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Dysgraphia 101- Introduction And Strategies For  
Understanding Dysgraphia in Children  
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- [Fawn] Today's course is Dysgraphia-101: Introduction and Strategies for Understanding Dysgraphia in Children. Our presenter today is Emily Finn. She is a California native currently living in Ecuador, South America. She is a pediatric occupational therapist with more than 10 years of practice working with students with various needs. She's worked in a variety of settings, including acute care, outpatient, pediatrics, private clinics and school-based. She's also a consultant for the international schools in Quito, Ecuador, where she works directly with teachers and learning support staff to facilitate best practices within the school setting. Welcome Emily, so glad...

- [Emily] Thank you so much. Thank you for the opportunity to be here, to speak with you all. Welcome to Dysgraphia-101. This will be an introductory level look at what is dysgraphia and what are some strategies we can use while working with children with dysgraphia. So let's get started. This slide is my disclosure statements for your review. And our learning outcomes for today will be to identify the current research-based definition of dysgraphia and the characteristics that may present in children. We will identify specific strategies for working with children with dysgraphia. And we will also identify specific accommodations for the learning environment for children with dysgraphia. So let's jump in. The definition of dysgraphia is, it is a brain-based specific learning disorder that impacts a child writing and fine motor skills. So brain-based means it is a neurological disorder. It can affect adult and children, but today we'll be focusing on children. And as with many diagnoses, dysgraphia can present differently in each child, but usually it includes difficulty forming letters, spacing words, or even organizing text into complete sentences. So I'd like you to do a quick activity with me. Go ahead and grab your writing utensil and place it in your non-dominant hand. And just write your name or the date, or draw a picture something simple per se. But while you're doing this pay attention to how much more effort it takes you to use that

non-dominant hand. And this is similar to the experience of someone with dysgraphia, trying to make the words or the letters or the picture turn out right on their page. Just so that we have a little bit of an understanding of just maybe what they're experiencing as they're trying to write.

I also wanted to share that there's research that tells us that there is a high prevalence of dysgraphia in students with ADHD or ADD or autism spectrum disorder, ASD, although they can be mutually exclusive, but that's something to keep in mind too as you're working with your students. There's an estimated 20 to 60% of children with ADHD who have one or more learning disabilities. And one of those may be dysgraphia. There is a bibliography available for you to download. And it has these research studies for your review, if you'd like to dive farther into that. So we're gonna start off with the quiz here, just in order to learn some facts about dysgraphia together. So our first statement is, messy handwriting is a sure sign of dysgraphia. And this in fact is false. A common sign of dysgraphia is messy handwriting, however, some students can write neatly, but it will likely take them a lot of time and effort. So other signs besides sloppy handwriting include, slow or effortful writing. Poorly sized or poorly spaced letters. So it's important that we as clinicians look at how they are writing. Our next statement is, kids with dysgraphia have below average intelligence. And this is false. It is a myth that people with learning or thinking differences have cognitive deficits. And children with dysgraphia often fall under that same misconception. So in fact, kids with dysgraphia usually have average, or even above average intelligence. They just struggle with getting their thoughts and ideas down on the paper. So their written work may not reflect their understanding or their ideas on the subject.

We're gonna talk more about this throughout today's session, because I feel this is a very important aspect of dysgraphia and something that we really need to keep in mind as we're working with the students. So statement number three, students with

dysgraphia are just being lazy. So if you're catching onto the trend here, that is also false. So dysgraphia, can make the act of writing a slow and tedious task. When the task of forming the letters and the words requires so much effort and focus that a child forgets what they wanted to say in the first place, it's not surprising that they often hate to write or will resist any sort of writing activities. So this may look like laziness, but we know that there are underlying factors that we may not see if we only look at the behavior that's in front of us. And then if we think about how these students are watching their friends or their peers go through writing easily, that doesn't help their self-esteem either. Statement number four, dysgraphia is the same thing as dyslexia. And again, this is also false. So both dysgraphia and dyslexia can affect a student's ability to spell. However, they are two different conditions and dyslexia makes it more difficult for a child to learn to read, while dysgraphia affects handwriting. And finally statement number five, most kids outgrow dysgraphia. So it's not necessary to spend time helping them. Now dysgraphia is considered a lifelong condition. So our focus, excuse me, as therapists is to help support the challenge of writing. So we'll talk more specifically about how to do that as we move forward.

Well, as I already mentioned, presentations of dysgraphia can vary from child to child, but it is worth noting that there are in fact different types of dysgraphia. And a child can present with more than one type as well. So they are not mutually exclusive. When we're thinking about any type of diagnosis, we as occupational therapists, we can recognize it, notice the red flags per se. And then we would need to refer to pediatric neurologist or a neuropsychologist with experience in the disorder in order to get the formal diagnosis. But as we go through these different types, let's just keep our therapist lens on. And remember that we will treat the student individually and not just based on the diagnosis category that they fit into. But it is important to understand that there are differences in presentation and challenges within the umbrella diagnosis of dysgraphia. So the five different types are as listed here; dyslexic dysgraphia, motor dysgraphia, spatial dysgraphia, phonological dysgraphia, and lexical dysgraphia. So

we'll go through each one just so we have a better understanding of what they each are. And as we're looking at these different types, we're usually analyzing three different areas, one being spontaneous writing the the next being copied writing and the third being the fine motor skills. These are usually the markers that help us identify which category, which type they may be presenting with.

So, the first one is dyslexic dysgraphia. And with this type we see that spontaneous written work is usually illegible. Whereas copied work can be okay or pretty good. Spelling typically is affected. So for this student coming up with those letter formations and shapes on their own, that's where their challenge is. Usually fine motor skills, the speed and dexterity for fine motor skills tend to be normal. And as we mentioned during the quiz, dyslexia and dysgraphia are two separate diagnoses and unrelated. However they can occur together. Now, the next type is motor dysgraphia. And I feel this is a one that is the most common that we as OTs will likely catch and recognize. And as we learned in the quiz also, sometimes it's not only the writing product that we need to be analyzing, but also the process of writing. How much effort or exertion does it take this child to produce the writing? With motor dysgraphia, usually it is due to deficient fine motor skills. They may have poor dexterity, poor muscle tone, or just unspecified motor clumsiness. For these students, any written work is poor to illegible. So both spontaneous and copied work are affected. Even if it's copied by site from another document. So both types of writing are affected. Letter formation for these students may be acceptable for example, in very short samples of writing, but you'll be able to see that it takes them extreme effort or extra time and they can't sustain this letter formation for length of time, or it can't sustain the neat quote unquote neat writing or extended time.

Often, we also see these students have poor grasp. The writing could be crooked, due to holding the pen or pencil incorrectly. They may be using hard pressure or there may be dark writing or inconsistent pressure due to those decreased fine motor skills.

Usually spelling is not affected, it's not impaired. So in these pictures here, we can see this guy, my little guy had pretty poor grasp. And in the writing, you can see that the pressure that he uses to form those letters was very inconsistent. His fine motor skills were definitely delayed. So, our next type of dysgraphia is spatial dysgraphia. And spatial dysgraphia is usually due to a visual spatial deficit. So these students present with illegible spontaneous written work and illegible copied work. So both areas, both types of writing are affected. Typically, these students have normal spelling and normal fine motor skills, but they have trouble keeping their writing on the lines and difficulty with spacing between the words. And it can also be noted in their drawing skills as well. So you can, this picture here demonstrates the prompt is, is above the first two line. And the students writing are the third and fourth line. And you can tell that this young student had a really hard time identifying where the line was and keeping her letters on that line, especially as the writing progressed. She started out okay, but as it went longer that baseline placement was really affected the most.

Now for the last two types of dysgraphia, I feel that they are harder to recognize from an OT perspective as they are more spelling related. So they may be more likely identified by a learning specialist. But, we will still review them so that we are aware of what they are. So the fourth one is phonological dysgraphia, and it presents as writing and spelling difficulties in which the spelling of unfamiliar words, non-word and phonetically irregular words is impaired. So, these students have difficulty holding phonemes in memory and blending them in their appropriate sequence to produce the target word. And finally, the last type is lexical dysgraphia. So, the child can spell, but relies on standard sound to letter patterns with misspellings of irregular words. This is more common in languages, such as English or French, where excuse me, which are less phonetic than a language such as Spanish. But this type of dysgraphia is also known to be pretty rare in children. So those are the five types. As OT, since we don't diagnose legally or formally, I do find it less important to focus on exactly which type they may have. And rather more important to focus on the general signs and

symptoms so that we know what to focus on in our treatment sessions. So, when assessing handwriting of a child with dysgraphia, we usually will see, poor letter formation, poor baseline placement or spacing and poor letter size. So these students have difficulties staying in the margin or writing straight across the page. They often also have difficulty with longer writing assignments. They may have an awkward or inefficient grasp on the writing utensil. And an awkward stabilizing hand, incorporating that bimanual skill of stabilizing the paper with the non-dominant hand. And overall generally illegible writing.

Also, usually in general, these students, their written work does not reflect, does not match the students' verbal expression or comprehension on a subject, or even their cognitive level. So the gap between what you know, they know, and what is coming out on the paper can typically indicate a challenge with the writing process. It's also important to consider there may be physical symptoms with dysgraphia. The student may be experiencing pain with writing as they're not efficient with their fine motor control. They also may be exhibiting anxiety or refusal to write resistance towards writing. And all of these signs and symptoms, can result in a child feeling or excuse me, falling behind an assignment and schoolwork and overall work avoidance. And kind of as we noted in the in the quiz, they may get labeled the lazy or defiant kid. But we know that there's more going on underneath that writing. So as we move towards thinking about how to treat the student, we should consider which frame of reference to approach it from. And there are likely many that are relevant. But my personal favorite is PEOP or person environment occupation performance. And this frame, this is a pretty common frame of reference in OT. And it tells us that a person's performance is affected by the person, the environment and the task itself, the occupation. So the person refers to the physical components of the person themselves. For example, in our case, we may be looking at the grasp, the student's hamstring, perhaps their posture whether it's their postural strength or their postural endurance. It could also involve praxis or coordination. Environment refers to

components in the student's workspace. For example, we may wanna look at their desk height, their work surface, is it adequate for what they need, does it support their body the best. Their chair, is it supporting them in the best way to support their posture? And then the third component is occupation or the task itself.

So with this, we would wanna consider, are there elements of the task that we can modify, perhaps maybe the format of the assignment, or are there tools or accommodations that would support the task of writing? So with this in mind, we are going to look at different strategies for working with students, but also we'll look at accommodations that can also support the student while they're completing writing. So, we'll get into the strategies now, the part that you can put straight to work as you are working with these students. And I do, I really feel that for OTs, our greatest skill is to perform task analysis and address the components of a task to support performance. That is what we do. So we will now talk about the strategies that can strengthen the foundational components of writing in order to make the process of writing less overwhelming and demanding. And of course, this is not an exhaustive list of ideas, but it's a good place to start. The first strategy we will consider is kinesthetic learning and proprioceptive work. So what is that? That is basically tapping into the brain body connection. So using as much of our body at once while learning, and we can do this with writing. Also we can have students forming the letter, the shape of the letters with their body, that's what this exercise is all about, the alphabet exercise which came from the OT toolbox. I do not have any affiliation with them, but it is a resource that I often use. They have a lot of really wonderful ideas that you can also access if you'd like. But the idea with this ABC movement is how can we use the whole body in order to learn about the letter shapes? Another idea is maybe tracing letters on the student's back and they trace on your back and having to guess what the letter is that you're forming. Again, connecting the brain body components together. Proprioceptive work, or otherwise known as heavy work is always an excellent way to get the whole body involved in the learning. My go-to's are always wheel bear walks

wheel bear walks, excuse me, an animal walks. For example, just the other day, I had a student working on the letter S, and so we formed an S on the floor with a hammock type material that I have. And she had to do the bear walk all along the S, so we're getting the whole body involved with learning this one letter shape. Maybe you have big foam blocks or gym equipment that you can use in order to make the shapes of the letters.

So, the student is having to use all of their muscles and their body movement, as they're moving this equipment around and they're learning about the letter shape. Pool noodles are another great tool to use for the same purpose. There are many resources out there such as Pinterest or Teachers Pay Teachers, for example, that you can definitely go to and find ideas that are already created, you don't have to reinvent the wheel for a lot of these things. Again, I don't have any affiliation with them, they're just resources that I really like to use for my own professional use. Our next strategy is multi-sensory activities. So we know that using a variety of experiences and tools increases the brain involvement and activation. So anytime that you can incorporate multiple materials, especially if they're involving different tactile experiences, we know that we are gonna get activate that part of that child's brain and increase the chances of experiential learning.

So, examples or ideas could be sand. You could be writing, it could be in a small sandbox or a sand tray or table. They could be using their fingers. So now we're getting some finger isolation while we're tracing letters or shapes, or pre-writing strokes even. Or they could be using some sort of utensil, maybe a stick or a paintbrush as they're making these shapes in the sand. Foam or shaving cream is also a favorite amongst many of my students. Again, you can work on different finger isolation as you're drawing and writing in the foam. You could be putting the foam up on a window or a mirror, and then now you're also getting vertical surface work at the same time. Playdough is another favorite go-to, making the different shapes, rolling out

the playdough, make your snake turn it into a letter shape. Or it could even be making a bunch of little playdough balls and then having to put those balls into the letter shape.

So finding a different way to use a similar material at the same time. Another one I really like is to put paper over a piece of sandpaper, and then the student writes on the paper and you get just an extra level of friction with that sandpaper underneath. And depending on the grain of the sandpaper, whether it's fine grain or thicker grain, you'll get more or less friction. Even whether that's using a pencil or crayon, you'll get more feedback as you write and feel that sandpaper underneath. And of course there's always water or paint that we can use in many different ways. And chalk, I think of another one that is great to go back to whether it's small, regular, like chalkboard pieces of chalk, the skinnier kind, or if you're using sidewalk chalk then you get a little bit of help with the grasp on the thicker pieces of sidewalk chalk. If you can get the student using the sidewalk, excuse me, sidewalk chalk actually on sidewalk, that's even better, because now we're in a weightbearing position. So you're getting even proprioceptive work while you're working with the multisensory activity of using chalk. Or you can put that chalk, using a vertical chalkboard, then you're getting vertical surface work as well. Some children have a hard time working with chalk because they don't like the feeling on their fingers, but you can find ways to work around, maybe wrapping a piece of paper towel around the chalk for them, they don't feel the chalk on their fingers. But chalk really provides similar to the sandpaper idea. It does provide more feedback from the friction of using the chalk than say a pencil or particularly a whiteboard marker.

So again, we're just getting as much input at once while we're working on these handwriting skills. The next strategy that we have to use is visual processing interventions. So dysgraphia can include visual processing challenges. Most commonly in those kiddos with the spatial dysgraphia type that we talked about earlier. These are

the kiddos who have difficulty with the baseline placement and spacing while they're writing. So, it could be beneficial to work on things such as visual discrimination, left, right orientation visual scanning. With this particular exercise I have here, it's just a simple sheet that I made on a Word document where I have capital letters in different fonts. And I print that out and have it on the table for the student or on the board. And with this one, we usually are working on scanning from left to right while also working on discrimination as they have to find, maybe find the same letter that's printed in different fonts. Sometimes I will also add visual markers on the side if they need some cues, some visual cue for the scanning. Or we may do something like circle the vowels and underlying the confidence so that we're working on visual processing, but now we've added in visual motor skills as we're putting the pen to paper at the same time. So there are many things you can do with one simple letter sheet.

The next strategy is letter formation practice and repetition. So traditional practice and repetition of handwriting are also important in order to form good habits of letter formation. Now, if it's the only thing you do, then you're missing many important components, but also on the other hand, if we never get to practicing actual handwriting, that's missing out on important skills as well. So, you could use a formal writing curriculum and there are many out there. Or you find whatever works best for your student. You could also find out what the teacher implement in the classroom and go with that, or else you will need to communicate with the teacher and the parent as to what you were doing in order to ensure that there's consistency between the classroom and the home and therapy sessions with how they're learning to form these letters so that they don't get confused as which way are they supposed to do it in which setting. We'll get much much more success, if we can also have consistency across all the different environments for these students. And finally, the last strategy that we will discuss is it is addressing basic biomechanical requirements of handwriting. So writing particularly requires a lot of risk control and finger dexterity. So we do want to be sure to include hand and finger strengthening. In these pictures on

the left here, I'm using a TheraBand and working on grasp and pull. Maybe you could be working on wrist isolation and strengthening and also finger strengthening as we're working on grasp. On the right hand side, we're just working with playdough and pinching along a snake. You can be sure to have the student pinch with each finger isolated, working on the thumb strengthening as well, which is going to support the finger grasp. You can also have them squeezing the playdough, pulling the playdough, there's many different exercises quote, unquote that you can use with playdough. Also, activities such as weight bearing or pulling, twisting, pinching, squeezing. Those are all activities that are going to support hand and finger strengthening, which we know we need in order to complete writing tasks.

So, thinking back to our frame of reference that we noted earlier, with the strategies that we just went through, we are mostly addressing the person within that framework. Now, in order to consider the environment and the task itself, we do want to think more about accommodations that we can provide that will support the student. The idea is to help the student convey, excuse me, convey their ideas, their knowledge and produce product that shows that knowledge. And there are many ways to do this, especially if we know that writing is so taxing and difficult, that it affects the student's ability to perform and produce work in the classroom. So, with that in mind, I wanna start with some ideas that are more in the realm of assistive technology. So you would want to get an IT specialist involved if you feel that these strategies would be most appropriate for your student: because they're the ones that can really identify what program or what, which tool will work best for that student needs. Some examples of assistive technology options or resources would be a speech-to-text type program where the student is speaking and the computer or the app is typing out the text for them. So it's a dictation type program. And with these, it's a great way that they can show what they know, or verbalize what they know, but writing is not the point. So for example, maybe with spelling words, or if it's a matter of comprehension type test, writing is not needed to really be able to assess the student's abilities in those areas.

Another option would be recording, the student records themselves speaking, and then they themselves can listen back and write it out. So that they're only having to think of one thing at a time. As they're recording, they're thinking of their ideas and getting them out. And then as they're writing, they're just thinking about the writing. They're not having to also think of what it is they're trying to say, 'cause they've already said it and they have it on the recording. Typing is another good tool or resource for these students because there are much less variables involved in typing, than there is in handwriting.

So for example, think about when you're typing, you don't have to worry about the letter size. You don't have to worry about the letters sitting on the line. Spacing happens automatically when you put that space bar, it makes it creates an appropriate space for you. Letter formation has taken care of and even sometimes, spelling is taken care of if auto-correct is working. So, there's much less that the child has to be focused on while typing. Also, another way to look at it is that when they print out work, then there's going to be a lot less markings on it from corrections because those variables were already taken care of. So there will be less of an effect perhaps on their self-esteem with being able to produce, print out that piece of paper and produce a written quote, unquote written piece of work that looks a lot neater. They can be proud of that product that they have created. The next thing to consider are visual support. What visual supports can we provide these students? So graphic organizers are a great way to shorten work into smaller sections at a time. It also can provide kind of a visual model for how the work should look once it's completed. For these students, it is much easier for them if the visuals are closer to them. So asking them to copy from the board is an added challenge. So if we can put a copy of what is going to be on the board, on their desk, that can be really supportive for them as well.

The next type of accommodations to consider are more work modification type accommodations. If we can provide these students extra time to complete their writing

tasks, that could be a way to reduce pressure and stress around those writing assignments. Maybe there is also an appropriate way we can decrease the workload itself. So again, this is focusing on the product and trying to not overwhelm them with the process. An example may be, if they're working on our worksheet, could it be that they just fill in the keywords instead of complete sentences? If it's a matter of just needing to show their knowledge on a topic. Perhaps they could also work with a buddy and share notes or maybe work on one shared document and the student with dysgraphia can be dictating their input, their ideas to their partner, and the partner can be the one to write down those ideas. And in the end there still is a complete assignment that is turned in. So again, the student is able to show their knowledge in an inappropriate way. These ideas may be things that have to be implemented more in the classroom, but we as occupational therapist or supporting therapists can be the ones to make the suggestions to the teachers, to the team as to what accommodations may work best for the student. It could be things that we're trying out in our session, and then we help implement in the classroom. The last area of accommodation, excuse me, are more physical tools that we could provide for the students. For example, if we know that the student has poor grasp, we could try out different pencil grips in order to support that grasp and reduce strain on the fingers.

Another thing would be looking at the desk space. Desk space as I noted when we were looking at the frame of reference, thinking about the environment is their workspace, what is most supportive or optimal for them to be working. Perhaps they would do well with the vertical or slanted surface. Perhaps they may do best with their page taped up on the wall than we really have a vertical surface. Maybe standing is more comfortable and more supportive for them, and requires less postural activation in order versus having to maintain their posture seated in a chair. It would also be interesting to look into flexible seating. Is there flexible seating available within this child's learning environment? Or is it something that we could test out with the student and see how it works and then be able to implement it in the classroom? And finally

looking at adaptive paper or graph paper, and these are just different styles of paper, which I have pictures here to show you that just provide different visual strategies for the writing. There are lots of different types of paper available and typically each writing curriculum, handwriting program has their own type of paper or kind of set up for writing that they promote. And again, really, it's going to be trying out different things with your student and seeing what works best for them. I love trying the graph paper out and as you can see, it's just showing them that for capital letters, it takes two boxes, you fill up two boxes with the shape of the capital letter. And the lowercase letter fits into either one or two boxes, depending on if it's a small letter, a tall letter or a diver letter to go below the baseline. And this strategy using the graph paper has worked really well for some students and for other students, it has not worked well because it is a little bit visually busy when you have all of the boxes like that. So again, it's trial and error. There is no one size fits all for these tools.

Another example is highlighting either the bottom half of the line space, or that could be the top half, or it could be that the top half is one color and the bottom half is another color. As you can see in the picture on the top left, they've also darkened the baseline in this type of writing paper. So that gives a visual for the student of where the baseline is, where on the contrary, in the bottom, the middle picture there, that student needed more queuing for where the top of the line of the space was, because the student tended to make letters too tall or too big. So for that student, I darkened the top line. So again, trial and error, what is gonna work best for your student, you'll have to try it out. There are also some papers I wanted to mention that have raised lines that give that tactile feedback of where either the bottom or the top lines are. But a easy DIY way to do that is to use Wiki sticks which are just as wax sticks and thin, thin sticks of wax. Again, it's just a way to have a tactile input as to where that either bottom or top both lines are. When you do use a or another way, excuse me, another way to do that is a thin line of hot glue. Again, it's just the tactile, it's just feedback so that they can feel when that pencil or pen bumps into that bottom line and understand

what that means, what bottom line means. When you are using either hot glue or Wiki sticks, it is harder to do the letters that go down below the line. They'll have to go kind of up and over. Wiki sticks tend to be thicker and with hot glue, you can get a little bit thinner line if you do it really carefully. Just something to consider. It's not impossible, it actually gives a nice little, they can feel the bump as they go over that, that baseline, and really get more feedback, more understanding of where that line is.

Last thing I wanted to mention about these different writing papers is sometimes different colors of highlighter can make a difference as well. I've had one particular student tell me that the yellow line yellow highlights was really distracting for them, but that he did much better with blue. And so we started using a blue highlighter and then I actually printed out some sheets of paper where the bottom was highlighted, you know, colored in blue. And I provided those to his teacher. And it was pretty remarkable. The teacher came back to me and let me know that his writing had significantly improved with that blue highlighted space. So don't get stuck on the yellow highlighter, try different things out, see if there's a difference. 'Cause they're just well maybe. And again, there's so many different resources out there that have their own versions of adaptive paper or highlighted paper. Don't feel like you have to come up with it on your own, do a little digging and see what's available out there. Often, there are many that are available for free. There may be some that are low cost as well. And even looking at the different ideas may give you ideas of then how you can kind of DIY it to make your own version of things to see what works best for your students. Those are the adoptive paper and those are the accommodations.

In summary, I just want to reiterate that writing is important, right? It is what we use to help us remember and organize and process information. But if the act of writing is so overwhelming for a student, imagine how much is actually retained or gained from that writing experience. In school, writing is most often how a student shows, what they know as we've already talked about. And if they're constantly struggling to perform, it

will take a toll on their self esteem and perhaps their attitude towards learning. But, we also have to remember that writing is complex. So we have to approach it with different strategies and accommodations, and there is not one quick fix or one size fits all. And we have to try things out and see what works. And in the classroom, if the point is that the student expresses their ideas and knowledge, then focus on how they can do that best in the classroom. In the treatment sessions or during handwriting practice time, that's when we can focus on the physical process of writing. That's why we have to consider both the strategies and the accommodations that will best support them. And I hope that this course has given you some ideas on how you can do that with your students.

There are many questions that I get during my practice about dysgraphia, and I just wanted to share a few of those frequently asked questions with you. And I think the biggest one to begin with is, how can we distinguish between dyspraxia and dysgraphia, because they may present similarly, maybe a child with dyspraxia also has difficulty handwriting. But what I think is important to distinguish is that dyspraxia, is usually going to present itself across many different environments or different activities. It is a much more general dis-coordination for the child. So we could see it on the playground. We could see it in the classroom with not just handwriting activities. Whereas dysgraphia really is just in the difficulty with the handwriting tasks. So if you're seeing it more across the board, it's dyspraxia, whereas if it's just presenting in the handwriting, that's when we're seeing dysgraphia. Another common question I get is, are there items or tools that I always keep in my toolbox? And I do have a couple favorites again, I don't have any affiliation to any of these things, but I love the pencil grasps that have more of the wings per se, so that the student's fingers slide in and they don't come off versus maybe just the round graphs really is gonna help them position those fingers better on the utensil and not have to worry about fumbling, holding that pencil. I love to use putty, something that the students love to use too, and putty can be useful for hand strengthening or for kind of a multisensory approach

making those letter formations. I particularly like thinking putty because it's not as sticky and most students enjoy working with it where sometimes playdough can be too sticky or some other putties can be a little bit too sticky for them. So that's just one that I personally enjoy using.

I also usually have a small TheraBand in in my box. And another thing I love to use is a tennis ball with a slit cut down the side of it, and the child has to pinch it open and we can slide small items in maybe like pennies or, small balls, anything that would fit inside down this hole that we've made and call it tennis ball man. I've even drawn a face on the tennis ball. That is not an idea that I came up with on my own. That is something that you can look up and see what it is that I'm describing, in order to have that visual understanding of what I'm talking about. But it's a great tool if you're working on that, that pinch hand strengthening. And then also some fine motor control with having to pick up a small item and slide it into the slot of the tennis ball there. Another item, I almost always carry around my air cushion, because I really love that it is a way that can provide postural support for students while they're sitting. And that often can support the upper extremity and support the handwriting. I'm also a proponent, whereas this isn't necessarily a tool in my toolbox per se. I really love to promote having students work on a vertical surface. And the easiest way to do that is to take the paper and tape it up on the wall. You don't have to have a fancy slant board or an adjustable desk, put it up on the wall for them. And they're now they're in this really nice upright position. The shoulder is working the arm is working. Granted, I do want to note that this can be fatiguing for students as well. So please keep an eye on that and notice when do they need to move back to that horizontal surface to support them again.

And then I always carry my highlighters, couple of different colored highlighters, maybe a couple of different colored pens, not markers, but actual pen, like a red and a blue pen, so that I can make that baseline or top line stronger colors, try different things out

for students. So those would be my tools in my toolbox. Another question would be what are some take home activities? And I think the best thing to do rather than sending homework per se to family, is to really be promoting those multisensory activities and experiences and finding those organic moments to incorporate the writing practice or the visual motor skills and strengthening into the child's day and into their home. One of my favorite things is to promote cooking, having the student be involved in meal planning or preparation. Maybe they have to write down the list of ingredients for the shopping list.

Now, you're getting some writing practice or read the recipe and create the meal. You're getting all sorts of bi-manual skills, maybe even some postural skills, stirring, maybe some strengthening. And that's all being organically incorporated into the experience. And the last one I wanted to address is how can we best educate teachers about dysgraphia? So often I get teachers say, oh their handwriting is just bad and he's lazy. But really I believe it's our greatest tool to be able to say, no, there's something else going on for the student. There's more to it, and help them understand what is dysgraphia. So providing that moment of education can be really powerful for teachers. And I just wanted to ask you now to think about, how can you apply the strategies and accommodations that we've gone over into your practice, whether it's in the next week or maybe in the next school year. And what are things that I have spoken to you? So really think about what are your takeaways, what can you use with your students sooner rather than later? So thank you for your time. Thank you for being here today. And please feel free to reach out to me anytime. I'm happy to chat with you, should you have any questions. And my information is here for, for you to access. And as I also mentioned, there are my references available for download, if you would like to look farther into any of the information. Thank you so much.

- [Fawn] Thank you Emily for a great talk. I hope everyone joins us again on continued for other school-based topics. And I appreciate everyone's time, thank you.

