

Scenario 1: Amanda 1st grader

- Keep in mind child's SUCCESS

a. What concepts do you need to pre-teach Amanda?

- Shapes that are going to be taught, UEB math symbols for various fractions, the vocabulary words, braille for the different shapes. Help Amanda trace along the contours of objects that can be held in the hands. Label the shape. Present the same shapes in different sizes, textures, color, and width (thick/thin). The shape remains the same whether it is in plastic or metal. Then move on to larger objects of the same shapes in everyday environments. These can be explored with the hands while moving around the perimeter of the shape: tables are typically circles, rectangles, or squares. Container lids are round, square, or rectangular. Take a shape walk around the classroom. Introduce traffic signs. Yield signs are triangles, highway signs are rectangles, and stop signs are octagons. You could state things like, "That sign is yellow. It is shaped like a triangle." Make a real world connect - if you had a pink square piece of cake and your sister wanted half, what would that look like? Explore things that have shape in our lives to link math to real life. The cereal box is shaped like a rectangle, the Hershey candy bar is too! Braille the shapes' names next to the shapes.
- Draw using various tactile materials - peel, fold, stick. Proper finger and hand techniques to identify raised line shapes.
- Concepts: fractions/parts of whole, long/short side, size comparisons, equal/unequal.
- Assess Amanda's current level of understanding of this concept and ability to tactually and visually identify the smallest size of the shapes.

b. Are there adaptations to the worksheets that need to be made? If so, what are they?

- Enlarge the worksheets and make available with bold lines and color as well as tactile. Amanda uses her color preference to outline and color in the shapes.
- Braille with tactile lines using items such as: foam strips, foam shapes, APH graphing tape, Wikki Stix, puff paint, PIAF (Pictures in a Flash) on Swell Touch paper.
- Foam shapes can be given to her to glue or Velcro on to the name of the shapes that are brailled on the worksheet.

Also, the names of the shapes can be brailled out by TVI on strips of brailables and Amanda can peel and stick the name under the tactile shape. Another option would be to give Amanda actual shapes with index cards containing the name of shapes and a sorting tray with dividers to match the shapes to words.

- Classroom textbook available in braille so Amanda has experience with how shapes are presented in this format.
- c. What materials and/or tools, if any, will Amanda need to have available in order to complete these worksheets?
- Supply cut-out shapes that are tactually interesting such as corduroy, foam, felt, glitter, sandpaper, cardboard, ribbon, uncooked spaghetti noodles, string licorice.
 - Partitions - cut Wiki Stix to create different parts in each shape or a tactile drawing board with the shapes pre-drawn and have her draw the partitions.
 - Colorful foam shapes, Velcro or glue, braille copy of worksheet, brailables with brailled names of shapes cut into strips, graphing tape, shapes from APH geometry kit, sorting tray with dividers, index cards with names of the shapes written in braille.
 - Amanda would be able to create drawings of shapes using different tools. The inTact, APH Draftsman or TactileDoodle, or Geo Board could be used to create tactile drawings. Magnatab is a drawing board that uses magnets and a magnetic pen to create basic drawings. You could also use foam stickers or pipe cleaners.
 - Use objects placed against a contrasting background on the table so that she could easily see how the objects are divided up and then put back together.
 - Fractional parts to whole puzzles and Tactile Tangrams from APH.
 - Pre-teach concepts using:
 - Tactile Treasures: Math and Language Concepts for Young Children with Visual Impairments <http://www.aph.org> 1-08842-01
 - Binder I: Shape and Size Concepts, Shape Board <http://www.aph.org> 1-03710-01 (square, rectangle, triangle, circle, and pentagon)
 - Puzzle Form Board <http://www.aph.org> 1-03721-00
 - Math Builders <http://www.aph.org> Unit 1 Matching, Sorting, and Patterning 7-03560-00
 - Fractional Parts of Completely Set <http://www.aph.org> 1-03290-00
 - Geometry and Graphing Products from APH, Math Builders, Unit 6: Geometry Kit, Feel and Peel Point Symbols or

Stars, Feel and Peel Sheets: Carousel of Textures, Shape Board, Textured Sorting Circles and Shapes, Embossed Graph Sheets: 1 inch Squares, 10 x 10 Grid, Picture Maker Wheatley Tactile, sensational board – drawing shapes

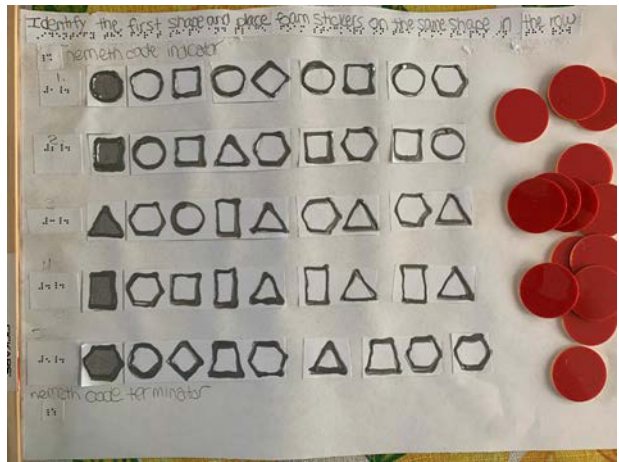
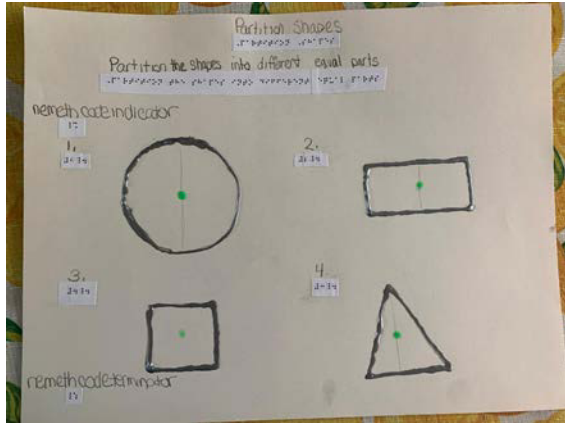
- d. Do you have any specific directions for Mr. Johnson to consider using during worksheet time? What are they?
- Encourage the teacher to use details, verbalize more than he might have planned to, and encourage working in teams or small groups at times to promote socialization.
 - Have Amanda identify the shapes verbally and use the provided cut Wiki Stix to have her partition the shapes. Depending on her reading abilities, I would ask him to give her verbal directions and have her follow along. I'd also inform him that the tactile drawing board is another tool he could use for her partitioning shapes if she was having some difficulties.
 - I would reinforce with Mr. Johnson what his role is and what the VI teacher's role is in serving Amanda. Having scheduled meetings with the classroom teacher helps to reinforce this and helps each teacher preview and discuss upcoming assignments and lessons. This helps to ensure that both teachers are on the same page and know what to expect from each other and the student. I would show Mr. Johnson the materials I plan to use for this lesson so it's not a surprise on the day he teaches. I would encourage Mr. Johnson to include Amanda in his group lesson by letting her hold the manipulatives as he explains what they are. After Amanda has her turn, she can pass the manipulative on to the next student. I would encourage Mr. Johnson to ask Amanda questions to check for her understanding and to check on her during the assignment as well.
 - Ask Mr. Johnson to deliver worksheets far enough in advance to be adapted, so that Amada can participate with class at the same time. Mr. Johnson needs to have manipulatives ready to pull out and hand to Amanda when he is introducing/reviewing shapes. He might review shapes during morning meeting when class discusses the days of the week, days of the month, and numbers. The VI teacher needs to provide adaptive aids (graphic line tape, Wikki Stix, tactile stickers, feel and peel stickers, and puffy paint) to Mr. Johnson so that he feels comfortable with using aids when the vision teacher is not around.
 - Mr. Johnson needs to check-in frequently with Amanda to make sure she is understanding the questions and manipulating materials correctly. He especially needs to

provide her assistance once she begins the problems that require dividing the shapes. He needs to realize that this process will likely take her longer than students using pencil and paper and provide extended time or adjustment to the number of questions depending on her IEP accommodations.

- Amanda can be the “teacher” and introduce her shapes to Mr. Johnson or the class. In this way, she wouldn’t be singled out, but would be using the same materials as everyone else in class.
- e. Please share anything else that you would do/share/encourage so that Amanda has success and develops understanding.
- I would encourage Mr. Johnson to keep using manipulatives with the entire class when possible, as to keep Amanda included in his instructions with the entire class. A suggestion I’d give for some student interactions would be to have students pair up or work in groups for some of those assignments with manipulatives so that Amanda will have time for socializing with her peers. Also, if he sees her having any difficulties, he should let me (the TVI) know and I could provide other materials to help aid her in grasping the shapes and partitions concepts.
 - I would prepare a Teacher Reference Sheet for the paraprofessional or classroom teacher, so they know what the alternate directions are, what materials will be used, and where they are located.
 - I want to work with Mr. Johnson and closely monitor how Amanda is progressing throughout the week. If possible, I would like to be present for the first lesson or two this week. It is possible that more review on the techniques, an adjustment to how the worksheets are produced, or a change in technique for Amanda to mark her answers may be necessary. I do not want Amanda overwhelmed by being expected to make a leap in both academic skills and tactile skills at the same time. Hopefully, I have done a good job preparing her gradually to have the tactile skills needed. If I have not, more heavy reliance on manipulatives may be necessary and possibly allowing Amanda to identify the raised line shape that is divided evenly from multiple choices to demonstrate the same knowledge as her peers (hopefully transitioning to one of the other dividing options I’ve mentioned later in the week).
 - I would firmly reinforce that if an aide is present, they are an extension of the teacher’s hands and should not be providing the instruction to the student.

- An additional concept that I would address with Amanda would be self-determination and helping her practice asking someone for help and also practicing how to let her peers know when she can do something by herself. Independence and Self-Advocacy are very important components of the ECC that Amanda will receive instruction on throughout school, and being able to let other people know that she can do something for herself and recognize when she does need to ask for help are very important skills for her.
- I would love to make it fun (and delicious) by making little "cheesecakes" with her using a Laughing Cow wheel of cheese (comes in a circular container divided into 8 wedges) and graham crackers (rectangular shape that can be divided into four smaller rectangles) since these are the two shapes they practiced partitioning the previous week. We could discuss "Why do we need to know how to divide shapes?" just to see what ideas she can come up with (such as sharing with others). We could top the cheesecakes with strawberries we cut both crosswise and lengthwise. She could compare the two different shapes that are created.
- I would show her my antique glass divided relish trays (circular and rectangular) and tell her about how each section typically holds a different food item. We could set up the cheesecake assembly by placing one food item in each section of a divided tray.
- Plan ahead - use your state's curriculum scope to learn which concepts 1st graders will be using so you can have materials prepared. For example, the TEKS (Texas Essential Knowledge and Skills) are specific to Texas but each state has a similar set of guidelines.
- A trip to the store with her family could offer the opportunity to explore shaped items divided into sections. A huge wheel of Parmesan cheese and the sections the store offers for sale might be interesting (especially when they look at the price tag!) And if they can locate toddler food dishes, those are often divided. Some stores have "brownie" pans that are divided into serving size squares or rectangles. An apple slicer could be safely explored. Pill boxes come in a variety of shapes and have different divisions.

Worksheet examples submitted by participants:



Scenario 2: Mrs. Jemez paraprofessional

- Keep in mind child's SUCCESS

a. How will you inform Mrs. Jemez about what you are teaching Holly without alienating her?

- Depending on the state, consider how paraprofessionals must be utilized according to IDEA and state guidance. Work with school administrators about allowing for more collaboration time between myself and Mrs. Jemez.
- Stress the importance of a good foundation in math skills by all students and point out how a good foundation in Braille and Nemeth Braille skills are especially important for our visually impaired students.
- Communicate that Mrs. Jemez is an integral part of the education process, and how much I appreciate that she has taken it upon herself to learn braille for the purpose of helping her student succeed. Also, success is dependent on making sure what she is conveying is accurate. Learning braille is like learning a new language and being self-taught, there may be subtleties of which she is not aware. I would reassure her that the errors she is making are a simple lack of training, and I would like to support her however I can, to make sure she is successful. I would avoid criticizing her for making mistakes and focus on encouraging her for trying to go the extra mile for Holly, as well as let her know that we have to take great care when making Braille because having the wrong dots will change the entire meaning and confuse Holly. I'd make myself available to her when she had questions or wanted to learn how to do something.

b. What practices can you put in place so that you can oversee the materials Mrs. Jemez is preparing for Holly when you are not there?

- Set up a material preparation schedule that would allow for me to review and edit any materials she prepares for errors. I would do this in a manner that would allow for Mrs. Jemez to learn from common mistakes she makes and provide follow up resources for her if needed. It is important that this feels like a supportive practice, and not a critical one of Mrs. Jemez's work.
- Meet with Mrs. Jemez to discuss the math plan for Holly. I would create objective sheets for each math topic and go over them with Mrs. Jemez.
- Ask for Mrs. Jemez to email or call me with any questions she might have. I would also create a running checklist of the Nemeth code symbols that Holly is using and will be

introduced to as a record of where Holly is with her math symbols.

- It might be helpful to create exercises or worksheets that both she and the student could do to help reinforce braille contractions and rules. Since her student is a beginning braille reader, it might be a fun activity for them to do together. I would ask Mrs. Jemez to create flash cards for the student, which I would review before using, that coordinate with the lessons being taught in class. This would help reinforce the correct way to braille for both. And, I would make sure that Mrs. Jemez has reference materials like a UEB Braille chart and a UEB Rulebook.
 - Share the possibilities and opportunities of becoming a brailist with Mrs. Jemez. Not only would this be a useful piece of information, but it would put her in touch with a brailist for any additional questions about their duties and responsibilities.
 - I would ask Mrs. Jemez to take a picture of any assignments she would use with Holly and text them to me. This way I could check them no matter where I was and provide immediate feedback. I would also provide Mrs. Jemez with a binder of all the basic symbols, along with the dot numbers to have as a reference.
 - There is another angle that would need to be investigated to make this the most successful for everyone. The teacher would have to be included in the process by reminding them that the classwork, homework, and tests would need to be into the vision department 2-3 weeks prior to being used within the classroom. This would give the vision teacher a chance to proofread the material that the aide created during the "training period", allowing time for mistakes to be found and corrected before the material is given to the student.
 - I would ask that Mrs. Jemez run all materials past me first. I would get her set up with Duxbury or another braille software program where she can use 6-key entry and email her braille documents to me for proofing before giving them to the student. Additionally, I would give her a braille document containing the symbols for each new chapter that she can use as a reference.
- c. You know of an upcoming workshop being offered by your state AER that will have several sessions appropriate for Mrs. Jemez including one about Nemeth Code and one about early math concepts. What will you share with administrators to help them understand the importance of allowing Mrs. Jemez to attend the AER conference. Your district typically does not provide this type of opportunity for paraeducators.

- Mrs. Jemez is working diligently and independently to search for online resources and training to support Holly; however, due to the specialized nature of teaching math and using Nemeth with students who are visually impaired, it is crucial that the resources used are accurate. Unfortunately for Mrs. Jemez, due to the lack of my availability to train her, upon reviewing her work, the resources she has been using have been inadequate. This is through no fault of her own, as she is clearly working to the best of her ability and wants to support Holly! We must seek other, more reliable professional development opportunities to ensure Holly receives the support she needs to be successful.
 - A district or school should train paraprofessionals in appropriate reading, writing, math, and social/behavioral strategies to ensure paraprofessionals are able to successfully support students with disabilities under the direct supervision of a licensed special education teacher.
 - Give examples of what might be taught incorrectly due to lack of training of the paraeducator. Inform the district that you, the TVI, would be attending the workshop as well and you would be able to assist the paraeducator after the workshop to make sure that she understands the importance of teaching Nemeth correctly.
 - School districts acknowledge the need for sign-language interpreters for hearing impaired students but an understanding of the value of support personnel who can provide a visually impaired student with the same academic experiences as their sighted peers, has been in my experience lacking. And with resources spread thinner each year, a trained paraprofessional is a simple but highly effective addition to the educational team. I would advocate for support, time and/or financial, from the school district for Mrs. Jemez to participate in programs and workshops, when available. Hadley School for the Blind and the National Federation of the Blind both offer online classes that provide opportunities for clarification and feedback. Some states have online classes with teachers who meet once a week for 16 weeks to provide real-time instruction in literary UEB. And regular workshops like the ones from AER, will help keep Mrs. Jemez's skills up-to-date and provide her the opportunity to connect with others like her.
- d. The work done by Mrs. Jemez supports the TVI providing services once a week, but being sure that she is adequately trained is critical to Holly's learning process. You get permission to meet with Mrs. Jemez 1:1 for an hour to give her an in-

service on Nemeth Code. Prepare the materials you will share with Mrs. Jemez during your session together.

- 30 min--Professional References:
Expectations for our working relationship:
 - Explain my role as TSVI
 - Share her role as paraprofessional
 - Communicate daily via email or phone regarding assignments/class materials; maintain a digital log; cc classroom teacher on EVERYTHING!
 - Email me digital copies of prepared worksheets, etc. or send pictures of hard copy braille (dust with blush so I am able to see the dots!)
 - Please feel free to ask ANY questions or share ideas! We are a team!
 - Review data collection procedures and forms as needed
<https://www.aph.org/product/nemeth-code-reference-sheet-for-basic-mathematics-print/>
 - Review identified areas of need in her skillset—gently point out errors and where she can find accurate information about symbols!
<http://www.brailleauthority.org/ueb/nemeth-guidance/Nemeth%20Guidance%20Final.pdf>
- 30 min--Student Materials and Manipulatives:
Briefly review and determine if more support is needed on: Perkins braille, slate and stylus, tactile stickers, Wiki Stix, counting bears, coins, various baskets for sorting/separating found at:
<https://www.aph.org/product/jumbo-work-play-tray/>,
<https://www.aph.org/product/small-work-play-tray-black-17-x-11-75-inches/>
- Introduce Mrs. Jemez to the available APH products: APH Personal Calendar, Hundreds Chart, Cranmer abacus, Addition and Subtraction table, Feel 'n Peel Stickers: Nemeth numbers and Basic Math Symbols, Math Drill Cards (addition and subtraction), Quick Pick Addition and Subtraction, Tactile Five and Ten Frames, Draftsman, Tactile Doodle, Flashcards with Nemeth Symbols, as well as a Chart of Nemeth Symbols.
- During this collaboration time, it would be imperative to convey the importance of error free braille. Let Mrs. Jemez know that if a beginning braille reader is introduced to a braille symbol that is misshaped or identified with the wrong term it could lead to confusion in the future. The example I could offer is of a print reader being introduced

to the number 2 as a 5. They have a similar shape, however it's more difficult to re-teach it correctly than to spend the time making sure everyone understands the proper shape in the beginning.

- Also give her: Deck of cards with Nemeth Numbers on them, Math Window, rubber mat so materials won't slide around, and Braille UNO cards.
- I think overall the key is communication. With technology you could always communicate via video or text to make sure that the materials are correct and let her know that she can ask you any question or seek guidance when necessary. Perhaps you could get permission to continue the lessons on a bi-monthly basis.
- I would introduce her to the Texas School for the Blind and Visually Impaired website and courses (<https://www.tsbvi.edu/course-listing#nemethdescription>) and the APH Nemeth tutorial (<https://nemeth.aphtech.org/>). These would give her more training opportunities to reinforce her skills learned at the AER conference. I would try to provide her with reputable resources so that when she does have questions, she can refer to these resources with confidence that they will be accurate.
- Other resources include: the Pearson Symbol Library at: <http://accessibility.pearson.com/nemethdatabase/>, various Nemeth Quick Reference Charts, and the publication: *The Role of the Paraeducator in the Education of Blind Children* <https://www.actionfund.org/sites/www.actionfund.org/files/images/nfb/publications/fr/fr7/frsp0211.htm>

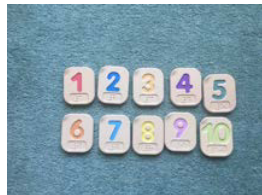
Scenario 3: Jose 6 Mall

- Keep in mind child's SUCCESS

- a. A list of ideas Gabby can do that will allow Jose to practice counting, shapes, money skills, and positional concepts.
 - You point out ways she can have Jose "see" math in things they encounter, such as the play space has a circular tunnel and his soda cup has a circular top; the parking spaces are rectangles; the trash cans outside are circles; there are 2 sliding doors that are rectangles.
 - Give all the children some money (it doesn't have to be a lot and it can be loose change). Make sure you tell them how much they are starting with. Ask them if it is a lot of money or a little bit of money (These questions generally give good answers!). Ask them if there is something they want to buy and if the amount they have will be enough (again, kids generally give good answers). This money can be spent anywhere, but sometimes the vending machines (i.e. candy, food/drink, or the little toy dispensers) are good cheap options. This could also cover other areas such as independent skills, money concepts, and self-determination.
 - The food court generally has tons of options for spending money, counting, shapes and positional concepts (i.e. A slice of pizza is \$2; it is shaped like a rectangle or a triangle; it has pepperonis that are shaped like circles; we lift it off our plate to put it in our mouth. We have a 10-piece serving of chicken nuggets; what shape are our French fries?, etc.).
 - An overall layout of a mall could have stores in lots of directions, but sometimes mapping out what stores will be visited, helps kids with concepts of time. If young children know that mom needs to shop at 3 stores, then they can know roughly how much longer they will be there (subjective of course)! This can also be mapped out (i.e. We started at Old Navy and we need to go 5 stores down and to the left to be at the OshKosh store). Jose could count the number of stores (often differentiated by sound, air conditioning and/or smell).
 - I would also reassure mom, that even though this seems like a lot of ideas, all the kids can learn from these concepts. But most importantly, have fun with it. It doesn't have to be strict, there are no right or wrong answers necessarily and if it doesn't happen for the entire time they are at the mall, it is ok.
 - In the car on the way to the mall, have each of the 3 children take turns pulling a number tile (see pictures 1

and 2) out of a shopping bag, count the leaves on the back of the tile, and read the number out loud. Have them say the phrase: "I went on a shopping trip and bought (fill in the number) (fill in an object). For example, if Jose picks a 7 tile, he would count the leaves, read the number, and then say "7." Then he would say, "I went on a shopping trip and bought 7 bags of candy." Then the next person would pull a tile, count the leaves, read the number and say his/her number. Then they would repeat what Jose said and add their own objects that they would buy. **Jose and I have played this game at school, so he can help explain the directions.** You can keep this game in the car to use any time you go on a trip.

Picture 1



Picture 2

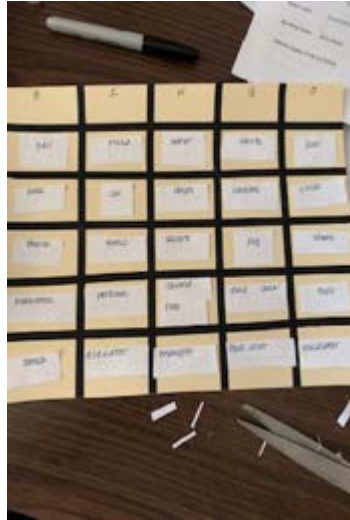


- There are 6 elevators in the new mall, one in each corner, one next to the food court, and one near the bathrooms outside of Macy's. As you move around the mall, have Jose read the floor numbers on the elevator buttons. If you have time, take the elevator to the 4th floor rooftop terrace. It's so rare to have 4 floors in a mall!
- Every time you make a purchase, have Jose help you by naming a coin and having him find it. He knows all of his coins when he sees them all together (one of each coin in a row) but occasionally mixes up the penny and the nickel. When having him help you, give him a choice of 2 coins and ask him to find the named coin from the 2 you provide.
- I made a simple map of the food court using the Wheatley Picture Maker to practice travel concepts.
- Counting – Count the steps going up to the second floor and then down to the first floor. Count out XXX ketchup packets and XXX napkins at the food court.
- Positional Concepts – Have Jose sit across from Gabby. Have Jose hold his sister's right hand. Have Jose sit on his brother's left side. Place his napkin next to his lunch tray. Which clothing item is in front/behind. Which toy is on the left/right. Which food item is on top/under.

- Shapes – Have Jose identify shapes in the food court – round, square, or rectangular tables, round or square chair seats, round plates and cups, rectangular food trays. Have Jose identify shapes in the toy store – square puzzle boxes, round balls, wooden shape sorter, rectangular game boxes.
 - They can count the number of M&Ms on the top of their cookies and determine which has greater than or less than. They could count the number of french-fries they eat. There are so many things that they could compare in size and space. They could get a large drink or a small drink, etc.
- b. A game that he can play with his brother and sister at the mall that will reinforce math concepts. The game you design for the three children to play needs to incorporate one or more of the concepts from the list above and be accessible to braille and print readers.
- Depending on the layout of the mall a guessing game is always fun with any age child! It can include everyone and it will allow for several different answers. Ask things like: what shape do you think the doors will be; what color do you think the door will be; how many steps do you think it will take to get from the car to the door? Do we think the door will be on the left side or right side of the building; how many trashcans will we pass before we get to the Under Armour store; when we get inside, should we go left, right or straight; etc.)? This game gets everyone involved and children’s opinions get heard. If there is an argument between the 3 children, I would say just do a rotation of “the next time it is Jose’s turn.”
 - Another fun game which may be a little tricky with little ones, but sometimes they pick up quickly is OVER/UNDER. While in a store ask if an item is OVER or UNDER a dollar amount (i.e. Is the shirt over \$10 or under \$10?). This can be played getting gas (Will the car need over 20 gallons or under 20 gallons of gas?) or, at the grocery store (Will the total amount be over \$50 or under \$50?).
 - Follow the leader in the climbing structure - Each child takes a turn at being the leader. The leader gives verbal directions, such as turn right after the stairs, pass the slide and turn left, go straight to the airplane cockpit, etc.
 - Scavenger hunt – Have Jose and his siblings search for the following objects and whoever finds all the objects first is the winner. For example: 2 red pairs of tennis shoes in the shoe store, 1 round object in the food court, 1 square

object in the greeting card shop, 5 chairs and 3 hangers in the clothing store.

- Scavenger hunt bingo - The kids are each given a bingo card on a clipboard and tactile stickers to mark off the squares on the bingo grid as a child finds the item on the square. The first one who marks off 5 in a row wins. Each square could contain a word in Braille and print, or a shape, or a number. The grid would be lined with black tape. (counting, shapes, positional concepts)



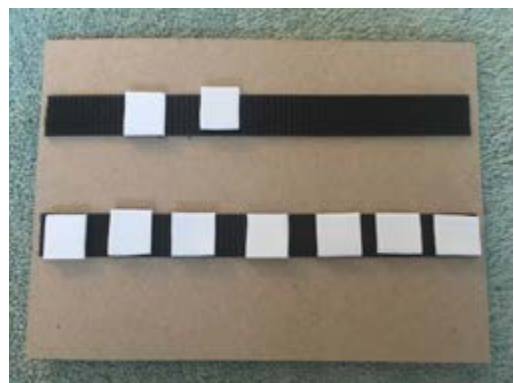
- c. A graph for Jose to use at the mall that has pieces he will add as he counts up things at the mall (e.g., how many people he says hello to first, how many people say hello to him first).
- The APH calendar kit is a great way to start not only learning a calendar but I have used it to learn and make beginning graphs. It comes with tactile squares and Velcro that fits in the square. Since the APH manipulatives from the 100 Boards are already there at the home for sorting, they can be used to make a graph for many things like: How many bites did it take to eat cereal? how many times can Jose jump, how many times can Maria jump? Maria can be a star and Jose can be a circle.
 - I think this could be tricky for a 6-year-old to be expected to hold onto something while navigating the mall and with 2 other children, but it can be done. One way to graph something non-conventionally would be a small manipulative that would fit in his tiny little pockets. Preferably something that it would be ok if it gets lost (i.e. pennies, tiny balled up pieces of paper, paperclips, etc.). The idea would be to move the item from the left pocket to the right pocket. Keeping the whole concept of left to right, just as in reading. Every time he said hello to someone he could move from his full pocket to his empty pocket. I

would also keep the expectation small (maybe only 10 items) so it wasn't overwhelming or too difficult to keep up with while in the mall.

- Another idea would be a small notepad (one that would fit in a back pocket) and a crayon or pen that was attached. Every time he passed a trash can or guessed correctly at the OVER/UNDER game he could make a mark in his notepad.
- On the way home, have your older children tell Jose every time you get to a traffic light. They will need to say the color, like "Red light!" Every time they say a light color, Jose should put a chip (from the back of the board), on the line under each colored light on his board. When you get home, have him read the graph to you, telling you which colored light you saw most and which you saw least. Have him count the chips in each column. You can keep this game in the car to play whenever you go places where you'll see lights. (If Jose cannot see the three colors on his game board, you will need to tell him that the first column is for red lights, the second column for yellow lights, and the third column for green lights.)



front



back

- Have Jose use pennies to graph how many people he hears in the shoe store versus the candy store.
- Send a magnetic graph with Jose to the mall. The picture shows a graph of circles, squares and triangles, so that Jose can keep track of and compare the number of each shape he locates at

the mall. There is a small metal container with a magnet on its back that can hold the shapes until they are placed on the graph.

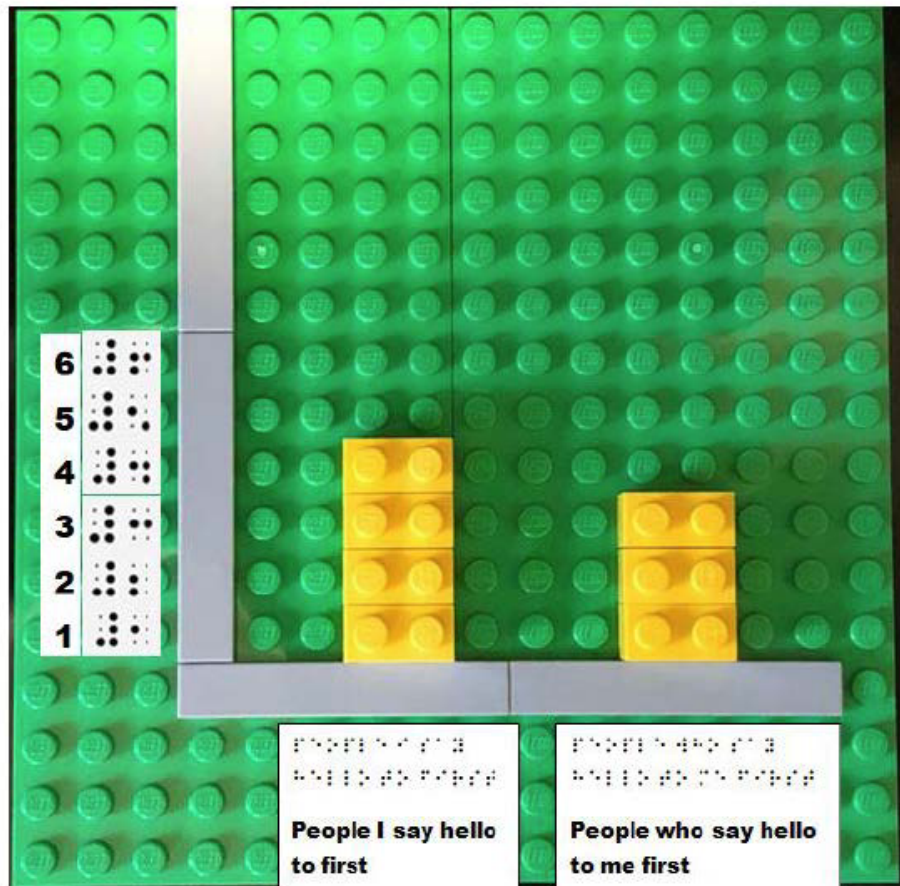


And then you make a book



- On our trip to the mall I counted 5 circles.
 - On our trip to the mall I counted 4 triangles.
 - On our trip to the mall I counted 7 squares.
 - There were more squares than circles. $7 > 5$
 - There were fewer triangles than circles. $4 < 5$
 - My favorite circles were on the toy car wheels at the toy store.
 - I liked the big triangle blocks in the play area.
 - The square button by the door opened the door for us.
 - We bought 4 cookies. Guess what shape they were?
- Jose can use a Lego/Duplo board to make a graph of things he counts up at the mall. Using Legos allows for a smaller pocket-sized graph, while Duplo allows for easier to grab and keep track of pieces. Using 1x2 Lego blocks lets Jose feel the number by tracing the dots up the graph. The Legos may be kept in a plastic bag, Jose's pocket, or on the graphing plate itself (on the bottom). The graph can be accessible to Braille and print readers by putting both Braille and print labels on the graph to separate columns for the x-axis label and numbers for the y-axis label. All Braille may be spaced appropriately for Jose's current level by simply skipping spaces on the graphing plate as one would

double space any math document for young learners (having the Lego piece match up to the line where the number is printed). The flat smooth raised pieces on the graph allow Jose to feel where the axes lines are, without confusing them with the counting blocks.



This lesson plan was submitted by Becky Peek from Virginia on 7/27/2020

Email to Gabby before the trip:

Dear Gabby,


Your trip to the new mall sounds like so much fun! I can't wait to hear about it! I have some games and fun activities for you and the kids. Please do not feel like you need to try all of them on your first trip. Think of this list as a menu. You might try 2 or 3 activities this time and then 2 or 3 the next time. Some of these activities can be played in the car, in the grocery store, or even at home.


The kit I dropped off at your house has all the materials. I'd be happy to go over this with you before or after school or through Facetime or Zoom. You and the kids may even think of other ways to use the materials. Math can be so much fun! It is part of many of our daily routines and I think you'll find that Jose can learn as he participates in these everyday activities.

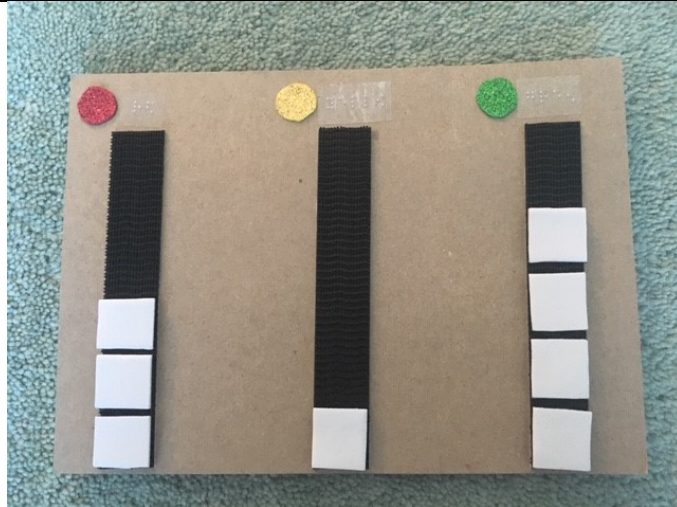
Have fun and I'll talk to you soon!

Becky Peek

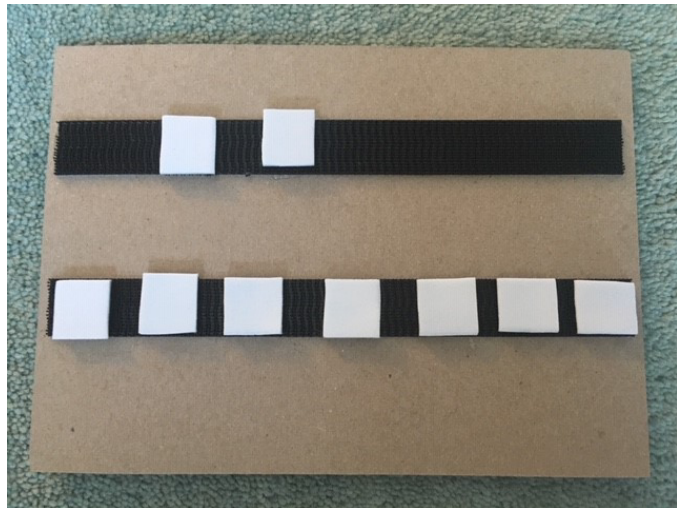
Jose's Shopping Activities

Concepts	Activity	Materials
<p>Counting and Reading numbers</p>	<p>In the car on the way to the mall, have each of the 3 children take turns pulling a number tile (see pictures 1 and 2) out of a shopping bag.</p>  <p>The image shows two rows of ten Braille number tiles each, numbered 1 through 10. The tiles are white with colored numbers and Braille characters below them. Below the number tiles is a single white tile with a green plant design on its back.</p> <ol style="list-style-type: none"> 1. Have them count the leaves on the back of the tile, then read the number out loud. 2. Have them say the phrase, "I went on a shopping trip and bought (fill in the number) (fill in an object). For example, if Jose picks a 7 tile, he would count the leaves, read the number, and then say "7." Then he would say, "I went on a shopping trip and bought 7 bags of candy." 3. Then the next person would pull a tile, count the leaves, read the number and say his/her number. Then they would repeat what Jose said and add their own objects that they would buy. Jose and I have played this game at school, so he can help explain the directions. You can keep this game in the car to use any time you go on a trip. 	<ul style="list-style-type: none"> • Braille number tiles • Shopping bag
<p>Reading numbers</p>	<p>There are 6 elevators in the new mall, one in each corner, one next to the food court, and one near the bathrooms outside of Macy's. As you move around the mall, have Jose read the floor numbers on the elevator buttons. If you</p>	<p>None</p>

	<p>have time, take the elevator to the 4th floor rooftop terrace. It's so rare to have 4 floors in a mall!</p>	
Shapes	<p>The play area at the mall looks beautiful!</p>  <p>There are many shapes in this structure including circles, squares, triangles and rectangles. Show your kids a shape from the shapes I gave you and have them go through the structure to find that shape.</p>	Plastic shapes
Money skills	<p>Every time you make a purchase, have Jose help you by naming a coin and having him find it. He knows all of his coins when he sees them all together (one of each coin in a row) but occasionally mixes up the penny and the nickel. When having him help you, give him a choice of 2 coins and ask him to find the named coin from the 2 you provide.</p>	Coins
Positional Words	<p>I made you a simple map of the food court using the Wheatley Picture Maker (shapes and lines on a board). The rectangles are restaurants, the circles are the bathrooms and the square is the elevator. Using the map, have Jose find the bathrooms or the elevator. Have him explain where it is using words like "left of the elevator" or "right of the bathrooms" or "in between the restaurants." Then see if you can walk to the designated place. He will need help with this, but he has been working on this quite a bit out in the community with his orientation and mobility instructor.</p>	Wheatley Picture Maker
Graphing and number counting	<p>On the way home, have your older children tell Jose every time you get to a traffic light. They will need to say the color, like "Red light!" Every time they say a light color, Jose should put a chip (from the back of the board), on the line under each colored light on his board. When you get home, have him read the graph to you, telling you which colored light you saw most and which you saw least. Have him count the chips in each row. You can keep this game in the car to play whenever you go places where you'll see lights.</p>	Red light, yellow light, green light board with chips (If Jose cannot see the three colors on his game board, you will need to tell him that the first column is for red lights, the second column for yellow lights, and the third



Front of board



Back of board

column for green lights.)

Lesson Plan Submitted by Kimberly Dang from California in Summer 2020

Gabby,

Here are some activities that you can do during your shopping mall outing with Jose and his siblings to help him practice some of his math skills.

<p><u>COUNTING</u> There are so many opportunities to count!</p>	<ul style="list-style-type: none"> • Number of teddy bears in the toy store • Number of people standing in line • Counting to 20 while washing hands in the restroom • Number of stairs • Number of cars in one parking row • While eating, count how many food items (peas, corn etc.) are on your plate • Number of ice cream flavors at the ice cream cart • Number of buttons in the elevator
<p><u>SHAPES</u> Try to have Jose “see” math in various places and items in the mall. Have him look for shapes in different objects.</p>	<p>Shapes</p> <ul style="list-style-type: none"> • Circle • Triangle • Rectangle • Square <p>Objects to look at</p> <ul style="list-style-type: none"> • Coins • Watermelon wedges • Doors • Bracelets • Napkins • Window displays • Tiles on the floor • Playground • Signs
<p><u>MONEY SKILLS</u> Have Jose practice his money skills.</p>	<ul style="list-style-type: none"> • Have him feel the size difference and roughness to distinguish the coins • Counting coins – give and receive • Look at prices in the store • He can pay for a small item at the vending machine
<p><u>POSITIONAL CONCEPTS</u> Explore positions and directions by comparing items in the stores.</p>	<ul style="list-style-type: none"> • Which clothing item is in front/behind • Which toy is on the left/right • Which food item is on top/under

EYE SPY/NUMBER HUNT GAME

Playing a game is a great way to learn math. Jose and his siblings can play a game similar to Eye Spy or hunt for numbers. You can call out numbered items for them to find or have them find items with a number on it. Whichever is easier. Jose's siblings can help guide him. To make it harder you can give them a timeframe to find each item. They can get a treat when the game is completed!

Find the following:

- Item for under \$1.00
- 2 items that have triangles
- Person holding 3 shopping bags
- 4 benches
- 5 teddy bears

OR

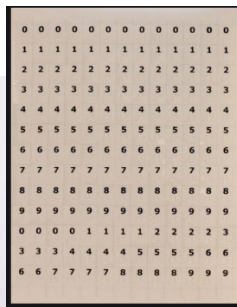
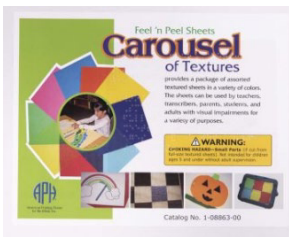
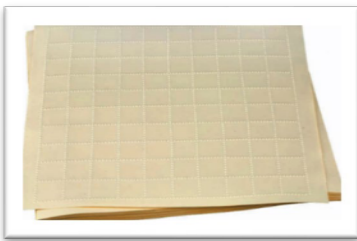
Look for an item with the number 1,2,3,4,5.

Examples:

- 1 on a clock
- 2 on a birthday card
- 3 on an elevator
- 4 on a price tag
- 5 on a menu

GRAPH

I have included an embossed graph sheet and some feel 'n peel stickers that Jose can bring to the mall to practice graphing. At home place the Nemeth braille-print numbers to label the axis. Have him choose an item to graph and add the textured stickers to the graph in each column to count the item.



Examples:

- Graph the number of different shapes you see (circle, square, triangle)
- Graph the number of different toys you find in the toy store (cars, dolls, balls)
- Graph the number of different colors you see (red, blue, green)

Let me know if you have any questions. Have fun learning math together!