

# **Kindergarten Module 4**

## **Building Towards the Hundreds Chart**

### **Teacher Script Answer Key**

## **Introduction**

- All bracketed text should not be read aloud and is for reference only.
- The questions and answers have been numbered in this document to aid teachers and parents. However, the questions are not numbered the same way, if numbered at all, in the student documents.
- Throughout the script, it is assumed that the student is correct. The teacher may need to go off script if the student does not answer a question correctly.

## **Section 1: Building the Hundreds Chart to 10**

### **Section 1 Materials**

- 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 from 1-inch graph paper, graphic art tape, and/or braille paper)
- Number cards from 1-10 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 with a braillewriter and 1-inch pieces of index cards)
- Optional: hard copy of numbers in order, APH Number Board, or APH Consumable Hundreds Chart to use as a model, nonslip surface such as a rubber shelf liner or a sorting tray so numbers will not move as much
- Activity 1
  - Braillewriter
  - Braille paper
  - Grid Board with numbers 1-10 placed on it in order
  - Optional: GK-M4-Writing-Answers.brf

### **Section 1 Teacher Notes**

- There are multiple counting songs available online if you would like to incorporate music into the review of counting from 1-10.

- After the student explores the grid board, place the numbers 4 and 10 of the Numbers Set from the APH Hundreds Board and Manipulatives Kit onto the Grid Board in the location where they belong.
- If you do not have a Grid Board and Numbers Set from APH, you can use 1-inch graph paper to create a Grid Board. You can use a braillewriter and 1-inch pieces of index cards to create the number cards. Another option is to use the Feel 'n Peel Stickers: Nemeth Braille-Print Numbers from APH to create the number cards.
- If preferred, you can use graphic art tape and braille paper to create a Grid Board. Another option is to use flashcards, Velcro, and a large piece of construction paper to create the charts.
- If needed, provide a hard copy of numbers in order or the APH Number Board to use as a model. You may also use APH Consumable Hundreds Chart. It may also help to place the numbers on a nonslip surface such as a rubber shelf liner or a work tray so they will not move as much.
- Activity 1
  - Repeat saying each problem if needed.
  - Remind the student to move their fingers across the braille and check their work.

## **Section 1 Teacher Script**

On your mark, get set, go! It's time for an adventure on a scooter! Do you know what an adventure is? An adventure is a fun experience, and building toward the braille hundreds chart is lots of fun!

For the first part of our adventure, let's practice counting aloud, beginning with 1 and ending with 10. Count along with me!

1 2 3 4 5 6 7 8 9 10

That was super counting!

[Ensure that all numbers have been removed from the Grid Board before proceeding.]

Now let's use our Grid Board from the APH Hundreds Board and Manipulatives Kit to build a chart together, beginning with the numbers from 1 to 10. Use your hands to explore the Grid Board. What did you notice about the board?

Yes, the Grid Board is large and contains 10 rows. You are also correct that there are no numbers on the board yet!

Place your hands on the top row of the grid. A row goes from the left to the right. Move your hands across the row from left to right. Now count the squares on the top row. Yes, there are 10 squares on the first row. Now place your hands on the bottom row of the Grid Board. Move your hands across the bottom row from left to right. You got it!

The Grid Board also contains 10 columns. What, if anything, do you know about a column? A column goes from the top to the bottom. Place your hands on the column on the far left of the Grid Board. Move your hands down the column from top to bottom. Nice work! Now place your hands on the column on the far right of the Grid Board. Move your hands down the column from top to bottom. You got it!

Now I am going to place two numbers on the top row of the board. Scan the top row from left to right and find the two numbers. What numbers did you find?

Yes, the numbers are 4 and 10.

### **Practice 1.1**

Now, let's work together to place the rest of the numbers from 1 to 10 on the Grid Board.

Answer 1.1

The numbers 1 to 10 should be placed consecutively on the top row of the Grid Board.

1 2 3 4 5 6 7 8 9 10

### **Practice 1.2**

Now place your hand on top of my hand and listen as I touch each number as I read it. Now, you try it!

Answer 1.2

Numbers 1-10

1 2 3 4 5 6 7 8 9 10

### **Practice 1.3**

Help me remove the numbers so that you can try to build the chart to 10 by yourself. Once you finish building your chart, find the number 1 and then read the numbers from 1 to 10. Way to go, Nemeth champion!

**Answer 1.3**

The student should first place the numbers 1 to 10 consecutively on the top row of the Grid Board and then read them.

1 2 3 4 5 6 7 8 9 10

So, what happens when you move your fingers to the right on the chart? Do the numbers get bigger or smaller? You got it! The numbers get bigger. Each number is one more than the previous number. Put your fingers on 3. What is one more than 3? That's right! 4 is one more than 3.

Using the chart we just created, tell me what number is one more than 9. That's right! 10 is one more than 9. What is one more than 5? That is correct! 6 is one more than 5. Now give me an example about "one more".

Great work, math superstar! Now tell me what number is one more than 2. That's right! 3 is one more than 2. What number is one more than 6? You got it now! 7 is one more after 6.

So, what happens when you move your fingers to the left on the chart? Do the numbers get bigger or smaller? That's correct, math superstar! The numbers get smaller. Put your fingers on 3. What number is one less than 3? You got it! 2 is one less than 3. Now give me an example about "one less".

Using the chart, tell me what number is one less than 4. Way to go! 3 is one less than 4. Let's try another one. Tell me what number is one less than 9. That's right. 8 is one less than 9.

**Fun Fact 1**

A scooter is similar to a bicycle except that most scooters do not have pedals or a bicycle chain. The wheels are also much smaller.

**Activity 1**

You will need your braillewriter and braille paper for this activity. Listen as I read each math problem, and then use your chart to answer the question. You will number each problem, and then write your answer.

## Practice 1.4

1. What number is one less than 10?
2. What number is one more than 4?
3. What number is one less than 7?
4. What number is one more than 1?
5. What number is one less than 9?

Answer 1.4

The student should write the following problems in Nemeth Code:

Number 1, punctuation indicator, period, 9

Figure 1 shows four 3x3 dot patterns. Pattern (a) has 6 dots: (1,1), (1,2), (2,1), (2,2), (2,3), and (3,1). Pattern (b) has 7 dots: (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), and (3,2). Pattern (c) has 8 dots: (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), and (3,3). Pattern (d) has 9 dots: (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3), and (3,4).

Number 2, punctuation indicator, period, 5

Number 3, punctuation indicator, period, 6

Number 4, punctuation indicator, period, 2

Number 5, punctuation indicator, period, 8

The student can check their answers for Section 1 using page 1-2 of the writing answers document.

## Practice 1.5

Let's try a few more.

6. What number is one less than 3?
7. What number is one more than 6?
8. What number is one more than 2?
9. What number is one less than 8?
10. What number is one less than 5?

Answer 1.5

The student should write the following problems in Nemeth Code:

Number 6, punctuation indicator, period, 2

Number 7, punctuation indicator, period, 7

Figure 1 shows four 3x3 dot patterns labeled (a), (b), (c), and (d). Pattern (a) has 5 dots, pattern (b) has 6 dots, pattern (c) has 7 dots, and pattern (d) has 8 dots. Each pattern consists of black dots on a white background.

Number 8, punctuation indicator, period, 3

Figure 1 shows four 3x3 dot patterns. Pattern (a) has 6 dots, (b) has 7 dots, (c) has 8 dots, and (d) has 9 dots. The dots are arranged in various configurations within the 3x3 grid.

Number 9, punctuation indicator, period, 7

Figure 1 shows four 3x3 dot patterns labeled (a), (b), (c), and (d). Pattern (a) has 5 dots, (b) has 6 dots, (c) has 7 dots, and (d) has 8 dots. Each pattern consists of black dots on a white background.

Number 10, punctuation indicator, period, 4

## Section 2: Building the Hundreds Chart to 20

### Section 2 Materials

- Grid board (either the Grid Board from the Hundreds Board and Manipulatives Kit from APH or one that you create from 1-inch graph paper, graphic art tape, and/or braille paper)
- Number cards from 1-20 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 with a braillewriter and 1-inch pieces of index cards)
- Sorting tray with a 2-section divider
- Student Braille Document: GK-M4-Student-Materials.brf
- Optional: hard copy of numbers in order, APH Number Board, or APH Consumable Hundreds Chart to use as a model, nonslip surface such as a rubber shelf liner or a sorting tray so numbers will not move as much
- Activity 2: Grid Board with the numbers 1-20 placed on it in order

### Section 2 Teacher Notes

- There are multiple counting songs available online if you would like to incorporate music into the review of counting from 1-20.
- Have the student begin by locating the numbers on the chart and reading them. Then build the chart together with the student. At first, model placing a few of the numbers and explaining how you know where the numbers fit. Then encourage the student to place some of the numbers and explain how they know where the numbers fit.
- If necessary, model how to separate the remaining number cards into groups using the sorting tray. This will make it easier to build the chart to 20 on the Grid Board.
- It may be helpful to take notes about how quickly the student can place numbers and how well they can explain how they know where the numbers fit.
- Once you have completed building the chart together, have the student touch each number and read it. This process can easily be completed multiple times if the student requires additional practice.
- Activity 2
  - Offer assistance if the student has difficulty developing clues about their special number.
  - If desired, the student can develop clues for additional numbers.

## Section 2 Teacher Script

For the second part of our adventure, let's practice counting aloud, beginning with 1 and ending with 20. Count along with me!

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

That was excellent counting to 20!

[Ensure that all numbers except 3, 9, 12, and 17 have been removed from the Grid Board before beginning the section.]

Now let's use our Grid Board again to build a chart together. This time we will be building to 20. Which two rows do you think we will use and why?

That's right! We will be using the top two rows, similar to how we built to 10. Now I am going to place four numbers on the top two rows of the board. Scan the top row from left to right and find the numbers.

What numbers did you find? Yes, the numbers are 3 and 9. Now find the two numbers on the second row. What numbers did you find? That's right. The numbers are 12 and 17.

### Practice 2.1

Now let's work together to place the rest of the numbers from 1 to 20 on the Grid Board. Nice work building to 20! Place your hand on top of my hands and listen as I touch each number as I read it. Now, you try it!

Answer 2.1

Numbers 1-20

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

### Practice 2.2

Help me remove the numbers so that you can try to build the chart to 20 by yourself. Once you finish building your chart, find the number 1 and then read the numbers from 1 to 20. Way to go, Nemeth champion!



**Answer 2.2**

The student should place the numbers 1 to 20 consecutively on the top two rows of the Grid Board and then read them.

1 2 3 4 5 6 7 8 9 10  
11 12 13 14 15 16 17 18 19 20

**Fun Fact 2**

Some scooters have a motor, some scooters have pedals, and some scooters are pushed with a foot.

We can use our chart to answer questions about one more and one less.

Find the first line of braille on page 1. It is at the top of the page. Softly glide your fingers across the line.

It says Module 4. Now move your hands down to the second line of braille on the page. There is just one symbol on the second line. It is on the left side of the page.

⠠⠠

Do you remember that this symbol is called an opening Nemeth Code indicator? It tells us that we are going to read math or science. Dots 4-5-6 are in the first cell, and dots 1-4-6 are in the second cell.

**Practice 2.3**

Now read the problem about “one more” on the third line of braille.

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

**Answer 2.3**

Number 1: 12 general omission symbol

Did you remember that the full braille cell stands for a general omission symbol? What number is the general omission symbol standing for? You got it! 13 is one more than 12.

## Practice 2.4

Let's try another problem about "one more" on the fourth line of braille.

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠

Answer 2.4

Number 2: 9 general omission symbol

What number is the general omission symbol standing for? Excellent! 10 is one more than 9.

## Practice 2.5

Now read several more math problems about "one more", beginning in the middle of the page. Then use your chart and tell me what number the general omission symbol stands for. Good luck!

[Make sure the student is viewing the fifth line of braille on page 1.]

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠⠠ ⠠⠠

Answer 2.5

Number 3: 17 general omission symbol

The general omission symbol stands for 18.

## Practice 2.6

[Make sure the student is viewing the sixth line of braille on page 1.]

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠

Answer 2.6

Number 4: 6 general omission symbol

The general omission symbol stands for 7.

## Practice 2.7

[Make sure the student is viewing the seventh line of braille on page 1.]

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠⠠ ⠠⠠

Answer 2.7

Number 5: 15 general omission symbol

The general omission symbol stands for 16.

**Practice 2.8**

[Make sure the student is viewing the eighth line of braille on page 1.]

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠⠠ ⠠⠠

Answer 2.8

Number 6: 19 general omission symbol

The general omission symbol stands for 20.

**Practice 2.9**

[Make sure the student is viewing the last line of braille on page 1.]

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠⠠ ⠠⠠

Answer 2.9

Number 7: 13 general omission symbol

The general omission symbol stands for 14.

**Fun Fact 3**

Scooters that are powered by feet are sometimes called kick scooters.

**Practice 2.10**

Now let's try some math problems about "one less". Turn to page 2 and read the problem at the top of the page. Then use your chart to figure out what number the general omission symbol stands for.

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠

Answer 2.10

Number 8: 8 general omission symbol

Super work, Nemeth superstar! The general omission symbol is standing for the number that is "one less" than 8. What number is that? That's right! 7 is "one less" than 8.

## Practice 2.11

Read the problem on the second line of braille.

Answer 2.11

### Number 9: 19 general omission symbol

Now use your chart to figure out what number the general omission symbol stands for. 18 is "one less" than 19.

## Practice 2.12

Read the several more math problems about “one less”, beginning with the third line of braille. Then use your chart and tell me what number the general omission symbol stands for.

Answer 2.12

Number 10: 11 general omission symbol

The general omission symbol stands for 10.

### Practice 2.13

[Make sure the student is viewing the fourth line of braille on page 2.]

Answer 2.13

Number 11: 5 general omission symbol

The general omission symbol stands for 4.

## Practice 2.14

[Make sure the student is viewing the fifth line of braille on page 2.]

Answer 2.14

## Number 12: 16 general omission symbol

The general omission symbol stands for 15.

### Practice 2.15

[Make sure the student is viewing the sixth line of braille on page 2.]

Answer 2.15

### Number 13: 20 general omission symbol

The general omission symbol stands for 19.

## Practice 2.16

[Make sure the student is viewing the seventh line of braille on page 2.]

Answer 2.16

Number 14: 4 general omission symbol

The general omission symbol stands for 3.

### Practice 2.17

[Make sure the student is viewing the last line of braille on page 2.]

Answer 2.17

Number 15: 14 general omission symbol

The general omission symbol stands for 13.

## **Activity 2**

This activity is called "Guess My Special Number". The only thing you will need is your chart. Listen carefully to my clues so that you can guess my special number. Do you know what a clue is? It is information that gives you a hint about my special number.

Here we go! My special number is on the top row, and it is one more than 8. What is my special number?

That's right! My special number is 9. Let's try another. My special number is not on the top row, and it is one less than 15.

You got it! My special number is 14. Listen carefully because this time I will be sharing three clues about my number.

My special number is a two-digit number, and it is on the top line. It is one more than 9. Do you know what my special number is?

Excellent work, math detective! My special number is 10.

Now it is your turn to give me clues so that I can figure out your special number.

## **Fun Fact 4**

Kick scooters can travel about 4 miles per hour.

# **Section 3: Building the Hundreds Chart to 30**

## **Section 3 Materials**

- Student Braille Document: GK-M4-Student-Materials.brf
- Grid board (either the Grid Board from the Hundreds Board and Manipulatives Kit from APH or one that you create from 1-inch graph paper, graphic art tape, and/or braille paper)
- Number cards from 1-30 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 with a braillewriter and 1-inch pieces of index cards)

- Sorting tray with a 3-section divider
- Optional: hard copy of numbers in order, APH Number Board, or APH Consumable Hundreds Chart to use as a model, nonslip surface such as a rubber shelf liner or a sorting tray so numbers will not move as much
- Activity 3
  - Timer
  - Two flashcards for each number from 20-30 shuffled
- Activity 4: APH Grid Board with numbers 1-30 placed on it in order

### **Section 3 Teacher Notes**

- If the student stops counting before reaching 30, it may be helpful to practice counting to 30 before moving to the next section. If the student continues counting beyond 30, that will be helpful in the next section. By the end of kindergarten, a student should be able to count aloud to 100.
- Have the student begin by locating the numbers on the chart and reading them. Then build the chart together with the student. At first, model placing a few of the numbers and explaining how you know where the numbers fit. Then encourage the student to place some of the numbers and explain how they know where the numbers fit.
- If a student reads any number incorrectly, tell the student the correct way to read the number.
- If needed, provide a hard copy of numbers in order or the APH Number Board to use as a model. You may also use APH Consumable Hundreds Chart. It may also help to place the numbers on a nonslip surface such as a rubber shelf liner or a work tray so they will not move as much.
- If necessary, model how to separate the remaining number cards into groups using the sorting tray. This will make it easier to build the chart to 30 on the Grid Board.
- It may be helpful to take notes about how quickly the student can place numbers and how well they can explain how they know where the numbers fit.
- Once you have completed building the chart together, have the student touch each number and read it. This process can easily be completed multiple times if the student requires additional practice.

## Section 3 Teacher Script

How high can you count, math superstar? For the third part of our adventure, let's practice counting again, but this time don't stop at 20.

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

That was great counting! Before we use the Grid Board to build a chart to 30, let's practice reading numbers from 20 to 30 together.

Turn to page 3 and begin reading the numbers at the top of the page.

20	21	22	23
⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠
24	25	26	27
⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠
28	29	30	
⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	

That was excellent reading! Move your hands down to the fourth line of braille and let's read the numbers from 20 to 30 together once more.

20	21	22	23
⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠
24	25	26	27
⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠
28	29	30	
⠠⠠⠠⠠	⠠⠠⠠⠠	⠠⠠⠠⠠	

That was super reading, Nemeth all-star!





### Answer 3.2

29 17 16

28 3 27

20 7 30

19 10 21

23 30 18

That was super reading!

### Practice 3.3

Let's try a few more.

[Make sure the student is viewing the last five lines of braille on page 4.]

**Answer 3.3**

20 13 22

16 5 24

29 14 9

21 3 26

28 25 6

[Ensure that all numbers except 4, 7, 11, 16, 23, and 28 have been removed from the Grid Board before beginning proceeding.]

Now let's use our Grid Board again to build a chart together. This time we will be building to 30. We will be using the top three rows, similar to how we built charts to 10 and 20. Now I am going to place six numbers on the top three rows of the board. Scan the top row from left to right and find the numbers.

What numbers did you find? Yes, the numbers are 4 and 7. Now find the two numbers on the second row. What numbers did you find? That's right. The numbers are 11 and 16. What numbers did you find on the third row? Excellent work! The numbers are 23 and 28.

**Practice 3.4**

Now let's work together to place the rest of the numbers from 1 to 30 on the Grid Board. Afterwards read the numbers on the chart, beginning with 1. Way to go, Nemeth champion!

**Answer 3.4**

Hundreds chart numbers 1-30

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

**Practice 3.5**

Help me remove the numbers from the Grid Board so that you can build the chart to 30 by yourself. Afterwards read the numbers on the chart, beginning with 1. Ready, set, go!

Answer 3.5

The student should place the numbers 1 to 30 consecutively on the top three rows of the Grid Board and then read them:

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

### **Fun Fact 6**

Kick scooters are light-weight and unlike bicycles, most of them do not have a seat to sit on or pedals. They also fold up which makes them easy to store when you are not using them. Have you ridden on a kick scooter?

Let's review what happens when you move your fingers to the right on the chart. Do the numbers get bigger or smaller? That's correct, math superstar! The numbers get bigger.

We can use our chart to help us begin counting with any number. For example, if we want to count beginning with 7, we would use our fingers to find 7 and what number is next to it on the chart. Find 7 on the chart. What number is next to it? That's right. 8 is next to 7. We are ready to count beginning with 7. Stop counting when you reach 30.

[Hundreds chart numbers 7-30]

7 8 9 10 11 12 13 14 15 16 17 18 19  
20 21 22 23 24 25 26 27 28 29 30

That was excellent counting! Now let's use our chart to count beginning with 11. What is the first step? That is correct. Begin by finding 11 on the chart. What is the next step? Find the number that is next to 11. You got it! 12 is next to 11.

We are ready to use the chart and count beginning with 11.

[Hundreds chart numbers 11-30]

11 12 13 14 15 16 17 18 19 20  
21 22 23 24 25 26 27 28 29 30

## **Activity 4**

Use your chart and count beginning with the following numbers. You can stop counting each time when you reach 30.

### **Practice 3.6**

Count beginning with 23.

Answer 3.6

Hundreds chart numbers 23 to 30

23 24 25 26 27 28 29 30

### **Practice 3.7**

Next, count beginning with 17.

Answer 3.7

Hundreds chart numbers 17-30

17 18 19 20 21 22 23 24 25 26 27 28 29 30

### **Practice 3.8**

Then, count beginning with 9.

Answer 3.8

Hundreds chart numbers 9-30

9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

27 28 29 30

### **Practice 3.9**

Finally, count beginning with 26.

Answer 3.9

Hundreds chart numbers 26-30

26 27 28 29 30

That was great counting!

## Section 4: Building the Hundreds Chart to 50

### Section 4 Materials

- Student Braille Document: GK-M4-Student-Materials.brf
- Grid board (either the Grid Board from the Hundreds Board and Manipulatives Kit from the APH or one that you create from 1-inch graph paper, graphic art tape, and/or braille paper)
- Number cards from 1-50 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 with a braillewriter and 1-inch pieces of index cards)
- Sorting tray with a 5-section divider
- Optional: small stickers, grease marker or crayon
- Activity 5
  - Timer
  - Two flashcards for each number from 31-50 shuffled

### Section 4 Teacher Notes

- If the student stops counting before reaching 50, it may be helpful to practice counting to 50 before moving to the next section.
- If the student reads any number incorrectly, tell the student the correct way to read the number.
- If you are using hard copy braille, the student can do the following instead of saying "go, scooter, go":
  - Stomp a foot
  - Underline or circle the number with a grease marker or crayon
  - Place a small sticker on top of the number
- Have the student begin by locating the numbers on the chart and reading them. Then build the chart together with the student. At first, model placing a few of the numbers and explaining how you know where the numbers fit. Then encourage the student to place some of the numbers and explain how they know where the numbers fit.
- If needed, provide a hard copy of numbers in order or the APH Number Board to use as a model. You may also use APH Consumable Hundreds Chart. It may also help to place the numbers on a nonslip surface such as a rubber shelf liner or a work tray so they will not move as much.
- Once you have completed building the chart together, have the student touch each number and read it. This process can easily be completed multiple times if the student requires additional practice.

- Afterwards, have the student help you remove the numbers and then build the chart by themselves. It may be helpful to take notes about how quickly the student can place numbers and how well they can explain how they know where the numbers fit.
- If necessary, model how to separate the remaining number cards into groups using the sorting tray. This will make it easier to build the chart to 50 on the Grid Board.

## Section 4 Teacher Script

For the fourth part of the adventure, let's count to 50.

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

Before we use the Grid Board to build a chart to 50, let's practice reading numbers from 31 to 50 together. Turn to page 5 in your braille document and begin reading at the top of the page.





31	32	33	34
⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠
35	36	37	38
⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠
39	40	41	42
⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠
43	44	45	46
⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠
47	48	49	50
⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠	⠼⠠⠠⠠⠠

That was excellent reading! Move your hands to the next line of braille and read the numbers from 31 to 50 once more.

[Make sure the student is viewing the last five lines of braille on page 5.]





31      32      33      34

35                      36                      37                      38




                  

39	40	41	42

43                      44                      45                      46

47                      48                      49                      50

That was super reading, Nemeth all-star!

## Practice 4.1

Turn to page 6 and read just the numbers, beginning at the top of the page. All of the numbers will be from 31 to 40.

[Make sure the student is viewing the first five lines of braille on page 6.]



### Answer 4.1

34

47 35

34 36 31

39 30

32 39 33

## Practice 4.2

Now read the number at the beginning of each line and then find its match on the line of braille. Say "go, scooter, go" when you find the match!

[Make sure the student is viewing the last five lines of braille on page 6.]

### Answer 4.2

The student will read the number at the beginning of each line, find its match, and say "go, scooter, go" when they find the match.

Line 1: 31 (last item on answer choices)

Line 2: 37 (second item on answer choices)

Line 3: 33 (first item on answer choices)

Line 4: 38 (last item on answer choices)

Line 5: 24 (first item on answer choices)

Excellent matching, Nemeth super star!



### Answer 4.4

36 27 39

38 4 37

40 17 30

35 20 31

33 30 22

That was super reading!

## Practice 4.5

Turn to page 8 and let's try a few more.

[Make sure the student is viewing the first five lines of braille on page 8.]

Answer 4.5

20 19 32

38 5 30

2 34 39

31 34 37

17 40 36



You are a Nemeth champion!

[Ensure that all numbers except 6, 15, 22, 29, 34, 37, 41, and 45 have been removed from the Grid Board before beginning the section.]

Now let's use our Grid Board again to build a chart together. This time we will be building to 50. We will use the top five rows, similar to how we built charts to 10, 20, and 30. Now I am going to place eight numbers on the top five rows of the board. Scan the top row from left to right and find the number.

What number did you find? Yes, the number is 6. Now find the number on the second row. What number did you find? That's right. The number is 15. What two numbers did you find on the third row? Excellent work! The numbers on the third row are 22 and 29.

Now find the fourth row. What numbers did you find? That is correct! The numbers are 34 and 37. Now find the fifth row. What numbers did you find? That is correct. The numbers are 41 and 45. Now let's work together to place the rest of the numbers from 1 to 50 on the Grid Board.

Great work!

### **Practice 4.7**

Now read the numbers on the chart, beginning with 1. Way to go, Nemeth champion!

Answer 4.7

Hundreds chart numbers 1-50

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

Help me remove 5 numbers from each row of the Grid Board so that you can build the chart to 50 by yourself. You get to choose which numbers you remove.

You did it! Way to go!

## Practice 4.8

Now remove all of the numbers and try to build the chart to 50 by yourself.

Answer 4.8

The student should place the numbers 1 to 50 on the top five rows of the Grid Board:

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

## Fun Fact 8

Some scooters used in P.E. classes are low to the ground and include handles on the sides. They are designed so that you can sit on them and use both feet to push yourself.

# Section 5 Using the Hundreds Board to Solve Problems

## Section 5 Materials

- Grid board (either the Grid Board from the Hundreds Board and Manipulatives Kit from APH or one that you create from 1-inch graph paper, graphic art tape, and/or braille paper)
- Number cards from 1-50 placed on the grid board (either the Numbers Set from the APH Hundreds Board and Manipulatives Kit or a set of number cards that you create with a braillewriter and 1-inch pieces of index cards)
- Activities 6 and 7: Grid Board with numbers 1-50 placed on it in order

## Section 5 Teacher Notes

- When counting by 10s beginning with 10, have the student move their hands to the next row and count to 10 with you each time.
- When counting by 10s beginning with 5, have the student move their hands from left to right and count to 10 with you each time.

- Activity 6
  - Repeat saying each problem if needed.
  - Assist the student in locating the number on the chart as needed.
- Activity 7
  - Offer assistance if the student has difficulty developing clues about their special number.
  - If desired, the student can develop clues for additional numbers.

## **Section 5 Teacher Script**

On your mark, get set, go! For the fifth part of our adventure, let's practice using our chart to 50 to help us solve problems about "one more" and "one less". Tell me what number is one more than 33. That's right! 34 is one more than 33. What number is one more than 46? You got it now! 47 is one more after 46.

Let's try a couple more. What number is one more than 28? That is correct! 29 is one more than 28. What number is one more than 41? You got it! 42 is one more than 41. Now give me an example about "one more".

Now let's try some problems about "one less". What number is one less than 22? You got it! 21 is one less than 22. What number is one less than 48? You got it! 47 is one less than 48.

Let's try another one. What number is one less than 35? You got it! 34 is one less than 35. Now give me an example about "one less".

### **Activity 6**

You will not need any new materials for this activity. Listen carefully as I read each problem, and then use your chart to answer the questions aloud.

#### **Practice 5.1**

1. What number is one less than 49?

Answer 5.1

48

#### **Practice 5.2**

2. What number is one more than 16?

Answer 5.2

17

**Practice 5.3**

3. What number is one less than 37?

Answer 5.3

36

**Practice 5.4**

4. What number is one more than 29?

Answer 5.4

30

**Practice 5.5**

5. What number is one less than 34?

Answer 5.5

33

Let's try a few more.

**Practice 5.6**

6. What number is one less than 31?

Answer 5.6

30

**Practice 5.7**

7. What number is one more than 40?

Answer 5.7

41



**Practice 5.8**

8. What number is one more than 42?

Answer 5.8

43

**Practice 5.9**

9. What number is one less than 28?

Answer 5.9

27

**Practice 5.10**

10. What number is one less than 44?

Answer 5.10

43

That was excellent work! Now let's practice skip counting by 10s to 50 together.

10 20 30 40 50

Now let's use our chart to 50 as we skip count by 10s.

What pattern did you notice? Yes, all of the numbers for skip counting by 10s are in the same column. A column goes up and down.

What do you think will happen if I change the starting number to 5? Will the patterns for skip counting by 10s remain the same or will it change? Will all of the numbers be in the same column? How do you know?

Let's skip count by 10s beginning with 5, using our chart, and find out.

5 15 25 35 45

Notice how all of the numbers for skip counting by 10s beginning with 5 are in the same column again. The last digit for all of the numbers is 5.

Way to go! Now let's skip count by 10s using our column pattern. Begin with 3 and go down the column on the chart.

3 13 23 33 43

Let's try one more! Skip count by 10s beginning with 8, using our chart.

8 18 28 38 48

### **Activity 7**

Let's play "Guess My Special Number" again. The only thing you will need is your chart. Listen carefully to my clues so that you can guess my special number. Do you remember what a clue is? It is information that gives you a hint about my special number.

Here we go. My special number is not on the top row, and it is one more than 28. What is my number?

That's right! My special number is 29. Let's try another. My special number is ten more than 40.

You got it! My special number is 50. Listen carefully because this time I will be sharing two clues about my special number.

My number is a two-digit number. It is one more than 47. Do you know what my special number is?

Excellent work, math detective! My number is 48. Let's try one more. My special number is a two-digit number, and it is ten more than 15. What is my special number?

Way to go! My number is 25. Now it is your turn to give me clues so that I can figure out your special number.

## **Section 6: Review**

### **Section 6 Materials**

#### **Activity 8**

- Grid board (either the Grid Board from the Hundreds Board and Manipulatives Kit from APH or one that you create from 1-inch graph paper, graphic art tape, and/or braille paper)
- Number cards from 1-50 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 with a braillewriter and 1-inch pieces of index cards)
- Sorting tray with a 5-section divider

- Optional: hard copy of numbers in order, APH Number Board, or APH Consumable Hundreds Chart to use as a model, nonslip surface such as a rubber shelf liner or a sorting tray so numbers will not move as much

## **Section 6 Teacher Notes**

### **Activity 8**

- Pause at the end of each sentence to allow the student time to complete each step in the process.
- If the student seems to struggle, model the process for the student.
- This activity could easily be completed with peers as long as each student has a chart to 50.
- If necessary, model how to separate the number cards into groups using the sorting tray. This will make it easier to build the chart to 50 on the Grid Board.

## **Section 6 Teacher Script**

### **Activity 8**

#### **Practice 6.1**

Begin by using the Grid Board to create a chart to 50. Then see if you can follow the directions to my special number.

#### **Answer 6.1**

The student should place the numbers 1 to 50 on the top five rows of the Grid Board:

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

Let's practice together the first time.

Begin by finding the number 6. Next move down two rows. What is my number?

That is right! My number is 26.

Let's try another one together.

Begin by finding the number 50. Move up three rows. Now move four to the left. What is my number?

Perfect! My number is 16.

Now you try one by yourself. Here are the directions:

Begin by finding number 25. Move up one row. Now move to the right three numbers. Next move down three rows. What number are you on?

Excellent work with the 50s chart! My special number was 48.

Let's see if you can follow the directions to another special number.

Begin by finding number 38. Move up two rows. Now move to the left one number. Next move down one row. Finally move to the right two numbers. What is my special number?

You got it! My special number is 29.

Follow the directions to find my last special number.

Begin by finding number 43. Move up four rows. Now move to the left two numbers. Next move down two rows. Finally move to the right five numbers. What is my special number?

You got it! My special number is 26.

Now it is your turn to give me directions to a special number!

Now you are ready for the last train stop: module 4 check-up! Thank you for all of your hard work! You are a Nemeth all-star!