

Kindergarten Module 2

Numbers 11-15 and General Omission Symbol

Teacher Guide

Prerequisite Skills

- Ability to use rote counting number words in order
- Ability to verbally count objects
- Ability to tactually identify the numbers 0-10
- Ability to write the numbers 0-10
- Ability to tactually count tally marks (1-10)
- Ability to write tally marks

Symbols and Concepts

- Counting to answer "how many"
- Numbers 11-15
- General omission symbol
- Patterns that incorporate the general omission symbol (introduced, but not assessed)
- Represent numbers 11-15 with concrete materials, including base ten blocks or Digi-Blocks
- "One more" and "one less" (introduced, but not assessed)

Objectives

The student will be able to:

- Tactually identify and read the numbers from 11-15
- Tactually identify the general omission symbol
- Use the braillewriter to write the numbers 11-15
- Use the braillewriter to write the general omission symbol
- Count to answer "how many" questions about as many as 15 objects arranged in a line or rectangular array
- Represent numbers 11-15 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
- Taking turns
- Hand positioning
- Light touch (as opposed to scrubbing)
- Career exploration
- Recreation and leisure

Required Materials

- Braillewriter
- Braille paper
- Index cards
- Timer
- Braille documents available within the curriculum
 - Student braille document
 - Place Value Chart 1
- Sorting tray with a 2-section divider
- Base ten blocks in different containers (or Digi-Blocks)
- The story "The Lost Button" from **"Frog and Toad Are Friends"** by Arnold Lobel
- Assortment of buttons or other small objects that are tactually distinctive
- Bag that will hold approximately 20 buttons

Optional Materials

- Nonslip surface such as rubber shelf liner
- Writing answers braille document
- Grease marker or crayon to circle or underline answers
- Small stickers
- Small storage boxes

Teaching Tips

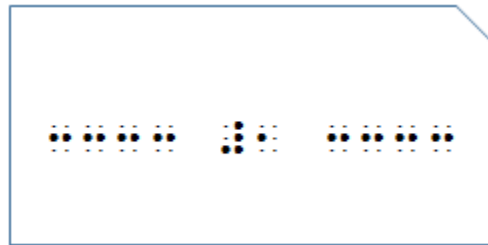
- Before opening any BRF files in Duxbury,
 - Go into the Global menu.
 - Select "**Formatted Braille Importer.**"
 - Select the box for "**Read formatted braille without interpretation**" at the top of the window. This will ensure that nothing is changed when opening the BRF files.
- All braille files in the curriculum are formatted with a 32-cell width by default.
- If the student has completed the Kindergarten Module 1 yet continues to experience difficulty reading and writing any of the numbers, you may use activities from the Pre-Kindergarten curriculum to teach and/or reinforce the numbers 0-10.
- 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.
- Sorting trays often define the workspace as well as assist students in determining which flashcards have already been read. 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 unit blocks, flashcards, etc.
- It may also help to place the flashcards and hard copy braille on a nonslip surface such as rubber shelf liner so they will not move as the student is reading.
- 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 may be used as the place value chart described below. Label the right compartment "ones" and the left compartment "tens" in braille. The sorting tray may assist students in easily keeping their units and rods in the correct columns.
- 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
- Using the braillewriter 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

- Create flashcards for the numbers 0-15 with the index cards. For this activity, flashcards with numbers 0-11 will be used. Cut out the upper right corner for easy identification of orientation. Make five flashcards for each number. 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.



- If you have number cards from the Pre-Kindergarten curriculum or Kindergarten Module 1, they can be used instead of creating new flashcards for 0-10.
- The flashcards will be used to practice reading numbers at first. Give the student one number card at a time. Make sure that it is oriented with the cut-out corner at the upper right.
- Later, your student will represent a number from 1-15 by making a set of tally marks. The student will need a braillewriter, braille paper, and flashcards for numbers 1-15. Have the student begin by shuffling the flashcards and then drawing a flashcard. They will read the number on the flashcard and then braille that many tally marks before pressing the line spacing key twice. If you would like, the student and a friend (or you, if no other students are present) can take turns drawing cards and brailing that many tally marks. If needed, students can use popsicle sticks, straws, stick pretzels etc. when practicing tally marks.

Activity 2

Activity 2 is the same as Activity 1. However, the numbers will range from 0-12.

Activity 3

Activity 3 is the same as Activity 1. However, the numbers will range from 0-13.

Activity 4

- The student will learn how to build numbers using either base ten blocks or Digi-Blocks. These blocks will provide a spatial model of our base ten number system.
- Place the units and rods in different containers, baskets or bowls. If preferred, Digi-Blocks (a different type of base ten blocks that nest) can be used. The student should begin by independently exploring with the base ten blocks and being introduced to the words "unit" and "rod".
- Before building any numbers, allow the student to explore and build with the blocks independently. Afterwards, have the student describe the different blocks to you. When discussing the rod, point out that it contains ridges. Then count how many squares are on each rod and explain that rods have ten squares.
- Now introduce the student to the place value chart. 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. Afterwards, ask the student to find the title and read it together. Then point out that there is a line going down the middle of the page. Have the student find the column headings at the top, and then help them read the headings. The column on the right is the ones, and the column on the left is tens.
- A two-compartment sorting tray may also be used as the place value chart. Label the right compartment "ones" and the left compartment "tens" in braille. The sorting tray may assist students in easily keeping their unit blocks and rods in the correct columns. If you do not have a two-compartment sorting tray, use two small storage boxes.
- Have the student begin by placing unit blocks, one at a time, in the ones column on the chart (or compartment labeled as "ones"). For each unit block that the student places, count the corresponding number of units placed (1, 2, 3, etc.). Continue this process until the student has accumulated 10 units. At this point have the student match their 10 units to 1 rod and trade those units for the rod. Then they will place the rod in the tens column. Then work with the student to build numbers, beginning with 11. At first, show the student how the numbers can be built in two ways.

- Depending on the child's response, the following questions may be needed.
 - Can you represent the number using units? If so, how many units do you need? If not, why not? As the student counts the unit blocks, assist them if needed in placing them in the ones column on the place value chart or "ones" compartment.
 - Can you represent a number using a rod and units? If so, how many of each kind do you need? If not, why not?
- If needed, model placing the rods in the tens column and the unit blocks in the ones column using hand-under-hand technique.

Activity 5

- Your student will listen carefully and then write the numbers 0-12 that they hear. This activity can be completed using the braillewriter and braille paper.
- Remind the student to space one time between the numbers and check their work. An answer key has been provided for this activity in the braille document entitled "GK-M2-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 6

All information is provided in the teacher script.

Activity 7

Activity 7 is the same as Activity 1. However, the numbers will range from 0-14.

Activity 8

Activity 8 is the same as Activity 1. However, the numbers will range from 0-15.

Activity 9

Activity 9 is the same as Activity 4, but concentrate on building the numbers 14-15.

Activity 10

- The student will count the number of tally marks on several lines of braille. They will write the number of tally marks on each line using the braillewriter.
- Remind the student to space one time between the numbers and check their work. An answer key has been provided for this activity in the braille document entitled "GK-M2-Writing-Answers.brf".

Activity 11

- The student will locate the general omission symbol in several lines of braille in one activity. Afterwards the student will identify and write the missing number that the general omission symbol is representing. If needed, provide the student with a hard copy of numbers or number flashcards in order to help them identify which number is missing. It may help to place the flashcards on a nonslip surface such as rubber shelf liner so they will not move as the student is reading the cards. You may also use a strip of sticky back Velcro on the back side of each flashcard and then arrange the flashcards on a long strip of Velcro on the student's desk.
- The student will write the missing number using the braillewriter and braille paper. Space one time between the numbers.

Activity 12

Activity 12 is the same as Activity 5. However, the numbers will range from 0-15.

Activity 13

- This activity is an adaptation of a lesson plan entitled "How Many Buttons?" on the Illuminations website sponsored by National Council of Teachers of Mathematics
<http://illuminations.nctm.org/Lesson.aspx?id=286>. Please note that only members of the National Council of Teachers of Mathematics can access this link.
- The student will need a small bag of tactually distinctive buttons (approximately 20-25), two-compartment sorting tray, number flashcards from 5-15, two index cards on which you have brailled "One More" and "One Less", braillewriter, and braille paper. Before you begin the activity, have the student select one button from the bag of buttons and place it in their hand. Have the student tell you about the button (or object) that they selected.

- Have the student keep holding the button as you read the story "The Lost Button" from **"Frog and Toad Are Friends"** by Arnold Lobel.
- If you do not have tactually distinctive buttons, use other small objects that are tactually distinctive such as a paper clip, a coin, a pencil eraser, etc. If you do not have a two-compartment sorting tray, use two small storage boxes.
- Do you think that the button (or object) in your hand could be the lost button? Why or why not?
- Now shuffle the flashcards with the numbers 5-15 and have the student draw one flashcard and read the number. As the student reads each number card, use a two-compartment sorting tray to separate which cards they have read and which cards they have not read.
- Then have the student make a set with that many buttons. It will make it easier to count the buttons if the student places them in a line or rectangular array. Assist the student in placing the buttons in a row if needed. Then count the buttons together. If the student made an error, encourage the student to correct their error by counting again and removing/adding buttons as needed in order to have the correct number of buttons in the set.
- Afterwards, have the student place the buttons back in the bag and draw another flashcard. Repeat the process several times or until all of the number flashcards have been drawn.
- Review or teach the meaning of the phrases "One More" and "One Less" before moving to the next part of the activity. Then make a set of buttons for the student to count. Have them count the buttons. Then have the student use the brailewriter and record how many are in the set. Assist the student as needed in determining how many will be in a set with one more. Continue to assist the student as needed in determining how many will be in a set with one less. Have the student record their answer each time.
- Then preview two new cards that read "One More" and "One Less". Have the student keep one of the cards and hand you the other one. Ask them to read the card that they have.
- Shuffle the number flashcards again and then ask the student to draw a flashcard. As the student reads each number card, have them use a sorting tray to separate which cards they have read and which cards they have not read. Then have the student write the number that is "One More" (or "One Less" depending on the flashcard that the child has).

- Repeat this process several times or until all of the number flashcards have been drawn. Then trade index cards with the words "One More" and "One Less" with the student. Ask the student to shuffle the number flashcards again and then draw a flashcard. As they read each number card, have them use a sorting tray to separate the cards that have been read and the cards that have not been read yet. Then have the student write the number that is "One More" (or "One Less" depending on the flashcard that the child now has).
- This activity can easily be completed with 2 or 3 students who read print or braille if preferred. If some of the players read print, add print to each of the flashcards and have them write their answers on paper with a pencil.

Fun Facts

Bicycle facts for kids. (n.d.). Science kids. Retrieved June 4, 2020, from <http://www.sciencekids.co.nz/sciencefacts/vehicles/bicycles.html>

Hamilton, J. (2015). *BMX*. A&D Xtreme.

Turnbull, S. (2016). *Mountain biking*. Smart Apple Media.