

# **First Grade Module 5**

## **Understanding Place Value and**

### **Numbers to 120**

#### **Teacher Guide**

### **Prerequisite Skills**

- Ability to use rote counting number words in order to 100
- Ability to tactually identify the numbers 1-100
- Ability to represent a number 1-20 with concrete materials, including base ten blocks or Digi-Blocks
- Ability to write the numbers 1-20
- Ability to read and write the numbering of math problems from 1-20, including the punctuation indicator and period
- Ability to skip count by 10s to 100

### **Symbols and Concepts**

- Count aloud to 120 beginning with 1
- Count aloud to 120 beginning with different numbers
- Skip count by 10s to 120
- Represent numbers 1-120 with concrete materials, including base ten blocks or Digi-Blocks
- Numbers 21-120

### **Objectives**

The student will be able to:

- Count aloud to 120 beginning with 1
- Count aloud to 120 beginning with different numbers
- Using a Counting to 120 Chart, skip count by 10s to 120, beginning with 10
- Using a Counting to 120 Chart, skip count by 10s through the last row in the chart, beginning with different numbers
- Tactually identify and read the numbers from 101-120
- Locate numbers 1-120 on a braille chart
- Write the numbers 21-120
- Represent numbers 21-120 with concrete materials, including base ten blocks or Digi-Blocks

## **Other ECC Skills Addressed**

**Note:** ECC stands for Expanded Core Curriculum.

- Listening skills
- Concept development
- Following directions
- Organization
- Tactual discrimination
- Left-to-right tracking
- Scan and interpret tactile graphics used in math
- Hand positioning
- Light touch (as opposed to scrubbing)
- Recreation and leisure

## **Required Materials**

- Braillewriter
- Braille paper
- Index cards
- Work and/or sorting trays
- Timer
- Braille documents available within the curriculum
  - Student braille document
  - Flashcards
  - Counting to 120 Chart (choose 1 of 2 versions)
  - Place Value Chart 1
  - Place Value Chart 2
  - Four activity pages in G1-M5-What-Am-I-Activity.brf
- Grid board (either the Grid Board from the Hundreds Board and Manipulatives Kit from the American Printing House for the Blind [APH] or one that you create)
- Number cards from 1-100 that fit onto the grid board (either the Numbers Set from the APH Hundreds Board and Manipulatives Kit or a set of number cards that you create)
- Construction paper
- Glue or glue stick
- Scissors
- Base ten blocks (or Digi-Blocks)
- Baskets, bowls, or different containers
- Wikki Stix®

## Optional Materials

- Nonslip surface such as rubber shelf liner
- Small storage boxes
- Graphic art tape (or other materials needed to create a grid board)
- Number Board and/or Consumable Hundreds Chart from APH
- Braille documents available within the curriculum
  - Writing answers braille document
  - Answer key for the What Am I activity (also available in print)

## Teaching Tips

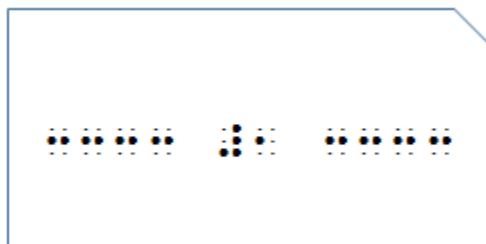
- Before opening any BRF files in Duxbury,
  - Go into the Global menu.
  - Select "**Formatted Braille Importer.**"
  - Select the box for "**Read formatted braille without interpretation**" at the top of the window. This will ensure that nothing is changed when opening the BRF files.
- All braille files in the curriculum are formatted with a 32-cell width by default. In this module, there are four 40-cell width files: Counting-to-120-Chart-40, Counting-to-120-Chart-Alt-40, G1-M5-Activity-40, and G1-M5-Activity-Answers-40.
- This module should be completed across multiple sessions.
- If the child is using a refreshable braille display, ensure that the child knows how to move to the next line of braille. Offer assistance as needed.
- If a student reads the symbols or equation incorrectly, tell the student the correct way to read the symbol or equation.
- If you do not have a Grid Board from APH, you can use 1-inch graph paper to create a Grid Board. Another option is to use graphic art tape and braille paper to create a Grid Board. If preferred, you can use flashcards, Velcro, and a large piece of construction paper to create a braille chart. Later in the module, a Counting to 120 Chart is used. Although the double-spaced chart is recommended for most first graders, a single-spaced alternative chart is also available in the curriculum.
- If the student stops counting before reaching 120, practice counting. There are multiple counting songs available online if you would like to incorporate music into the review of counting. Please note that by the end of kindergarten, a student should be able to count aloud to 120.
- Sorting trays often define the workspace. If you do not have sorting trays, you can use cafeteria type trays, cookie sheets, small cake pans, and/or small storage boxes.

- Using small storage boxes with labels can make it easier for a child to independently locate stored items such as number cards, etc.
- Base ten blocks and Digi-Blocks are often used in elementary general education classrooms. If you do not have base ten blocks or Digi-Blocks, request to borrow them from a classroom teacher.
- A two-compartment sorting tray, and then later in the module a three-compartment sorting tray, may be used instead of the place value charts. Label the compartments as ones, tens, and hundreds in braille. The sorting tray may assist students in easily keeping their units, rods, and flats in the correct columns.
- Using the brailewriter for some of the writing activities is encouraged as it facilitates the development of motor memory.
- 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.
- We maintain a list of [commercially available materials](#) that can be used to supplement instruction.

## Activities

### Activity 1

- You can either create flashcards with the numbers 101-120 using index cards or emboss the flashcards in the braille document entitled "G1-M5-Flashcards.brf":
- Cut out the upper right corner for easy identification of orientation. Make three flashcards for each number. If you are creating the flashcards, use lines of dots 2-5 before and after the number. For example, for numeral 1, type dots 2-5, dots 2-5, dots 2-5, dots 2-5, space, dots 3-4-5-6, dot 2, space, dots 2-5, dots 2-5, dots 2-5, dots 2-5.



- The flashcards will be used to practice reading numbers. Give the student one number card at a time. Make sure that it is oriented with the cut-out corner at the upper right.

## Activity 2

All information is provided in the teacher script.

## Activity 3

All information is provided in the teacher script.

## Activity 4

- In this activity, the student will rebuild a Counting to 120 Chart that has been cut into puzzle pieces. For each of these puzzles, you will need a large piece of construction paper, a glue stick, and a Counting to 120 Chart.
- For the first puzzle, cut the Counting to 120 Chart into 6 different pieces.
  - The first piece should include the numbers 1-20
  - The second piece should include the numbers 21-40.
  - The third piece should include the numbers 41-60
  - The fourth piece should include the numbers 61-80.
  - The fifth piece should include the numbers 81-100
  - The sixth piece should include the numbers 101-120.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

- Place all of the pieces into a work tray or large zippered plastic bag.
- Before the student begins to rebuild the chart, have them tell you what they know about the Counting to 120 Chart. If needed, briefly provide the Counting to 120 Chart as a refresher and motivator for beginning the activity.
- After the student can easily rebuild the Counting to 120 Chart, let the student glue the pieces in order on a large piece of construction paper.
- For the second puzzle, cut a second Counting to 120 Chart into 7 pieces. This time the pieces will be different sizes.
  - The first piece should contain the following numbers: 1-4, 11-14, 21-24, 31-34, 41-44, 51-54, 61-64, and 71-74.
  - The second piece should contain the following numbers: 5-10, 15-20, 25-30, and 35-40.
  - The third piece should contain the following numbers: 45-50, 55-60, 65-70, and 75-77.
  - The fourth piece should contain the following numbers: 78-80, 88-90, and 98-100.
  - The fifth piece should contain the following numbers: 81-87, 91-92, 101-102, and 111-112.
  - The sixth piece should contain the following numbers: 93-97, 103-106, 113-117.
  - The seventh piece should contain the following numbers: 107-110 and 118-120.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

- Place all of the pieces into a work tray or large zippered plastic bag.
- Print numbers can be added above the braille numbers so the two puzzles can easily be completed with the student and one of their friends. Another option is to have the student cut one of the Counting to 120 Chart into pieces and assist a friend in rebuilding the chart.

## **Activity 5**

- The student will learn how to build numbers to 30 using either base ten blocks or Digi-Blocks. These blocks will provide a spatial model of our base ten number system.
- Place the different types of blocks in different containers, baskets or bowls. If preferred, Digi-Blocks (a different type of base ten blocks that nest) can be used. If needed, allow the student to independently explore with the base ten blocks. It may also be helpful to re-introduce the words "unit" and "rod", and later in the module, introduce the word "flat".
- The student should be re-introduced to the Place Value Chart, and then later in the module introduced to Place Value Chart 2. It will provide a means for the student to organize their work as they explore the relationships among the blocks and determines how groups of blocks can be used to represent numbers. Encourage your student to use their hands to explore the Place Value Chart.
- A two-compartment sorting tray, and then later in the module a three-compartment sorting tray, may be used instead of the place value charts. Label the compartments as ones, tens, and hundreds in braille. The sorting tray may assist students in easily keeping their units, rods, and flats in the correct columns. If you do not have a sorting tray, use small storage boxes.
- If needed, model placing the blocks in the different columns using hand-under-hand technique.

## **Activity 6**

All information is provided in the teacher script.

## **Activity 7**

- The student will listen carefully and then write the numbers that they hear. This activity can be completed using the braillewriter and braille paper.
- Begin each time by asking the student to listen carefully as you read numbers. Afterwards they will write the numbers, symbols, or equations in braille. Remind the student to check their work.

- An answer key has been provided for this activity in the braille document entitled "G1-M5-Writing-Answers.brf".
- If your student is using a refreshable braille display for this activity, explain about the additional keys on the far right and far left.

## **Activity 8**

Activity 8 is the same as Activity 5. However, students will build numbers to 99 in this activity.

## **Activity 9**

All information is provided in the teacher script.

## **Activity 10**

All information is provided in the teacher script.

## **Activity 11**

All information is provided in the teacher script.

## **Activity 12**

Activity 12 is the same as Activity 5. However, students will build 3-digit numbers between 100 and 120 in this activity.

## **Activity 13**

Activity 13 is similar to Activity 7, but with a focus on writing a series of numbers instead of a single number.

## **Activity 14**

All information is provided in the teacher script.

## **Fun Facts**

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