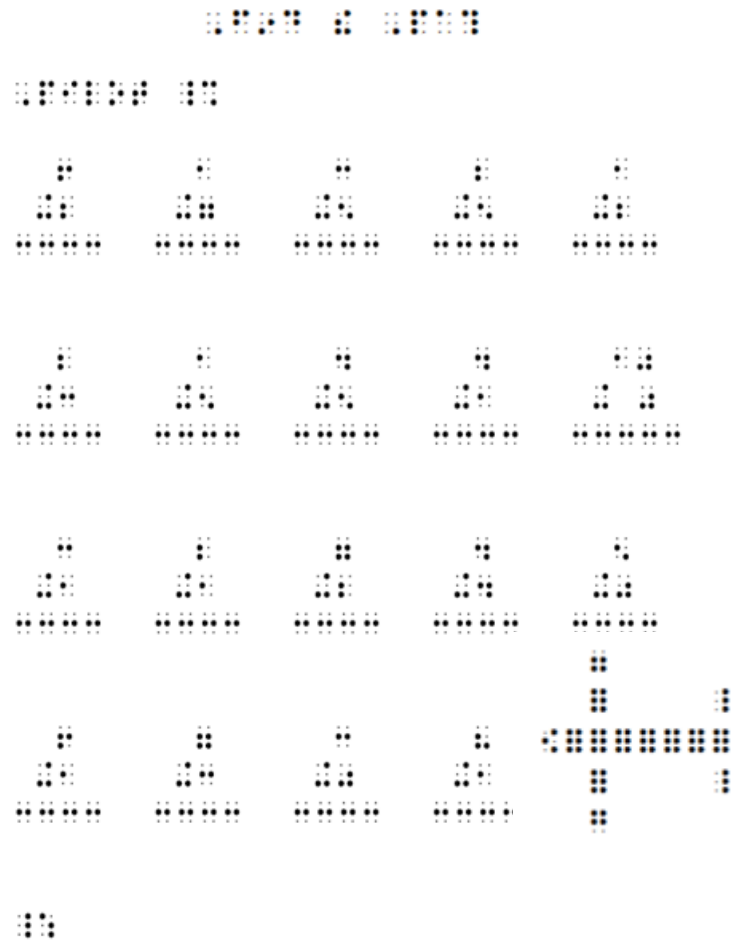
# Kindergarten – Maze



# Kindergarten - Rebuild a Hundreds Chart



# First Grade – Find the Path Activity and Help the Pilot Get to the Airplane!



# First Grade – Determine the Shape and Then Write the Missing Numbers

