

An Introduction to UEB Math/Science for Pre-Kindergarten – 1st Grade Students and Strategies for Supporting Math Learning

Lesson 6: Supporting the Student in Learning UEB Math/Science and Math Concepts



University of South Carolina Upstate, Fall 2023

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Lesson 6 Objectives

Participants will be able to:

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

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Pre-Teach UEB Math/Science Symbols and Formatting

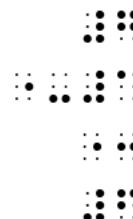
- New symbols for example:

- Visible space
- Tally marks
- Signs of comparison

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

- New formats for example:

- Spatially aligned problems
- Centered headings
- Format of multiple choice problems



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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.



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Correct Finger Placement

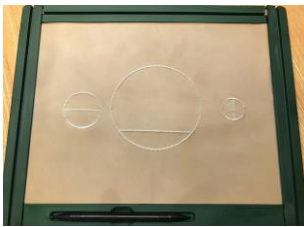
- Teach correct finger positioning.
- Have students use the thumb for spacing.
- Develop individual memory cues.



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



DRAFTSMAN:
Tactile
Drawing
Board



Tactile
Doodle



Five and
Ten Frames



Individual
Calendar
Kit

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Teach Organization

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



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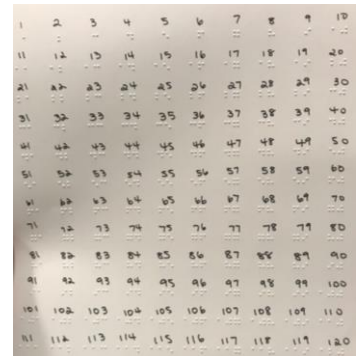
Building Understanding of Number Relationships



APH Hundreds chart



Base 10 blocks



Counting to 120 chart

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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.”



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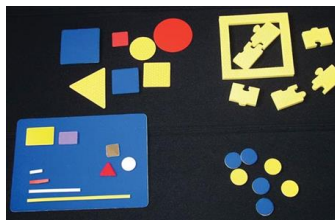
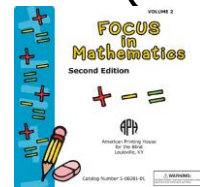
FOCUS in Mathematics Kit, Second Edition (APH)

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



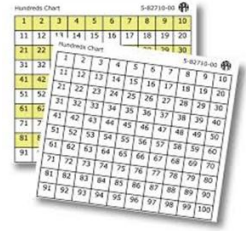
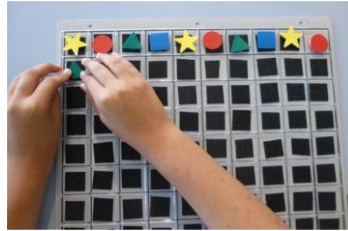
The kit includes great materials, but worksheets and flashcards are in Nemeth!

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Numbers and Algebraic Reasoning Products from APH

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



MathBuilders Unit 1 has a few worksheets with problems numbered in Nemeth!

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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



MathBuilders Unit 6 has reference sheets and worksheets in Nemeth!



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Addition and Subtraction Products from APH

- Math Drill Cards in Braille and Large Print: Addition Facts in UEB
- Math Drill Cards in Braille and Large Print: Subtraction Facts in UEB

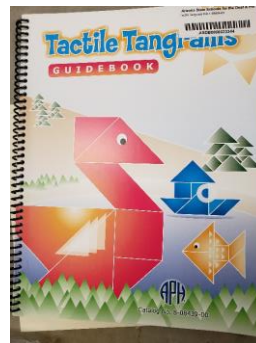


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More APH Products

- 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



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Even More APH Products

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



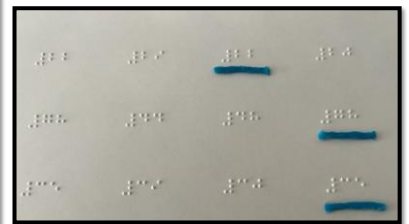
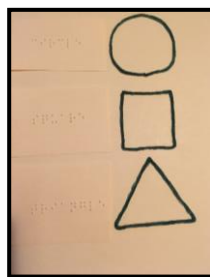
MathBuilders Unit 7 is currently only available in Nemeth, but you could make your own UEB labels for the manipulatives.

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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

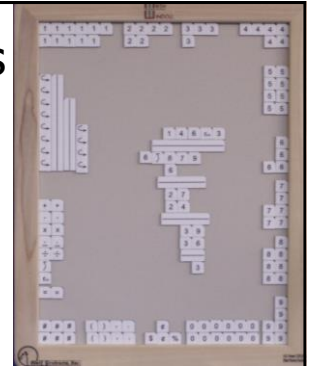


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Hands-on Materials and Manipulatives for Math and Science (continued)

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



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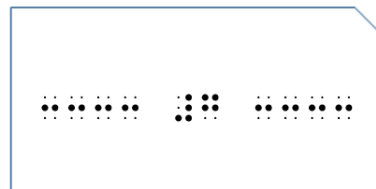
Pre-Kindergarten – Building a Train

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.

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Kindergarten – Tens and Ones

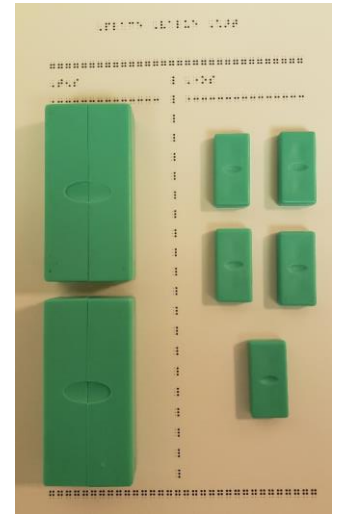
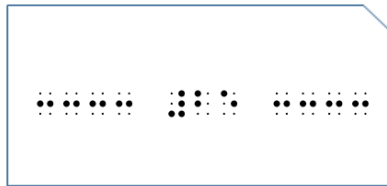
Materials

- Place Value Chart
- Flash cards labeled 1-99
- Digi-Blocks or Base Ten rods and unit cubes

Download
the place
value chart!

Steps

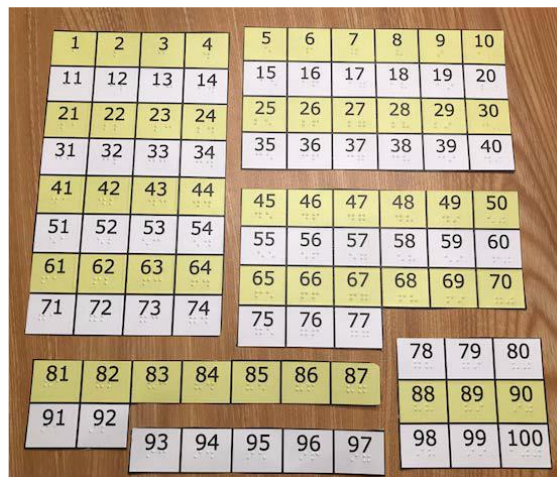
- Student shuffles flash cards
- Student draws a card and reads the number
- Student builds the number using the Place Value Chart



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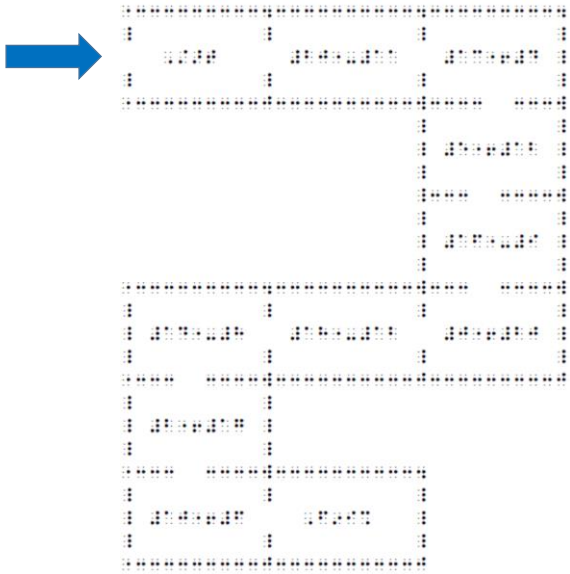
Kindergarten - Rebuild a Hundreds Chart



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First Grade – Maze



Download this maze!