Kindergarten Nemeth Braille Code Curriculum
Module 1: Review of Nemeth Numbers 0-10 and Tally Marks

It's time for a cross country bicycle ride! Before we begin our journey, find the first line of braille on the page. It is at the top of the page. Softly glide your fingers across the line.

It says Module 1. 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.

This 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.

Now we are ready to begin our bicycle ride! For the first leg of the trip, let's review the Nemeth numbers 0-5.

Note: *If the student has not been exposed to the Nemeth numbers 0-10 yet, use the Pre-Kindergarten curriculum in order to teach the numbers 0-10 before beginning the Kindergarten unit.*

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. (**Note**: *Make sure your student knows which finger is the index finger.*) 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.

Place your hands together and curve your fingers. Now find the beginning of the line of braille and follow along as I read the numbers 0 to 5 aloud.

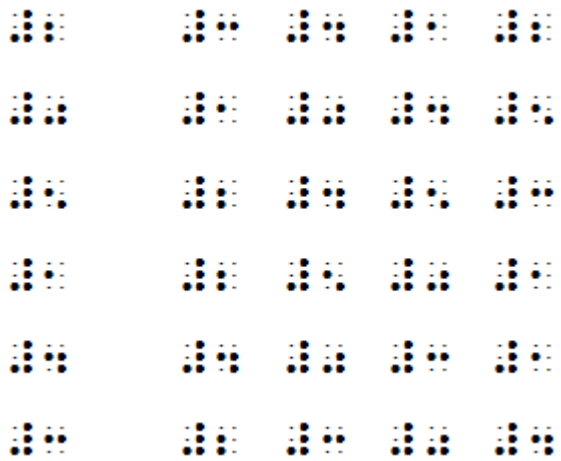
0 1 2 3 4 5

Now it is your turn. Read the numbers 0-5 in braille.

Read the numbers one more time.

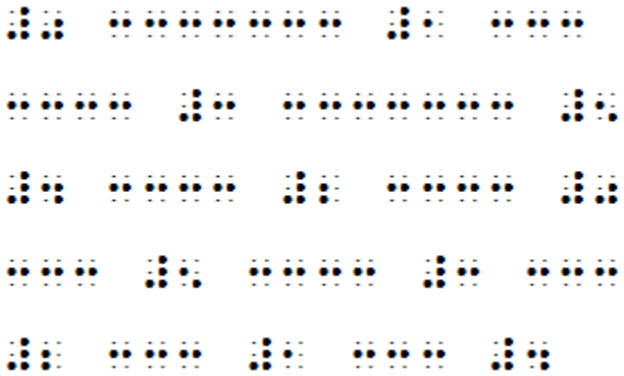
Now read the number at the beginning of each line and then find its match on the line of braille. Say "pedal faster" when you find the match!

Note: *Assist students in reading the braille numbers at the first of each line if needed. If the student would benefit from additional practice on specific numbers from 0-5, practice activities from Modules 2, 3, and 6 of the Pre-Kindergarten curriculum may be used to supplement instruction.*

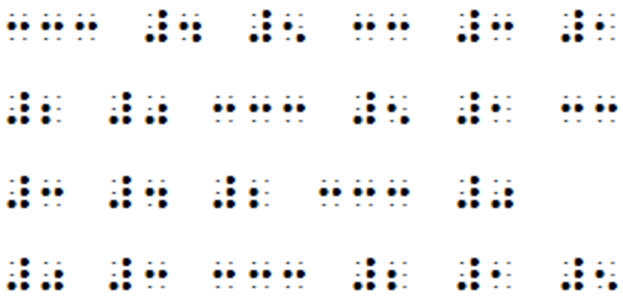


Fun fact: Bicycles are human-powered vehicles. They typically have a seat, pedals, handlebars, two wheels and a frame.

That was super reading, Nemeth all-star! Continue to the next lines of braille and read just the numbers.

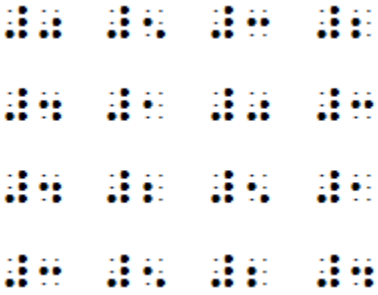


Reading braille numbers is lots of fun. On the next line of braille, there are even more numbers to read! Softly move your curved fingers across each line of braille and read only the numbers aloud. Ready, set, go!



Fun fact: There are more than 1 billion bicycles throughout the world. Bicycles are sometimes called bikes. They are used to travel from one place to another.

Let's practice reading numbers 0 to 5.



Activity time: Use your flash cards to practice reading the numbers 0-5. Once you can read all of the numbers correctly, go back and time how quickly you can read the numbers! Do you think you can read the numbers even quicker? If so, try one more time! You can do it!

Note: *If you have number cards from the Pre-Kindergarten curriculum, they can be used instead of creating new flash cards.*

You are a Nemeth super star! Now let's have fun with writing on the braillewriter! Dots 1, 2, and 3 are on the left side of the braillewriter. In the middle, there is a space bar. We will be using this soon.

Use your left hand for dots 1, 2, and 3. You will place the index finger 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. Now, use your right hand. You will place the index finger 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.

Place your fingers from both hands on the keys. Check that your index, middle, and ring fingers are on the correct keys! Now we are ready to go!

Numbers begin with a numeric indicator. Tell me which dots make the numeric indicator. That's right! Dots 3-4-5-6 make the numeric indicator. Use your ring finger on your left hand and all three fingers on your right hand to write the numeric indicator.

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

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

Now let's review the number 0. Do you remember how to braille the number 0? That's right. The number 0 begins with a numeric indicator in the first braille cell. It ends with dot 3-5-6 in the second braille cell. Use the ring finger on your left hand as well as the middle and ring fingers on your right hand. You try it now in the air and then on your braillewriter.

Practice writing the number 0 several times. Space one time between your numbers. When you finish writing the number 0 several times, move your fingers across the braille and check your work!

It is time to review the number 1. Tell me which dots make the number 1. That's right. The number 1 begins with a numeric indicator in the first braille cell. It ends with a dot 2 in the second braille cell. Use the middle finger on your left hand and none of the fingers on your right hand. You try it now in the air and then on your braillewriter.

Practice writing the number 1 several times. Space one time between your numbers. When you finish writing the number 1 several times, move your fingers across the braille and check your work!

Fun fact: Some people ride a bicycle for fun and exercise. Did you know that the energy required to ride a bicycle at a medium speed is almost the same as the energy required to walk?

Now let's review the number 2. Do you remember how to braille the number 2? That's right. The number 2 begins with a numeric indicator in the first braille cell. It ends with dots 2-3 in the second braille cell. Use the middle and ring fingers on your left hand and none of the fingers on your right hand. You try it now in the air and then on your braillewriter.

Practice writing the number 2 several times. Space one time between your numbers. When you finish writing the number 2 several times, move your fingers across the braille and check your work!

Activity time: You will need the Accessible Equation Editor and/or your braillewriter and braille paper for this activity. Listen as I read a number. Then write the number in braille. Space one time between the numbers.

Note: *An answer key in braille is provided at the top of page 1 of the document entitled "B3 Module 1_Answer Key for Writing Activities_K". If your student is using a refreshable braille display for this activity, explain about the additional keys on the far right and far left. If your student is using a QWERTY keyboard with the Accessible Equation Editor, it may be helpful to use tactile dots on the keys used for dot 1 and dot 4.*

0 1 0 2

Now move your fingers across the braille and check your work as I say the numbers again.

0 1 0 2

Press your line spacing key twice to move to the next line.

2 1 0 2 0 1

Now move your fingers across the braille and check your work as I say the numbers again.

2 1 0 2 0 1

Fun fact: Some people in big cities are hired to ride a bicycle to carry and deliver signed documents, original artwork and other items. They are called bike messengers.

Let's review the number 3. Do you remember how to braille the number 3? That's right. The number 3 begins with a numeric indicator in the first braille cell. It ends with dots 2-5 in the second braille cell. Use your middle finger on both hands. You try it now in the air and then on the Accessible Equation Editor and/or your braillewriter.

Practice writing the number 3 several times. Space one time between your numbers. When you finish writing the number 3 several times, move your fingers across the braille and check your work!

Now let's review the number 4. Do you remember how to braille the number 4? That's right. The number 4 begins with a numeric indicator in the first

braille cell. It ends with dots 2-5-6 in the second braille cell. Use the middle finger on your left hand as well as the middle and ring fingers on your right hand. You try it now in the air and then on the Accessible Equation Editor and/or your braillewriter.

Practice writing the number 4 several times. Space one time between your numbers. When you finish writing the number 4 several times, move your fingers across the braille and check your work!

Activity time: You will need the Accessible Equation Editor and/or your braillewriter and braille paper for this activity. Listen as I read a number. Then write the number in braille. Space one time between the numbers.

Note: *An answer key in braille is provided on page 1 of the document entitled "B3 Module 1_Answer Key for Writing Activities_K".*

3 4 2 0 1

Now move your fingers across the braille and check your work as I say the numbers again.

3 4 2 0 1

Press your line spacing key twice to move to the next line.

4 1 0 2 3 4

Now move your fingers across the braille and check your work as I say the numbers again.

4 1 0 2 3 4

Fun fact: Over the past 30 years, bicycle delivery services have become important, especially in the business district of cities. Bike messengers have earned a reputation for delivering items quickly because they can weave around the traffic.

It is time to review the number 5. Do you remember how to braille the number 5? That's right. The number 5 begins with a numeric indicator in the first braille cell. It ends with a dot 2-6 in the second braille cell. Use your middle finger on your left hand and your ring finger on your right hand. You try it now in the air and then on the Accessible Equation Editor and/or your braillewriter.

Practice writing the number 5 several times. Space one time between your numbers. When you finish writing the number 5 several times, move your fingers across the braille and check your work!

Activity time: You will need the Accessible Equation Editor and/or your braillewriter and braille paper for this activity. Listen as I read a number. Then write the number in braille. Space one time between the numbers.

Note: *An answer key in braille is provided on page 1 of the document entitled "B3 Module 1_Answer Key for Writing Activities_K".*

5 3 1 4 2 0

Now move your fingers across the braille and check your work as I say the numbers again.

5 3 1 4 2 0

Now press your line spacing key twice to move to the next line.

1 4 3 5 0 2

Now move your fingers across the braille and check your work as I say the numbers again.

1 4 3 5 0 2

Fun fact: Bicycles with a wheeled passenger cart are sometimes used as a taxi.

Activity time: You will need 6 bowls, index cards cut into halves, an assortment of small objects, and your braillewriter for this activity.

Note: *Before beginning the activity, explain that in this activity 0 means no objects.*

Begin by using the index cards and your braillewriter to create a set of number cards from 0-5. Then shuffle the cards. Draw a number card and place that many objects in the first bowl. Set the card aside. Continue the same with each of the remaining bowls. If you draw the number 0, you will leave the bowl empty.

Note: *If you have number cards from the Pre-Kindergarten curriculum, they can be used instead of creating new flash cards.*

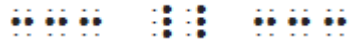
Afterwards arrange the bowls in a straight line and shuffle the number cards again. Then place each number card in front of the bowl that contains that many objects.

Note: *If needed, remind the student to place the number card 0 in front of the bowl that is empty.*

Way to go, math superstar! For the second leg of our cross country bicycle trip, let's explore tally marks in braille. Tally marks are a quick way of counting and keeping track of numbers, usually in groups of five. Sometimes tally marks are called hash marks.

A tally mark is made with dots 4-5-6. Softly guide your fingers across the line of braille. In the middle of the line, you will find a tally mark. There is a line of dots 2-5 before and after the tally mark.

On the next line, you will find two tally marks in the middle of the line. Once again, there is a line of dots 2-5 before and after the tally marks.

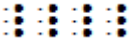


You will find five tally marks on the next line of braille. Try counting them.

Great work, cyclist! Count the number of tally marks on the next line.

That's right. There are 3 tally marks.

Let's try one more. How many tally marks are on the next line?

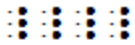


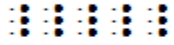
Great work, bicycle messenger! There are 4 tally marks.

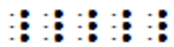
Fun fact: Some people competitively race on their bicycles. The Tour de France is the most famous cycling race in the world.

Activity time: Count the number of tally marks on each line. Then write the number using the Accessible Equation Editor and/or your braillewriter. Space one time between your answers.

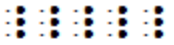
Note: *An answer key in braille is provided on page 2 of the document entitled "B3 Module 1_Answer Key for Writing Activities_K".*

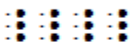


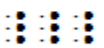


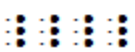


Press your line spacing key twice, and try some more.









Fun fact: Competitive cycling includes inside track cycling, mountain biking, BMX and longer outside events such as the Tour de France.

Let’s learn how to write a tally mark in braille. Place your fingers on the correct keys on either the Accessible Equation Editor or your braillewriter. Then use all three fingers on your right hand to write the tally mark. Practice writing the tally mark several times.

That was quick work, cyclist!

Activity time: You will need your braillewriter, braille paper, and flash cards for numbers 1-5. Shuffle your flash cards and then draw a flash card. Read the number on the flashcard and then braille that many tally marks before pressing the line spacing key twice.

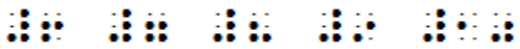
Note: *If you have number cards from the Pre-Kindergarten curriculum, they can be used instead of creating new flash cards.*

If you would like, you and a friend (or your teacher) can take turns drawing cards and brailling that many tally marks.

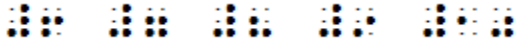
Let's continue our cross country bicycle ride! For the third leg of the cross country bicycle trip, we will review the Nemeth numbers 6-10.

Show me how you read braille with your hands and find the beginning of the line of braille. You are on the right bicycle path! Now follow along as I read the numbers 6-10 aloud.

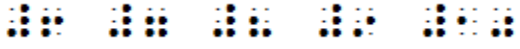
6 7 8 9 10



Now it is your turn. Read the numbers 6-10 in braille.



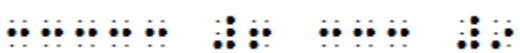
Read the numbers one more time.



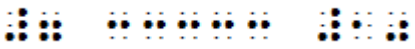
Let's practice finding numbers 6-10 in a line of braille.

Note: *Assist students in locating the specified number in each line of braille if needed. If the student would benefit from additional practice on specific numbers from 6-10, practice activities from Modules 4, 5, and 6 of the Pre-Kindergarten curriculum may be used to supplement instruction.*

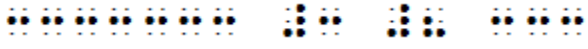
In the first line of braille, find the number 6.



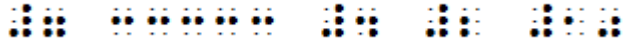
Find the number 10 in the next line of braille.



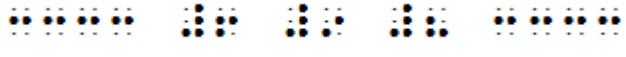
You are really moving now! Find the number 8.



We have 2 more numbers to find. On the next line, find the number 7.

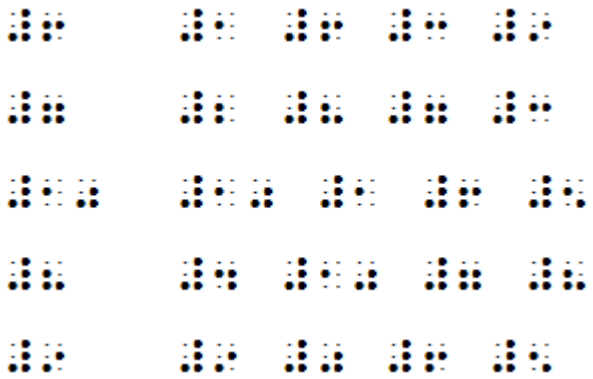


On the last line of braille, find the number 9.



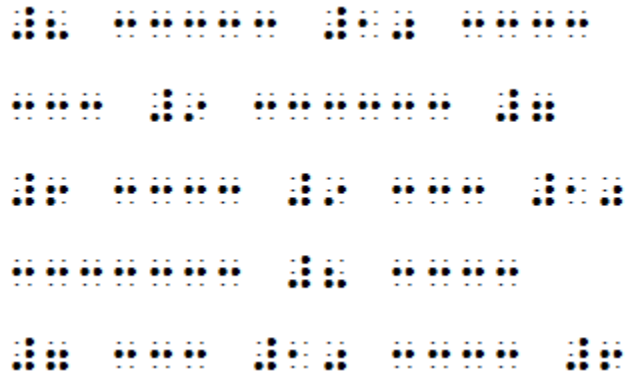
Ding, ding, ding goes the bicycle bell! Read the number at the beginning of each line and then find its match on the line of braille. Say "pedal faster" when you find the match!

Note: *If you are using hard copy braille, the student may also underline or circle the answer with a grease marker or crayon. Placing a small sticker on top of the answer is another option.*



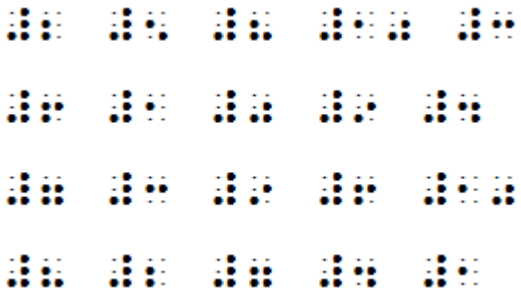
Fun fact: Some police officers in large towns and cities ride a bike on their patrol.

Continue to the next lines of braille and read just the numbers.



Let's practice reading numbers 6 to 10.

Now read numbers ranging from 0-10. Good luck, cyclist!



Activity time: Use your flash cards to practice reading the numbers 0-10. Once you can read all of the numbers correctly, go back and time how quickly you can read the numbers! Do you think you can read the numbers even quicker? If so, try one more time! You can do it!

Note: *If you have number cards from the Pre-Kindergarten curriculum, they can be used instead of creating new flash cards.*

Fun fact: Although unicycles have one wheel and tricycles have three wheels, they are sometimes still called bikes.

Activity time: You will need your flash cards from 1-10 and Unifix cubes or other cubes that can be snapped together. If you do not have the Unifix or snap cubes, you can also use MegaBlocks, Legos, or teddy bear manipulatives designed for young students.

Draw a card and then read the number. Then build an object using that number of Unifix or snap cubes. If you would like, you and a friend (or your teacher) can take turns drawing cards and building an object!

Activity time: We are going to play a game called BANG, but first we will need to make number flash cards. You will need your braillewriter, notecards cut into halves, and an empty container. First, braille each number from 0-10 three times on different notecards. Second, I will braille the word BANG on several notecards. Third, feel the word BANG. What did you notice about the word? Yes, it is longer than all of the numbers, and it begins with a capital word indicator.

Now shuffle the cards and place them into the empty container. If you would like, you can "decorate" the BANG container with foam stickers, Wikki sticks, buttons, or textured paper.

Note: *In order to save time, you may elect to use your number flash cards instead of creating new number flash cards.*

Instructions for playing BANG:

1. You will need 2 or more players for this game. Take turns reaching into the container and pulling out a flash card. If you read the number correctly, you get to keep the card. If you do not read the number correctly, the card goes back into the container.

2. Continue taking turns. If you pull out a BANG card, you must put your whole pile of cards back into the container!

3. At the end of 10 minutes, whoever has the most cards is the winner!

Note: *The length of time you play and ratio of BANG cards to flash cards is up to you.*

That was super reading and counting, math all-star! For the fourth leg of our cross country journey, we will explore how to group tally marks for easy counting. They are typically grouped into sets of five in both print and braille. The sets of five are separated by a space.

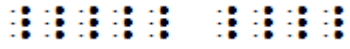
On the next line, you will find six tally marks. Try counting them. Notice how there is a group of five tally marks followed by a space and then one more tally mark.

On the next line, you will find ten tally marks. Try counting them. Notice how there is a group of five tally marks followed by a space. Then there is another group of five tally marks.

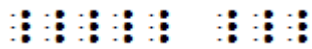
Great work, cyclist! Count the number of tally marks on the next line of braille.

That’s right. There are 7 tally marks.

Let’s try two more. How many tally marks are on the next line?



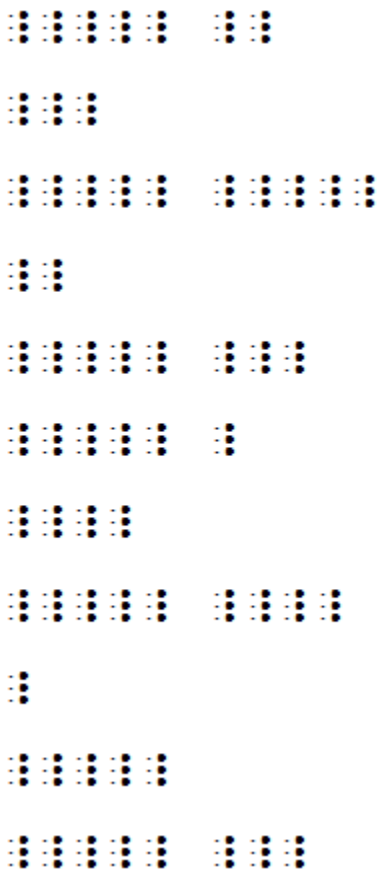
That is super work, cyclist! There are 9 tally marks. How many tally marks are on the next line?



You got it! There are 8 tally marks.

Fun fact: Tandem bicycles are designed to be ridden by more than one person.

Activity time: Count the number of tally marks on each line and then tell me how many tally marks you counted. Number of tally marks will range from 1 to 10.



That was super counting!

Activity time: Now let's practice writing tally marks in groups of 5 for numbers ranging from 6 to 10. You will need the Accessible Equation Editor and/or your braillewriter and braille paper for this activity. Listen as I read a number from 6 to 10. Then write a set of tally marks for each number in braille.

Note: *An answer key in braille is provided on page 2 of the document entitled "B3 Module 1_Answer Key for Writing Activities_K". The answer key is not provided in the student materials document.*

Let’s begin with the number 6. Don’t forget to braille the tally marks in groups of 5 with a space after each group. After you braille the tally marks, check your work and then press the line spacing key twice.

Now braille tally marks for the number 7. After you braille the tally marks, check your work and then press the line spacing key twice.

Now braille tally marks for the number 10.

Vroom vroom vroom! Keep up the super work and braille tally marks for the number 8.

It is time to braille tally marks for one more number. On your mark, get set, and go! The number is 9.

Activity time: You will need your braillewriter, braille paper, and flash cards for numbers 1-10. Shuffle your flash cards and then draw a flashcard. Read the number on the flashcard and then braille that many tally marks before pressing the line spacing key twice.

If you would like, you and a friend (or your teacher) can take turns drawing cards and brailling that many tally marks.

For the last leg of our cross country bicycle journey, let’s have fun with writing the numbers 6 to 10 on the braillewriter!

Tell me how to braille the number 6. That’s right. The number 6 begins with a numeric indicator in the first braille cell. It ends with dots 2-3-5 in the second braille cell. Use the middle and ring fingers on your left hand as well as the middle finger on your right hand. You try it now in the air and then on the Accessible Equation Editor and/or your braillewriter.

Practice writing the number 6 several times. Space one time between your numbers. When you finish writing the number 6 several times, move your fingers across the braille and check your work!

Fun fact: Tandem bicycles were invented more than 100 years ago!

Now let’s review the number 7. Do you remember which dots are used to braille the number 7? That’s right. The number 7 begins with a numeric indicator in the first braille cell. It ends with dots 2-3-5-6 in the second braille cell. Use the middle and ring fingers on your left hand and the middle and ring fingers on your right hand. You try it now in the air and then on your braillewriter.

Practice writing the number 7 several times. Space one time between your numbers. When you finish writing the number 7 several times, move your fingers across the braille and check your work!

It is time to move to the number 8. Tell me which dots are used to braille the number 8. That's right. The number 8 begins with a numeric indicator in the first braille cell. It ends with dots 2-3-6 in the second braille cell. Use the middle and ring fingers on your left hand as well as the ring finger on your right hand. You try it now in the air and then on the Accessible Equation Editor and/or your braillewriter.

Let's put the two cells together and practice writing the number 8 in Nemeth using the Accessible Equation Editor and/or your braillewriter. Space one time between your numbers. When you finish writing your numbers several times, move your fingers across the braille and check your work!

Fun fact: A cyclist can let pedestrians and other cyclists know that they are approaching by ringing their bicycle bell!

Activity time: You will need the Accessible Equation Editor and/or your braillewriter and braille paper for this activity. Listen as I read a number. Then write the number in braille. Space one time between the numbers.

Note: *An answer key in braille is provided at the bottom of page 2 of the document entitled "B3 Module 1_Answer Key for Writing Activities_K".*

6 7 8 6

Now move your fingers across the braille and check your work as I say the numbers again.

6 7 8 6

Press your line spacing key twice to move to the next line.

1 8 2 6 3 7

Now move your fingers across the braille and check your work as I say the numbers again.

1 8 2 6 3 7

Press your line spacing key twice to move to the next line.

5 8 6 0 7 4

Now move your fingers across the braille and check your work as I say the numbers again.

5 8 6 0 7 4

That was excellent work, cyclist! Just 2 more numbers to review! Do you remember how to braille the number 9? You got it. The number 9 begins with a numeric indicator in the first braille cell. It ends with dots 3-5 in the second braille cell. Use your ring finger on your left hand and your middle finger on your right hand. You try it now in the air and then on the Accessible Equation Editor and/or your braillewriter.

Practice writing the number 9 several times. Space one time between your numbers. When you finish writing the number 9 several times, move your fingers across the braille and check your work!

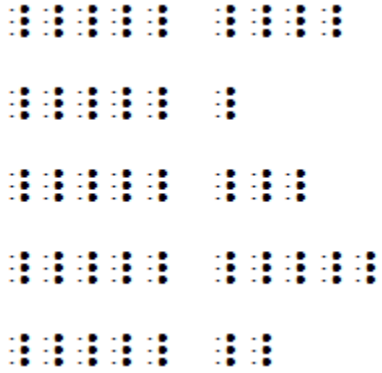
One last number to review! Do you remember how to braille the number 10? It begins with a numeric indicator in the first braille cell. Next, in the second braille cell, use your middle finger on your left hand and press the dot 2. To finish the number 10 in the third cell, use your ring finger on your left hand and your middle and ring fingers on your right hand.

Put the three cells together and practice writing the number 10 in Nemeth using the Accessible Equation Editor and/or your braillewriter. Space one time between your numbers. When you finish writing your numbers several times, move your fingers across the braille and check your work!

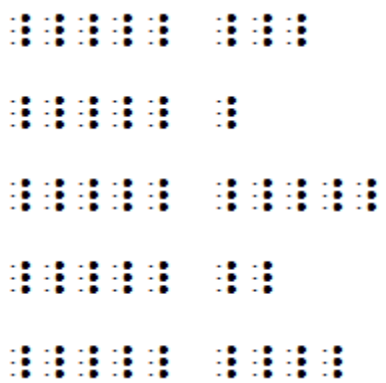
Fun fact: About 100 million bicycles are manufactured worldwide each year.

Activity time: Count the number of tally marks on each line. Then write the number using the Accessible Equation Editor and/or your braillewriter. Space one time between your answers.

Note: *An answer key in braille is provided at the at the top of page 3 of the document entitled "B3 Module 1_Answer Key for Writing Activities_K".*



Let's try some more.



Now move your hands down to the last line of braille on the page. There is just one symbol on this line. It is on the left side of the page.

This is called a Nemeth Code terminator. It tells us that we are done reading math or science. Dots 4-5-6 are in the first cell, and dots 1-5-6 are in the second cell.

Now you are ready for a pit stop: module 1 check-up! Thank you for all of your hard work! You are a Nemeth all-star!

Follow-up activity:

We are going to play a new game called FEED THE MONSTER. You will need your braillewriter, notecards cut into halves, braille paper, a sorting tray, a timer, and an empty container. First, braille each number from 0-10 three times on different notecards so that there is only one number on each card.

Note: *Previously made number cards may be used instead of making new cards if preferred.*

Second, decorate the empty container that will be the "monster". If you would like, you are welcome to name the monster. You can also "decorate" the monster with scented stickers, Wikki sticks, buttons, or textured paper. Now shuffle the deck of cards and pass out an equal number of cards to each player.

Note: *This would be a good time to use a sorting tray. Based on the child's preference, you can feed a dog, cat, or other animal instead of a monster.*

Instructions for playing FEED THE MONSTER:

1. You will need 2 or more players for this game. I will shuffle the deck of cards and pass out an equal number of cards to each player. Then I

will call out a number the monster is hungry for, and you will race to feed the number card to the monster before the timer goes off.

2. As you read each number card, use a sorting tray to separate which cards you have read and which cards you have not read. As soon as you find the correct number, try to be the first one to feed the monster. The monster can only eat the first correct number it is given. It is then ready for the next number. All of the players will be reading their own number cards at the same time. You will not be taking turns.

3. Every time you are the first to feed the monster, write a tally mark on a piece of braille paper to help you keep up with how many times you have fed the monster. Remember to write the tally marks in sets of five and leave a space between the sets.

4. At the end of 10 minutes, whoever has fed the monster the most cards is the winner!

Note: *This game can easily be played with students who read print or braille. If one of the players reads print, add print to each of the number flash cards. The length of time you play and the length of time to locate numbers is up to you.*