

Project INSPIRE: Course 7, Lesson 7

Transcript

SPEAKER: Welcome to "An introduction to UEB Math/Science for Pre-Kindergarten-1st Grade Students and Strategies for Supporting Math Learning." This is Lesson 7: Family Engagement to Support the Child's Success in Math.

So our objectives on slide 2 are to support the family in creating a positive environment for learning, to describe strategies to use when introducing family members to UEB Math/Science. Our third objective is to have you identify typical routines that support a child's learning of math concepts, then to explain activities outside of the home that families can take advantage of to increase the child's learning of math concepts. And they're going to be learning other things right along with that. The fifth objective is to develop ideas for activities to send home for families to complete together. So this could be in the evenings, weekends, and, of course, over longer breaks, like the holidays and summer. And then you want to provide ideas to families for supporting their child in completing math homework. So we really are focused on the family in this unit. But I do want to point out that some of our ideas are great ideas to share with other teachers and other people who are supporting that student.

Slide 3 talks about how important it is to create a positive environment for learning. So we want to guide families to engage the child in activities. In the photo, we see a child who is using a measuring cup to pour an ingredient into a pot. Having high expectations that children can engage in activities such as this and promoting a can-do attitude. If families expect their child to be involved and to engage in activities, the child's going to take on that attitude. It's really important that if all of us, including families, take advantage of opportunities and that we're always thinking ahead to the future, so the experiences children have when they're young are laying the foundation.

Slide 4 talks about how to introduce families to UEB Math/Science. So you really want to provide them print copies of materials so that they can follow along with the students. It's always good to help a family understand the basics of the code so that they understand that we're representing all the symbols and the numbers using that six-dot configuration. And there are some families who really want to get into and learn those symbols right along with their students. So I encourage you to provide them resources and encourage them. So they might sign up for a course, for example, through Hadley. You want to introduce families to others who use braille, including UEB Math/Science. So this could be a child who's older than their child, maybe a late elementary or middle or high school student. It even can be an adult who is a braille reader. But it's important that that individual, that braille reader, is using the same code as their child-- so UEB Math/Science in this case.

And I really like the idea of inviting families into the school to take part in instruction. One of my favorite TDIs, Liz Sutter in Texas, did a great activity where it was Bring your Mom to Braille Day. And she had prepared with her student activities to introduce this particular child's mother to braille. So think about

activities such as that. And I think also, too, sometimes families cannot physically get into join us with work and other commitments, so making short videos or taking photos that you can send home if the family can't actually join you and the student. And then, explain the assignments to the family. So that might mean leaving a sticky note on the sheet that talks about the new symbols that that child is learning that are included in this lesson, texting the parent or whatever system you've set up to let them know what's coming home, but help them understand what that child is doing with UEB Math/Science and what's new.

Slide 5 talks about how important it is to take advantage of typical routines. We actually have three pictures on this slide. We have a child cutting vegetables-- great opportunity to talk about shapes, to talk about how many pieces we're cutting, cutting something in half or into quarters. A child getting something out of the refrigerator-- it's in a rectangular container, talking about sizes and shapes of containers, top shelf, middle shelf, bottom shelf. And another student who's buttoning a shirt-- how many buttons are there? Are we buttoning? Are we unbuttoning? Are the buttons round? Are they square? Lots of opportunities. So we list dressing, matching socks as well as the buttoning are just examples, bathing, filling containers halfway in the tub, emptying the tub, filling the tub, counting the number of bath toys. Lots of things you can do at mealtime from getting and putting items away to having the student involved in food preparation, helping families recognize that having their child have jobs like sorting the silverware from the dishwasher and putting it in the drawer has value as does setting the table, and then that idea of helping with cooking and measuring, let's say, 3 cups of flour or 2 teaspoons of salt. That would be a lot of salt.

Slide 6 puts you to work. What math concepts come into play here? And I've got a container that has eight little brownies in it. I want you to think for a second. There's five people in this family, and our child is getting some ideas of how to help serve dessert. So what would you suggest? What concepts would come into play? I bet you, you talked about counting. So here, we've had the child count out five paper plates. So counting is a really great thing to talk about. You also could talk about the shapes of the brownies and the shapes of the plate. Any other concepts that come to mind for you?

Ah, did you say one-to-one correspondence-- one brownie on each plate? Did you say how many brownies are left in the container? Three. How many are on plates? Five. Lots of ways to bring concepts into a fun activity to give yourself and the other four members of your family a snack.

Slide 7 has even more ideas. The first is a shape sorter. There are different shapes, and when the child finds the corresponding hole and puts the shape in it, the child will hear music. There are puzzles. These have had braille added to the pieces. There are also print numbers, so the child can feel the corresponding print shape. We also see a picture of the APH tray divided into thirds with different textured shapes. You could easily send this home so the child could sort squares, circles, and triangles. So lots of sorting activities that families can do looking either at color, shape, size. Could be with socks, and washcloths, and towels, those types of things as well. Thinking about differences-- which box is bigger? Which box is smaller? Which one is round in this group?

Thinking about the ideas of having games like Go Fish and War. You can send these home with both print and braille on them. Help the family get a deck of adapted cards. There's now braille Uno. Having the family think about when it's birthday times, holiday times, having family members pick out educational-type toys that will help the child in their learning.

Slide 8 lets us take it outside the home-- so ideas that families can do out in the community from the playground to the buildings that they go into. Is it a square lobby? Is the elevator button round? Restaurants-- that great opportunity for money, even when you're sitting at the table. Those little round coffee creamers-- how many of them are there? Thinking of public places like gardens-- smelling flowers is great. Let's count the number of leaves on that flower. The aquarium-- how many fish do you see? What color are those fish? Which ones are the bigger fish? Zoos-- lots of things with animals, science centers, theme parks, nature walks.

You get the idea, and I have some pictures here to show you. The little girl that is on a playground piece of equipment, she has her feet in the round circle part. So she got a chance to feel that before she climbed in there. A young child in a garden. And then we see a young boy with an adult, and he's looking at a lizard at a science center. So lots of hands-on activities that we sometimes just need to help families recognize are great learning opportunities.

Let's move on to slide 9 and talk a little bit about shopping. In the picture, we see a young girl at the checkout line. The cashier is handing her the change from her purchase. Children can braille their own shopping list, and you can have them number the items even or specifically get three tomatoes or two cucumbers. Have the child be able to count the number of items in the cart or the bag. So whether we're at the store, when we get home, how many items are in there? Money responsibilities are huge. Our children need to learn how to use money, even in the day of plastic. And talking about the size and weights of items-- so you know which two things are heavier than the other one, those types of things.

Slide 10 talks about concepts, concepts, and more concepts. And we see a young lady. She's on a playground, and she's getting ready to step on a black ramp, and there's blue railings. So she's going to be going up on an incline. What a fun word to use. This is a path that she's following to get to the swings that she wants to go to. So we can talk about what's in front of her, what's behind her with her. Thinking about new and familiar areas-- what shapes do you come across? Is this a circle? Is this a square? Time concepts-- when are we doing things? Morning, afternoon, evening? And then also talking about temperature. That's part of math too. So what are you going to wear outside because it's cold today or hot today?

On slide 11-- I love numbers in the real world and the picture we have here on slide 11 of a young girl in an elevator getting ready to press the button because she's read the braille. But there's lots of numbers in our world. Children need to know their age and their birthday. Phone numbers just can't be in the cell phone-- their height, their weight. Showing them scales and how we measure their height and their weight-- that's a great thing to do. Numbers in their address, talking about time, how long does something

last for? What is five minutes versus half an hour? Prices-- when you're in the store, pointing out the prices of different items and relating that to money. And those elevator buttons, you can't miss those.

Slide 12 talks about sharing books as a family. And we have a wonderful picture here of a dad reading the book *The Littlest Pumpkin*. This is an APH *On the Road to Literacy* book. So he's sharing it with his preschool child, a little boy. And you'll see next to them is the real pumpkin. And this family, every year, goes to the pumpkin patch. So their son gets the opportunity to see lots of pumpkins-- different sizes, different weights. And then they come home. And after they share the story, they actually carve the pumpkin. You can have circles or triangles for eyes this year. Which are you going to pick? And then you can have a circle or a square for a nose. Be creative in carving that pumpkin-- lots of different things to talk about when we're carving the pumpkin. Then we have to reach inside and get out all that gunk. So our pumpkin's full of seeds, and then we take all the seeds out, and it's empty.

Books that have rhyming phrases or repeated phrases can be really helpful for our students, thinking about books that have number concepts or contain numbers or shapes. And then books like these APH *On the Road to Literacy* books are wonderful because they include tactile illustrations. If you have a book that doesn't have a tactile illustration as the TSBI, having you make a tactile illustration-- adding that to the book or teaching families how to do so is very valuable.

Slide 13 and the next couple of slides, I want to talk about some of the wonderful books that APH has for us available. This one, for example, on slide 13 is *Jellybean Jungle*, and this one is part of the *On the Road to Literacy* books. I do want to point out that these books in the *On the Road to Literacy* series are only available in EBAE. So that's English Braille American Edition. The good thing for our UEB Math/Science students is in EBAE the numbers are in the upper part of the cell. But there are some contractions differences between EBAE and UEB. So you want to preview and consider how you will address any things that could be confusing for your student. But from a math concept, one of the things we love about the *On the Road to Literacy* books is that there's an opportunity in many of them, such as this one, to practice math skills. So with *Jellybean Jungle* we get a lot of counting, for example, built in. And we see a father and a daughter sharing this book together.

Slide 14-- *Goin' On a Bear Hunt*, and this one's retold by Suzette Wright at APH. Again, this book is only available in EBAE, but great book for following lines, looking at shapes. And it's a really fun story. So check it out if you're not familiar with *Goin' On a Bear Hunt*.

Slide 15-- one of my other favorite APH books-- *Splish the Fish*. And this one was written by Suzette Wright. Again, only available in EBAE. But what a great opportunity as this father and daughter are looking to actually at the pictures of the different animals in the book, the different fish, to talk about size, to talk about above, below, beneath. Those are positional concepts. But, folks, those come into play in math-- so great opportunity while working on reading skills and learning to tell a story and retell a story to also be working on our math concepts.

Slide 16 talks about how fun it is to make cards, and books, and graphs yourself as a child. And in this particular picture, we have Valentine's Day coming up. And this child is taping a print Valentine's Day card that has a round donut on it onto a piece of braille paper. And then he's going to braille the "to" and "from" on the card. This is a dual-media student, so he can see that picture of the donut. And what made it really fun was he got to have a round donut to eat too.

So model for families sending home cards, and graphs, and games that you and the child create at school to give them ideas of things they can create at home. You might want to suggest to the families materials that they can have at home, and especially if they put those in a box or a location where the child knows where they are and can get to those. And giving them ideas of ways they can incorporate math concepts into fun things they're doing-- making birthday invitations. That's a really fun thing. You can have three balloons on the front of each birthday card that are made of different textures. So just helping them come up with ideas of ways that they can incorporate art, card making, and making books into activities they do.

Slide 17 talks about creating graphs. We see a student who has APH graph paper and the Feel-n-Peel stickers and he's adding stickers to his graph. He has got four different columns going on there. With young children at this age, we want to stress counting and modeling how to collect data and make a really simple graph like this. Lots of things kids can graph. For example, my personal favorite-- ice cream flavors. Mine would have chocolate off the chart. Other people might have just a few vanillas and strawberries in there. So let's find out what everybody at the birthday party likes when it comes to ice cream flavors. The number of times grandma gave each child a hug during her visit might be a fun thing to graph, or how many steps it takes to go from the kitchen to each room in the house. So having the child engage in data collecting and then graphing-- it is the key here. Keep it simple, but keep it fun.

Slide 18 is our favorite website, Path to Literacy-- tons of ideas on this website. For example, we just picked the article, "56 Tactile Math Ideas" This article is great, a wonderful resource to share with families.

Slide 19-- "Ideas for Success in Completing Math Homework--" now, we all know homework can be a challenging time for families, so you want to discuss with them the need for high expectation and communication. If we don't have good workflow going between all the adults involved with that child and the family, then it makes it really hard to make sure what's happening at home happens in school and vice versa. It's great to make sure that families set up a workspace for that child that everything is at that child's level, all the tools that child need are there. Helping the family understand braille comes by having a print copy of materials the child's going to use, so they can follow along and give support. Sometimes the child's going to need manipulatives to do an activity. You can send those home, or you can make suggestions. You don't have to send home all your shape pieces. You can suggest that they use coins, for example, for a counting activity. And helping the family brainstorm with the child about times the child's going to need to advocate for themselves. So if they don't have what they need or they don't understand the directions, what are they going to do when they go to school tomorrow? How are they going to begin to self-advocate?

So on slide 20, I have homework for Connor. He's in first grade, and his mother's name is Tanya, and his TVI's name is Carol. So Carol has written a note for Tanya that's going home with a worksheet that Connor needs to complete. And that worksheet says count the spots. Number one is to trace each numeral, and we see print numerals that our student would who is a print reader is going to trace. And part 2 says, how many spots? And we see eight boxes that have little circles in them, and the student is supposed to write in what number is represented by the number of spots. To help Tanya support Connor her son with this homework assignment, Carol has explained what she's done-- that she's brailled out for Connor on the attached page the worksheet that he needs to read the numbers and then have him braille them. And even a reminder for Tanya to make sure that she is giving him the dots for making the numeric indicator 3-4-5-6 and that he needs to put a numeric indicator in front of each number. I know you know how to do that. And she provides a sample of what the number should look like, telling also Tanya the dot configurations that he will need to press to make that number so that if he says, "I don't know how to make a 14," she has right there, 3-4-5-6, 1, 1-4-5.

And for the second part of the assignment, she has prepared for Connor a card for each of the drawings and has asked that he go ahead on his paper and braille the answers. So she even provided an example of what 14 would look like for the first one. And of course, she ended with, "Hey, text me if he gets stuck or you're unsure about the UEB numbers" to be available. And I know so many of you make yourselves available to families as needed.

Slide 21 is our last slide, and it talks about how your attitude influences your student's attitude. You want to encourage your student to do their best each and every day, to learn to advocate for themselves; you are not always going to be there. So how can you support them so they can be as independent as possible and express their needs positively? And helping them feel positive about themselves-- what do they do well? Helping them see that. We have a really sweet picture here of a girl who has dowels with marshmallows she's made into shapes, and she has a big smile on her face. And she says, "Not only can I do it-- it's fun."

And we want you and your students to have a fun experience with math at this age level, and we know you will. Thank you so much.