

# **Pre-Kindergarten Module 1**

## **Full Braille Cell and Numeric Indicator Teacher Script**

### **Introduction**

- All bracketed text should not be read aloud and is for reference only.
- The questions are not numbered in the student document. However, the questions and answers have been numbered in this document to aid teachers and parents.
- 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: Introduction to the Braille Cell**

#### **Section 1 Materials**

- Swing cell (or a half dozen muffin tin only if you don't have access to a swing cell)
- Student Braille Document: GPK-M1-Student-Materials.brf
- Activity 1: swing cell (Alternatives: Half dozen muffin tin with tennis balls or half dozen egg carton with plastic eggs or golf balls only if you don't have access to a swing cell)

#### **Section 1 Teacher Notes**

- It may be helpful to model locating each dot before the student independently locates each dot in the swing cell.
- Practice locating the dots multiple times if needed.

#### **Section 1 Teacher Script**

All aboard the Nemeth train! Do you know what sound a train makes? That's right! Choo choo!

Let's have fun learning about the braille cell by using a swing cell. Use your hands to explore the swing cell without any pegs. Tell me about the swing cell. What else do you feel on the swing cell?

Did you say that there are six holes in the swing cell? How many holes are on the left side? How many holes are on the right side? That's right. There are 3 holes on the left side and 3 holes on the right side!

Begin by placing your hands on the left side of the swing cell. Place 3 pegs on the left side. The top peg is called dot 1; the middle peg is called dot 2; and the bottom peg is called dot 3.

Find dot 1 first. That's right! It is the top dot on the left side. Find dot 2 now. You got it, train conductor! It is the middle dot on the left side. Find dot 3 now. Super work! It is the bottom dot on the left side.

Let's move to the right side of the swing cell. Place your hands on the right side of the swing cell. Place 3 pegs on the right side. The top peg is called dot 4; the middle peg is called dot 5; and the bottom peg is called dot 6.

Find dot 4 on the right side! Good job, train conductor! It is the top dot on the right side. Find dot 5 now. Way to go! It is the middle dot on the right side. Find dot 6 now. You got it! It is the bottom dot on the right side.

### **Fun Fact 1**

You can travel across the United States on a train.

### **Activity 1**

Now take the pegs out of the holes on the swing cell. Ready, set, go! Place a peg in each hole and tell me the dot number!

Your swing cell is like a big braille cell. There are 3 dots on the left side and 3 dots on the right side of a braille cell. A braille cell is smaller than a swing cell.

[Make sure the student is viewing the full braille cell at the top of page 1.]

A braille cell feels like this.



Did the braille cell feel smaller than a swing cell to you? A braille cell is just big enough for 6 dots to fit. Dots 1, 2, and 3 are on the left side, just like in the swing cell. Dot 1 is the top dot, dot 2 is the middle dot, and dot 3 is the bottom dot.

Dots 4, 5, and 6 are on the right side, just like in the swing cell. Dot 4 is the top dot, dot 5 is the middle dot, and dot 6 is the bottom dot. This is called a full braille cell because all six of the pegs are filling the swing cell.

## **Fun Fact 2**

Trains stop at the train station to load and unload passengers. Sometimes a train station is called a train depot.

# **Section 2: Hand Positioning and Tracking**

## **Section 2 Materials**

Student Braille Document: GPK-M1-Student-Materials.brf

## **Section 2 Teacher Notes**

- Introduce the student to which finger is the index finger.
- It may be helpful to have the student place their hands on top of your hands and model how to retrace a path.
- If you are using hard copy braille, tell the child to move their hands down to the next line after they retrace their path.

## **Section 2 Teacher Script**

Here are some helpful hints for reading braille. First, use both of your hands. Put your hands together so that your index fingers are touching. Second, slightly curve your fingers. Third, glide your fingertips lightly from left to right across the braille. Do you know what “lightly” means? It means softly like a butterfly lands on a flower or a snowflake lands on the ground.

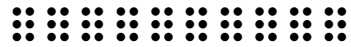
Now practice how you will read braille. Remember to put your hands together, curve your fingers, and glide your finger pads lightly across the braille.

Good work, train conductor!

### **Practice 2.1**

Now try reading a short line of braille cells with your fingers! Remember to glide your fingers lightly across the dots and say “choo choo” when you come to the end of the line!

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



### Answer 2.1

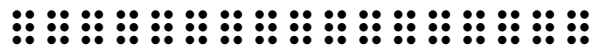
The student should use both hands with their index fingers touching each other. The student's fingers should be curved, and they should use a consistent light touch. They should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should say "choo choo".

### Practice 2.2

Let's try reading two more lines of braille. Say "next stop please" when you come to the end of the line each time! Then, retrace your path back to the first of the line and get ready to read the next line of braille.

[Make sure the student is viewing the third and fourth line of braille on page 1.]

Ready, set, go!



### Answer 2.2

Line 1: The student's fingers should be curved, and they should use a consistent light touch. They should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should say "next stop please". Then they should retrace the path and move their hands down to the next line.

Line 2: The student should begin in the first braille cell and move their hands from left to right. At the end of the line, they should say "next stop please".

### Practice 2.3

Sometimes not all of the dots are used in the cell. Try reading three lines of braille that only uses dots 2-5. Say "train depot" when you get to the end of the line. Don't forget to use both hands and retrace your path when you get to the end of the line!

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



### Answer 2.3

Line 1: The student's fingers should be curved, and they should use a consistent light touch. The student should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should say "train depot". Then they should retrace the path and move their hands down to the next line.

Line 2: The student should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should say "train depot". Then they should retrace the path and move their hands down to the next line.

Line 3: The student should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should say "train depot".

### Fun Fact 3

The first train tracks were made of wood, but today they are made of metal.

## Section 3: Reading the Full Braille Cell

## Section 3 Materials

Student Braille Document: GPK-M1-Student-Materials.brf

## Section 3 Teacher Script

What does a train whistle sound like? Wwwwwwwooooo!

## Practice 3.1

Now it is your turn to find the full braille cell in each line. Move your fingers lightly across the line of braille and make a sound like a train whistle when you find the full braille cell!

[Six lines of dots 2-5 on page 2 with a full braille cell inserted in each line.]

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### Answer 3.1

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The student will say "wwwwwwooooo" each time they point to a full braille cell at the following places:

- Line 1: toward the middle of the line
- Line 2: toward the beginning of the line
- Line 3: toward the end of the line
- Line 4: toward the beginning of the line
- Line 5: in the middle of the line
- Line 6: at the end of the line

### Practice 3.2

Train tickets please! Find a few more full braille cells. This time some of the lines will be short and some will be long. Can you find the full braille cell in each line?

[Six lines of dots 2-5 on page 3 with a full braille cell inserted in each line.]

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 ..... : .....

### Answer 3.2



The student should point to a full braille cell at the following places:

Line 1: at the end of the line

Line 2: toward the middle of the line

Line 3: at the beginning of the line

Line 4: at the end of the line.

Line 5: at the end of the line.

Line 6: toward the end of the line.

Way to go!

### Practice 3.3

This time the full braille cells are hiding on a train track. There may be more than 1 full braille cell on each line. See if you can find them all!

[Seven lines of dots 2-5 on page 4 with one or more full braille cells inserted in each line.]

### Answer 3.3



The student should point to a full braille cell at the following places:

Line 1: toward the middle of the line and at the end of the line

Line 2: at the beginning of the line and at the end of the line

Line 3: toward the end of the line

Line 4: toward the beginning of the line and toward the end of the line

Line 5: at the end of the line

Line 6: at the beginning of the line and toward the end of the line

Line 7: toward the beginning of the line, toward the middle of the line, and at the end of the line

### Practice 3.4

Count the number of full braille cells in each line of braille.

[Eight lines of dots 2-5 on page 5 with one or more full braille cells inserted in each line.]

Figure 1 shows a sequence of 10 diagrams illustrating the evolution of a 2D lattice of points. The lattice is 4x4. The points are represented by dots. The sequence shows the points moving from their initial positions to new positions, with some points being added or removed. The sequence is labeled 1 through 10.



### Answer 3.4

Line 1: 1

Line 2: 2

Line 3: 2

Line 4: 2

Line 5: 1

Line 6: 2

Line 7: 2

Line 8: 3

### Fun Fact 4

Trains are mostly powered by electricity or diesel today.

## Section 4: Writing the Full Braille Cell

## Section 4 Materials

- Braillewriter
- Braille paper
- Swing cell (or a half dozen muffin tin only if you don't have access to a swing cell) with pegs in all of the holes for the full braille cell
- Activity 2
  - Braillewriter
  - Braille paper

## Section 4 Teacher Script

You are a braille super star! Now let's have fun with writing on the braillewriter! Begin by going back to the swing cell. There are pegs in all of

the holes, and it is called a full braille cell. Show me where dots 1-6 are located.

Now open the swing cell. This is how the braille keys feel on a braillewriter. Dots 1, 2, and 3 are on the left side of the braillewriter too. In the middle of the braillewriter there is a space bar. We will be using this soon. You will place the index finger of your left hand on the dot 1 key. It is the key closest to the space bar. Your middle finger will be on the dot 2 key, and your ring finger will be on the dot 3 key.

Dots 4, 5, and 6 are on the right side of the braillewriter. You will place the index finger of your right hand on the dot 4 key. It is the key closest to the space bar on the right side. Your middle finger will be on the dot 5 key, and your ring finger will be on the dot 6 key.

Choo-choo-choo! Move to the braillewriter, and place your fingers on the keys. Check that your index, middle, and ring fingers are on the correct keys!

### **Practice 4.1**

Tickets please, train conductor! Now that your fingers are on the correct braille keys, use your index, middle, and ring fingers on the left and the right to make a full braille cell.

Answer 4.1



The student should have written a full braille cell.

Way to go! Remember to keep your wrist above the keys and your back straight! This will help you with your braille writing.

### **Practice 4.2**

Practice writing the full braille cell using the braillewriter. Use your thumb to space one time between your braille cells.

When you finish writing the full braille cell several times, move your fingers across the braille and check your work!

Answer 4.2

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The directions are to write the full braille cell several times, so there may be variation in how many times the full braille cell is written. Any length of line is considered correct.

## **Activity 2**

You will need a sheet of braille paper and your braillewriter. Use your braillewriter to create 5 lines of full braille cells for you, a teacher and/or a friend to read.

Make some of the lines long and some of the lines short. Use your thumb to space one time between your braille cells. Also push your line spacing key twice at the end of a line to double space your lines.

When you are finished, check your work and have fun reading the lines of braille that you created! Try to find the shortest line and then the longest line. Don't forget to let a teacher or friend read the braille too!

## **Fun Fact 5**

National Train Day was started by Amtrak in 2008.

# **Section 5: Reading the Numeric Indicator**

## **Section 5 Materials**

- Student Braille Document: GPK-M1-Student-Materials.brf
- Swing cell (or a half dozen muffin tin only if you don't have access to a swing cell)
- Activity 3
  - Sorting tray with a 2-section divider
  - Five flashcards each for the full braille cell and numeric indicator

## **Section 5 Teacher Script**

The numerals 1-10 begin with a numeric indicator.

[Make sure the student is viewing the numeric indicator at the top of page 6.]

It feels like this.



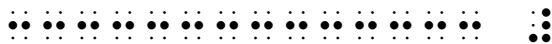
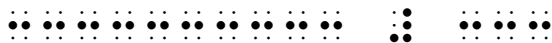
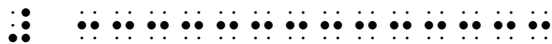
Notice that there is one dot at the bottom on the left and three dots on the right! The bottom dot on the left is dot 3, and the three dots on the right are 4-5-6. That means dots 3-4-5-6 make the numeric indicator! Chug-chug-chug-chug!

Now use the swing cell to make a numeric indicator. Begin by placing a peg in the bottom left hole and then place pegs in all three holes on the right. Congratulations train conductor! You made the numeric indicator.

## Practice 5.1

Now it is your turn to find the numeric indicator in each line of braille on the rest of this page. Move your fingers across the line of braille and make a sound like a train when you find the numeric indicator!

[Five lines of dots 2-5 on page 6 with a numeric indicator inserted in each line.]



### Answer 5.1



The student will make a sound like a train each time they point to a numeric indicator at the following places:

Line 1: toward the middle of the line

Line 2: at the beginning of the line

Line 3: toward the end of the line

Line 4: at the end of the line

Line 5: slightly after the middle of the line

Clickety clack along the rails! You found the numeric indicator in each line of braille.

## Practice 5.2

Now there will be more than one numeric indicator in each line of braille. Move your fingers across the line and make a sound like a train whistle when you find the numeric indicator!

[Six lines of dots 2-5 on page 7 with two or three numeric indicators inserted in each line.]

The figure consists of 10 diagrams arranged in two rows of five. Each diagram shows a pattern of black dots on a grid. The top row shows the initial pattern and its first four iterations. The bottom row shows the pattern after four more iterations, including a diagram with a large cluster of dots.

### Answer 5.2

The student will make a sound like a train each time they point to a numeric indicator at the following places:

Line 1: toward the beginning of the line and then slightly after the middle of the line

Line 2: at the beginning of the line and then at the end of the line

Line 3: toward the beginning of the line and then toward the end of the line

Line 4: toward the middle of the line and then at the end of the line

Line 5: at the beginning of the line, then toward the middle of the line, and finally at the end of the line

Line 6: at the beginning of the line and then toward the middle of the line

### **Fun Fact 6**

Trains can be powered by steam, diesel fuel, and electricity!

### **Activity 3**

Use your flashcards to practice reading the full braille cell and numeric indicator. Place all of the full braille cells in one stack and place all of the numeric indicators in another stack.

## **Section 6: Writing the Numeric Indicator**

### **Section 6 Materials**

- Braillewriter
- Braille paper
- Swing cell (or a half dozen muffin tin only if you don't have access to a swing cell) with pegs placed in dots 3-4-5-6 for the numeric indicator
- Activity 4
  - Braillewriter
  - Braille paper

### **Section 6 Teacher Script**

Now let's have fun with writing! Begin by going back to the swing cell. It contains the numeric indicator. Which dots make the numeric indicator? That's right! Dots 3-4-5-6 make the numeric indicator. Since it is closed, open the swing cell. This will help you know how to write a numeric indicator.

Do you remember which dots make the numeric indicator? That's right! The dots 3-4-5-6 make the numeric indicator.

### **Practice 6.1**

Write the numeric indicator. Use your ring finger on the left for dot 3 and your index, middle, and ring fingers on the right for dots 4-5-6!

Answer 6.1

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The student should have written a numeric indicator.

#### Activity 4

You will need a sheet of braille paper and your braillewriter!

#### Practice 6.2

Ready, set, go! Write the numeric indicator 5 times. Space one time between your numeric indicators. When you finish writing the numeric indicator 5 times, check your work.

Answer 6.2

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The student should have written a numeric indicator 5 times.

#### Practice 6.3

Now press your line spacing key twice and write a full braille cell 5 times. Space one time between your braille cells. When you finish writing a full braille cell 5 times, check your work.

Answer 6.3

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The student should have written a full braille cell 5 times.

## Section 7: Review

### Section 7 Materials

Student Braille Document: GPK-M1-Student-Materials.brf

### Section 7 Teacher Script

Time for reading again! Sometimes there is more or less space between braille lines.

## Practice 7.1

Read the five lines of braille. Stamp your foot when you get to the end of each line and then carefully retrace your path back to the beginning of the line. Afterwards move your hands lower on the page until you find the next line of braille. Good luck, train conductor!

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

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### Answer 7.1

Line 1: The student should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should stamp their foot. Then they should retrace the path and move their hands down to the next line. There is one blank line between the first and second line.

Line 2: The student should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should stamp their foot. Then they should retrace the path and move their hands down to the next line. There are two blank lines between the second and third line.

Line 3: The student should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should stamp their foot. Then they should retrace the path and move their hands down to the next line. There is one blank line between the third and fourth line.



Line 4: The student should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should stamp their foot. Then they should retrace the path and move their hands down to the next line. There are two blank lines between the fourth and fifth line.

Line 5: The student should begin in the first braille cell and move their hands from left to right. At the end of the line, the student should stamp their foot.

## **Practice 7.2**

Let's practice reading the full braille cell and numeric indicator.

[Make sure the student is viewing the two lines of braille on page 9.]

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Answer 7.2

Line 1: numeric indicator, full braille cell, numeric indicator, numeric indicator

Line 2: full braille cell, full braille cell, numeric indicator, full braille cell

Now you are ready for the next train stop: module 1 check-up! Thank you for all of your hard work!