

Supporting Messy Play with Infants and Toddlers

Sarah Lytle: Hello everyone, and thank you for attending today's webinar, "Supporting Messy Play with Infants and Toddlers" as part of the "Baby Talks" webinar series. "Baby Talks" is a series of webinars for teachers, providers, and home visitors working with infants and toddlers serving Early Head Start, Head Start, and child care programs. These webinars will introduce you to some of the research behind the Head Start Early Learning Outcomes Framework, the ELOF.

My name is Sarah Lytle, and I will be helping to facilitate today's session along with my colleague, Dawson Nichols. We're from the National Center on Early Childhood Development, Teaching, and Learning, and are based at the University of Washington's Institute for Learning and Brain Sciences, or I-LABS. I-LABS is a partner organization in the NCECDTL Consortium, and it's one of the leading infant research centers in the country.

Before we begin, I would like to go over some information regarding the webinar. We will be using some of the features of this webinar platform to help us interact. At the bottom of your screen, you will notice these widgets. If you have any questions during the webcast, you can submit them through the purple Q&A widget. We will try to answer these during the webcast. Please know that we do capture all questions. A copy of today's slide deck, and additional resources, are available in the resource list, which is the green widget. We encourage you to download any resources or links that you may find useful.

Throughout this session, we may use the yellow idea widget to engage. You can find additional answers to some common technical issues located in the yellow help widget at the bottom of your screen. You can also find the closed captioning widgets in both English and Spanish. Each of these widgets are resizable and movable for a customized experience. Simply click on the widget, move it by dragging and dropping, and resize using the arrows at the top corners. Finally, if you have trouble, try refreshing your browser by pressing F5. Be sure to log off of your VPN and exit out of any other browsers. So, thank you all for joining us today, and I will turn it over now to our presenter, Dawson Nichols.

Dawson Nichols: Thanks, Sarah. Hello everyone. I am really excited to be talking to you about supporting messy play with infants and toddlers. Today we'll be talking about why we do messy play, how we do messy play, and how we can best support infants and toddlers as they get messy. And to be clear from the start, messy play refers to the activity of exploring materials with the senses. It can happen at your sensory table or at your water table, but it also happens when you invite children to have an experience with clay or make a collection of leaves you've gathered from outside.

Actual messiness is sometimes part of this, but it isn't always. The "messy" in the messy play title simply means messing about as in exploring, playing with, experimenting. In "The Wind in the Willows," one of my children's favorite books, it's what Rat says to Mole about boats. "Believe me, my young friend, there is nothing, absolutely nothing, half so much worth doing as simply messing about in boats." Rat loves messing about in boats. Children love messing about with different materials. They love pouring water, mixing sand, putting things on shelves—or

clearing shelves—kneading PlayDoh or clay, smearing whipped cream. That's messy play, and it is a terrific way for infants and toddlers to learn about sensory perception, body awareness, cause and effect relationships, to develop motor skills, concentration, persistence, self-control. Messy play can provide rich and inclusive language experiences, making it a great way to address the needs of children who are dual language learners, as well.

And messy play provides activities that scale according to children's abilities, so it's perfect for children with disabilities or suspected delays. Children learn so much through messy play, and it's fun. Well, it's fun for the children. Messy play, as we must admit, is sometimes, well, messy, which is not always fun for the adults involved. We all like the play part, but messy? Wouldn't most of us rather have our children involved in tidy play, orderly play, or how about quiet and calm play that leaves the place cleaner than it was before?

Yeah, let's organize that kind of play. That would be good. OK. Yes. We all like orderly environments, and yes, messy play can get messy, but it is worth the effort. If there was any doubt about that, we wouldn't all be gathered for this webinar. Messy play is, without exaggeration, one of the most important kinds of early learning experiences we can offer to infants and toddlers. It builds foundational skills that are crucial for later development. As Ralph Waldo Emerson put it so beautifully, "The child amidst his baubles is learning the action of light, motion, gravity, muscular force," which is not to say that it's easy. It isn't always easy, and that makes some people avoid it. You may be one of those people. In fact, before we begin, let's take a poll to see where we as a group stand.

On a scale from one to five, with one being "I do not like messy play," and five being "I love it," how comfortable are you with messy play? This is not a scientific poll. I just want to get a sense of where people are. You should be able to vote now. I'll give you a few seconds, and then we'll see where we are as a group. Go ahead and vote now. I see some results coming in. It looks like quite a few people are really happy with messy play and comfortable with it. That's great.

Excellent. Thank you for that. Those of you who are not so comfortable with messy play, you should know that you are not alone, and it's OK. There are a lot of material engagements that aren't very messy at all, so be aware that you have options, and we will talk about those, but hopefully by the end of this webinar, we will have eased your concerns, even about some of the messier kinds of messy play. Hopefully you'll have some talking points to share with hesitant parents too.

We will see, so let's go. Alright. Here are our objectives and what you're going to get out of this webinar. When it's over, you will be able to describe what messy play is and why it is so important to infant and toddler development. Messy play promotes learning in all ELOF domains, but we'll focus on three, and by the end of this webinar, you'll be able to identify how messy play promotes learning in them. You'll also be able to design activities and environments to support learning through messy play and to support fun. Fun is actually one of the goals with messy play. It's messy play, not messy work.

OK. Let's start with a definition. Messy play is, "Play that emphasizes the active exploration of materials and their properties," and that seems pretty straightforward, but let's unpack it a little bit. Three things. First, notice that we're talking about the exploration of materials and

their properties. Is this stuff soft or hard, heavy or light, squishy or solid, dry or liquidy? Most parents, and people who work with very young children, have had that moment when they realize that infants and toddlers have to learn everything about the world—everything! And that's what they're doing most of the time.

They're learning. Pushing that bowl off the tray again and again and again, that's not necessarily defiance. Often, that behavior is developmentally appropriate. The child is experimenting with gravity. Mouthing that shoe? That's not hunger. That's an infant using her most sensitive and readily available instrument to test the properties of her footwear. She's a little scientist, testing, testing, testing, learning. Messy play gives children these experiences so that they can conduct these experiments and learn. They are little scientists, and if we give them the right materials, in a safe laboratory, say, whipped cream and some food coloring, non-staining please, they will do what comes naturally, experiment and learn. Second, this is active exploration. Children experiment with the world in an active and hands-on way, or for instance in toddlers, a mouths-on way, from a very early age, and messy play allows them to explore and experiment in developmentally appropriate ways. It's an activity that expands as their abilities expand.

Finally, this is play. Specifically, this is child-directed play. As this grid shows, children's activities can be divided into four types depending on who initiates the activity and who directs the activity. Messy play fits into that top row, and we're concentrating on the right square—guided play. Children will inevitably explore materials on their own, just as they encounter them in daily life, but for our purposes, we want to focus on material exploration that is prepared and initiated by adults but still directed by the children. This is play with a purpose. It's serious learning, and it's sometimes messy, but before moving on, I want to emphasize that messy play is not about getting filthy. There may be some mess, but this is about exploring materials, not getting dirty. Children who are doing an activity with shredded paper, they're not getting filthy, but they are engaging in messy play.

Messy play is also not disorganized or out of control. Children benefit most from exploring materials that are prepared and well organized. I want to highlight the exploration for just a minute. One of the wonderful things about messy play is that it allows children to perform their own experiments on their own schedule. This allows children to play at whatever developmental level is appropriate for them. It's up to us to choose materials and activities that are developmentally appropriate, and as I describe activities in this webinar, please do be aware that not all activities and materials are appropriate for all ages, but my point here is that this is a child-directed activity, so children should be allowed to engage however they like. For example, children engaged in messy play may repeat actions as many times as they like. They can pour and pour again, arrange then rearrange, mix and stir, and smear and smush over and over and over.

That's part of the play, but it's also how children explore and practice and figure things out. It's how they learn, and there's research to back this up. Researchers as early as the 19th century were interested in how we learn through our senses. They devised experiments in which subjects wore glasses like these with mirrors that turned the world upside down for the viewer. It was extremely disorienting. Imagine trying to walk with everything turned upside down. The

researchers wanted to know if a person would be able to learn to navigate the world like this. Well, it took them time, and there was some nausea involved, but the answer was yes, and studies like this have been done again and again. But here's the thing though, just looking around doesn't allow subjects to adjust to the glasses. They have to move.

The only way you adapt is by moving in the world, by reaching for things and moving your body in the world. When something is really new to you, to learn about it, you have to touch things, repeat actions, move around, which is important for messy play because when children have developed to the point where they can engage in messy play, now they're in a position to do this exploration for themselves. They can create their own experiments, do their own investigations. They can squish this way, that way, the other way, and figure out how things work, and it may not look like scientific investigation, but that's exactly what it is. This is especially true for infants and toddlers. They can't learn about how ice melts from a description, but they can feel it. They can't learn how clay stretches from Wikipedia, but they can stretch it themselves.

Let's look at an example of this. Let's watch this short video of a toddler exploring paint. As we watch, think about what she is doing and what she is learning. OK, here we go.

[Video begins]

Child: [Indistinct talking]

Educator: Let me wash your hands, come here. We need to wash your hands.

Child: [Speaking indistinctly]

Educator: Yes. OK. Open the water.

[Indistinct talking]

Wash. Again. Ready? Wash, wash, wash your hands. Let's go. You're finished? OK. Come over here. Let me wash your hands.

[Video ends]

Dawson: So cute. OK. Let's do a pulse check. Were you able to see this little girl learning? Was she learning anything? Give a thumbs up if you think that she was, and a thumbs down if you think that she wasn't. Let's see what people think. Here we go. You should be able to do it now. Getting a lot of thumbs up.

OK. I'm going to leave it open for just another minute. Get your votes in.

OK. We've got quite a few giving us thumbs up and only a couple giving thumbs down. Well, she was learning. She was exploring and experimenting and feeling how the paint moved. She was learning about paint as a material. How does it get onto the brush? How does it move on the paper? That's messy play. Even this simple activity is rich in learning. Alright. We have described messy play and seen it at work.

Now let's break down the learning more specifically. What are children learning when they engage in messy play. One way to examine this is through the ELOF domains. ELOF is the Head

Start Early Learning Outcomes Framework, and it describes the skills, behaviors, and knowledge that programs must foster in all children.

The five learning domains in the ELOF for infants and toddlers are perceptual, motor and physical development, social and emotional development, language and communication, cognition, and approaches to learning. It's worth remembering that children don't keep this learning domains separated. Learning is, pardon the pun, messy. For example, children will build gross motor skills on the playground, but they may also be doing some important language learning at the same time.

A child working on cognitive and math skills while doing a puzzle may also be building social skills. We talk about these learning domains separately, but in practice they usually mush together. This is a good time to note that you might be familiar with the acronym STEAM. Head Start uses this acronym to talk about learning through a focus on science, technology, engineering, arts, and math. Messy play is a great way to connect learning in these different areas. They do—They do all work together. If you're interested in learning more about STEAM, make sure you join the Teacher Time webinar series this year, all focused on STEAM. Messy play involves all ELOF domains, but for the sake of simplicity, again, we'll look at three as examples. Let's start with perceptual, motor and physical development. This is sub-domain number one, perception.

The goal, as you see, is to use perceptual information to understand objects, experiences, and interactions. This is almost just rephrasing our definition of messy play. It allows children to use their senses to directly explore objects like we just saw that little girl doing. Indicators, like those listed on the right, describe specific observable behaviors, and concepts, that children should have at specific ages.

OK, look at these. Combines information gained through the senses to understand objects, experiences, and interactions. We saw that little girl doing this moments ago. Before you can paint paintings, you need to figure out the basics of how paint works on the paper. That's what she was doing, watching how it smears on the paper but also feeling how it scoops with the brush, testing the stickiness of the paint in the container. And note again that because this is exploratory activity, she can engage at whatever level is appropriate for her. This makes it a perfect activity for children with disabilities or suspected delays.

Messy play is explicitly designed to give children foundational sensory experiences, and does messy play address other areas of this domain, motor and physical development? Yes. Messy play encourages children to develop fine and gross motor skills, spatial sense, and to build an awareness of their bodies and how their bodies work. These are the foundational skills upon which other skills rely. That's why this kind of instruction is so, so important.

Research strongly suggests that children who explore more with their senses learn physical principles more quickly, and a longitudinal study of more than 21,000 children clearly demonstrates that early visual and motor skills are related to later math and language skills, which makes sense. Skills and knowledge build on earlier skills and knowledge. A child can't cut out shapes or draw letters or brush teeth, which are later development markers in this domain,

until she has first had lots of sensory exploration and practice with motor skills and coordination. Messy play provides these, and it does it in a motivated, fun way.

Cognition is another ELOF domain, and here is the sub-domain of exploration and discovery. Will messy play help develop cognition? Child actively explores people and objects. Again, exploration like this child is doing is the whole point of messy play. Uses the senses, acts intentionally, observes and experiments with how things work. Messy play encourages all of these. These children are experimenting with how water works. They observe how the water flows through the toy, experiment with different amounts. They're messing about with water. They are little scientists. Messy play provides them with opportunities to do lots and lots of experiments.

An important area of the Approaches to Learning domain is self-regulation. The goal is child maintains focus and sustains attention with support. What are some indicators? Chooses to join in activities or pays attention to tasks and activities that are self-initiated, maintains focus and attention. Look how focused these children are. Because messy play is intrinsically motivated, it gives children a great deal of practice with focus and attention, and it does so in an environment in which children are likely to have success. They're paying attention, maintaining focus because they want to. They like it, and if you can do it alongside them, research shows that may be even better. Modeling persistence has been shown to help children build persistence of their own.

For example, researchers at MIT recently conducted an experiment in which infants saw an adult play with a toy. The toy first had to be removed from a container. Some infants saw an adult easily obtain the toy three times in 30 seconds. Others watched as an adult struggled to get the toy out of the container and only achieved it once in 30 seconds. The children were then given the opportunity to play with a toy of their own, a music box, but here's the thing, the button the children had seen the adults use to turn the box on didn't really work. The experimenters wanted to see which group of children would persist longer in trying to get the toy to work. Sure enough, those children who had seen an adult struggle to get at a toy persisted longer. This suggests that intentionally playing alongside children during messy play, modeling persistence has real benefits for children.

Again, you want to provide children with interesting materials, and you want to allow them to explore in their own way, but you also want to be intentional about helping them stay on task. Playing alongside them is one of the best ways to do this. Your own play provides an example of curiosity and creativity and persistence. Children learn from that, too. OK. We've discussed how messy play engages the three ELOF domains—in bold here—but as I said before, it really helps children develop in them all. That includes social and emotional development and language and communication. We don't have time to look at these ELOF domains in detail, but think back to your own experiences with messy play.

Can you think of ways in which messy play helps develop these?

Let's do a pulse check again. Give a thumb up if you can think of ways in which messy play engages one of these two domains. Give a thumb down if you think it doesn't. Ready? Go. Should be available to you now. Quite a few thumbs up. Again, we're thinking about social and

emotional development and also language and communication. Can messy play help in these areas as well? There seems to be overwhelming consensus that yes, it could—and does. Messy play provides rich opportunities to learn about sharing and working together and emotional regulation. It also offers rich language opportunities. Think about it. You can introduce all sorts of vocabulary, and if you're in a bilingual or dual language learning situation, you can take the opportunity to engage children in different languages. Learning happens in unpredictable ways, especially through play.

Alison Gopnik, one of the most influential researchers in childhood development, has summed up recent research this way. The research has begun to demonstrate scientifically what most teachers feel intuitively. Children's spontaneous exploratory play is designed to help them learn. Yes, and when we provide children with interesting materials and give them time to use their natural curiosity to explore those materials, we are engaging that exploratory play that is designed to help them learn.

Alright. We've described messy play. We've talked about how messy play promotes development in different ELOF domains. We've learned a little bit about the science that supports this kind of learning. Now let's talk about different messy play activities. Dividing something as complex and varied as messy play into categories is never clean, but I thought I would like to talk about three broad categories of messy play.

Here they are: dry materials, wet materials, and outdoor play. This is a practical way to distinguish between messy play activities because these categories require different preparation, different equipment and cleanup. Let's begin with dry materials.

Dry materials provide infants and toddlers with wonderful sensory experiences. These materials are great for mixing, sifting, pouring, ordering, making designs. Examples include sand, balls, paper—whole or crumpled or ripped—cardboard, cloth. This is a good place to mention that although food items are often wonderful for children to explore, we want to be sensitive to the fact that some families may not feel comfortable with having children use food for sensory exploration. They may object on moral grounds, or they may be of limited means and find it awkward or insensitive. Every situation is different, but do try to make sure that your material engagements aren't offensive to any of your families.

If you are able to use food items, you still want to be careful with children who are putting things in their mouths. Generally, dry materials are safe and not expensive. They can be confined to a table or bin fairly readily, but remember that this exploration should be allowed to take place in an environment where spilling is OK. Certainly there can be an expectation that we try not to spill, but there should also be assurance that if spilling happens, that's OK. Logistically, dry material messy play is probably the easiest kind to offer. Because they're generally easier to clean up, dry material activities can take place in a shorter amount of time, too. It's also easier to leave them and then return to them on a subsequent day or reuse them in different ways.

Cups and funnels make a sand-filled bin great for pouring activities one day, but replace the cups and funnels with cars and trucks, and that same bin can be used for a different sensory experience the following day. Now, it's all about pushing, making patterns. This is a good time

to point out that some of these activities can be done very quickly. Here's an example of something that need only take a few minutes. It also has the advantage that it can be set up to fill in when other activities aren't available.

Set an empty box next to a stack of newspapers. Tell your toddlers that you sometimes send packages, and it's good to have torn or crumpled paper to use. This is an inexpensive, relatively clean activity with rich material engagement for toddlers who have moved beyond exploring with their mouths. The tearing and crumpling they do will exercise their motor skills and teach them about cause and effect. They can work at their own pace, their own skill level, and they can have the satisfaction of knowing that they are making a real contribution. They're helping making packing material.

Wet materials are more difficult to work with, but remember more than 70% of the world is covered with water. Our brains are 73% water. Our lungs are 83% water. We need to know about this wet stuff. Seriously. Children do benefit from engaging with squishy, gooey, slidey, foamy, slimy, squirchy, squelchy stuff. The materials of the world are not all dry, and a lot of the most interesting things, and the most fun things, are at least a little wet. Here's a representative list in relative order from mostly dry to wet. As you can see from this list, there are plenty of materials to engage with even if children are still putting things in their mouths. Please, always make sure you know about allergies, by the way, and paint of course, non-toxic, please.

Messy play with wet materials can be more difficult to manage, but many children are captivated by sticky, tacky, slidey, sproochy, splashy wet materials, and they provide wonderful opportunities for exploration, experimentation, and development across ELOF's domains. These activities can bring about the kind of really joyful engagement that builds attention, focus, curiosity, and persistence as it engages the senses. It is so helpful for a child's development. Remember that all children are different though, and some children are highly sensitive to gooey or sticky items or loud noises.

It's always important to be aware of individual children's needs. If a child doesn't like sticky items, maybe substitute a dry material for them to explore, and remember, this is a child-directed activity, so children should be allowed to engage in the way that is most comfortable for them. We're there to facilitate the engagement, but if the child wants to sit back and watch, that's OK, too. Don't forget that mixing wet and dry materials is fun, too. Larger beads, balls, sponges floating in water are so much fun to play with. Drop them, sift them, pour them, sink them, see what floats, see what sinks. Make it a game. Wet and dry material exploration can go together.

Bibs often work, but if there's going to be some splashing, consider asking parents to bring in some extra clothes or have a few T-shirts around yourself just in case. A little preparation can make all the difference, which is something you can share with messy-averse parents, too. Having an extra T-shirt or pair of pants on hand can alleviate a lot of anxiety. An extra pair of sneakers can be the difference between a forced march in the rain and a puddle stomping delight. Messy play with wet materials doesn't have to be more difficult. With good planning and a contained environment, wet play can be completely manageable.

Water and ice are wonderful materials, and they clean up pretty easily. An inexpensive shower curtain or painting tarp can make even paint or pudding play a breeze to clean up. Speaking of which, wet material engagement doesn't have to be expensive either. A used yogurt container filled with water, some brushes or sponges or even just fingers. Water drawing on a chalkboard is a terrific activity. Easy setup, easy cleanup, and you get to see the images slowly disappear. Or you can bring children outside, and they can water paint on the sun-warmed cement. That won't require any cleanup at all. The point is messy play with wet materials is manageable even if you only have a little time. You can still give the children in your care a great experience engaging with materials.

OK. We've got a wealth of experience and knowledge and expertise present online here. I would like to take advantage of that now. Let's use the ideas widget to crowd source some ideas, share other wet and dry material activities that you have tried. This widget works in parallel with the presentation, so you can open and close it as you like, and refer to it during the remainder of the webinar. You'll be able to share ideas, give thumbs up to the ones you like, and collect some good ideas for future messy play activities. And these will be ones that have already proven successful. I'm going to keep going with the webinar, but I encourage you to open that widget now and share your successful activities, and thank you in advance for all of your ideas.

OK. Onward. We've covered wet and dry materials. Now let's look at outdoor play. This is its own category mainly for logistical reasons. Going outside isn't always easy. Access to the outdoors can be limited. Getting children outside can be difficult and time-consuming, and some people live in climates that don't invite outdoor play during parts of the year. When this is the case, consider bringing outdoor materials inside. Snow is a wonderful material inside or out, and children are delighted to find it in the sensory table.

Crunching through autumn leaves on a path in the woods is great, but you can crunch them on a nature table too. Even if going outside is impractical, remember that you can bring materials from the outside in, too. Still, if you can, I urge you to help your children explore materials in the outdoors. Children often love being outdoors, and the material engagement that can happen there often can't be done indoors. Let's look at a short video of some children playing in a sandbox. These infants and toddlers engage in material exploration. As you watch the video, think about the ELOF domains we've discussed. OK. Here we go.

[Video begins]

Educator: [Speaking in Spanish] ¿Quieres mas agua? ¿Si? Mira.

[Inaudible]

Mas agua para ti. ¿Quieres mas agua, Victor?

Girl: [Inaudible]

Educator: Good. Oh, you want me to put the water in here? Yes? It's coming. Oh. It's coming. Look.

[Speaking in Spanish]

Uno, dos, tres. Arriba. ¿Quieres mas? ¿Si? ¿Quieres mas agua? OK.

[Speaking Spanish]

Aqui. Alli. Mira. Aqui. OK.

[Speaking in Spanish]

Pon la manguera asi. Alli viene el agua. OK.

[Video ends]

Dawson: Oh, what a great video of messy play in an outdoor environment. The environment included materials that were open-ended, varied and accessible: sand, water, buckets, a water hose, and most of all, the children were allowed to get as messy and engaged as they wanted to. Toddlers were able to explore the properties of sand and how it gets muddy when wet, the cause and effect of pouring water down a tunnel and coming out the other end. They were also able to explore the water hose and see where the water comes from.

Oh, and I did want to mention that sound is often less of a problem outdoors. Sound is an important developmental area, and children delight in making sounds. This is much easier to do outside where clapping and stomping and banging and whooping aren't as disruptive as they might be indoors. Being outdoors can also lead to being in natural environments, and these can provide even more materials to engage with, dirt and mud and bark and seeds and stones. Children can really benefit from exploring these diverse materials. Nature offered the original opportunities for messy play, and it still offers some of the best.

Going out regularly and allowing children to dig in the dirt, splash in puddles, paint on sidewalks, this can be so beneficial, and don't let the weather get in the way. Rain doesn't have to be a problem. It can be a feature of being outside. It's a material. Explore it. Exploring ice on a tray indoors is terrific, but finding icicles outdoors adds excitement and adventure. Now let's look at messy play environments and how we can best guide children through them. Wet and dry and outdoor material engagements are all different, but adults can ensure that the environments in which they take place are effective.

The environment should be safe, defined, cleanable, organized and equipped, and inviting. Safety is, as always, the most important consideration. Is slipping and falling more likely during this activity? Will little fingers be putting things in little mouths? Are there allergies? Planning ahead for safety is important, so be sure to work with teachers and staff to ensure that the environment is ready for the activity. Messy play is best done in a defined space. This doesn't mean that messy play needs to be done in the same place every time, no. It simply means that before engaging in messy play, we take the time to somehow mark off the area in which it will take place.

We want to give children cues that will help them understand what behaviors are appropriate, and defining the space is one way to do this. For example, spreading out a tarp before playing with sand indoors lets even very young children know that this is a contained activity. A space was prepared for it. When you enter this space, you are welcome to engage with this material in a way that isn't always allowed. You can step in it, sit in it, or pour it on your legs. When we clean up and the tarp goes away, that's a cue that the messy play is over.

So, we want a defined space, but we don't want to spend our entire lives cleaning up. Preparation before messy play is the key to happiness after messy play. Tarps are great, as are other temporary floor or table coverings. Shower curtains work great too, and you can get them cheap. Hard floors are easier to clean than carpets, so if you have both, set up that tactile table full of dirt on an easily cleaned non-skip carpet over the hard floor. If you're doing an activity that will require water for cleanup, consider doing the activity nearer to the sink or cleanup area—or outside. Don't forget the smocks for the children. Communication between adults is a part of preparation, too.

Let other teachers and staff know what you're doing, how you're using shared spaces and materials, how long it will take. Plan ahead, but plan together also. Remember, too, that cleaning up is a life skill, and we can help children learn that too. Leaving time for cleanup at the end of messy play is a great way to transition to other activities. It can help children learn responsibility and provide a helpful cue that the messy play is finished. Organization is part of the preparation, of course, but it's not just about keeping things contained and cleanable. An organized space can orient children and make them feel welcome.

Remember, children need cues to let them know what to do. If, for example, the tools for playing in sand are strewn all around, children may be unsure what to do. Is someone else playing? Is this meant to stay here? Am I allowed to use these? If, instead, the tools are clean and organized, children feel more sure of themselves. They feel invited, and they will more readily take part in the activity. Similarly, if there are too many tools, a child might feel overwhelmed.

All the tools don't need to be available all the time, and putting out only a few at a time can keep things organized and make the activity more inviting. Of course, organization can involve labeling things. Whether you're working with dual language learners or not, consider labeling things in multiple languages. Even the youngest learners will benefit from being around multiple languages. Developmentally appropriate and inclusive tools and materials are important, too. Remember the girl we saw painting earlier? Remember the wide handle on her paintbrush? Something as simple as that can be the difference between a successful experience and a meltdown, so be thinking about developmentally appropriate tools. If the materials are available in a safe, orderly, organized, and well-equipped space, you've already created an inviting environment. Congratulations.

Children spend the majority of their time in situations where messiness is unwelcome. That's neither good nor bad. It's just the way the world is. This is a space where children understand that they can create a mess without feeling bad about it. Remember that we need to designate a time for messy play too. This is an activity that works best when children are allowed to engage with minimal time constraints, without feeling pressured to get started or to complete the activity fast. Exploration and experimentation require time, so allowing plenty of it is key. The goal is not to produce a product here. The exploration is the goal. Finally, let's turn to guiding messy play.

Messy play is a child-directed activity, but adults are still there to facilitate and guide. What are the effective practices for making this engagement as rich as it can be? Prepare the environment, model persistence, provide autonomy, make it social, and of course, have fun.

The first effective practice is setting up the environment, as we discussed. You want a place where children can safely explore materials at their own pace. At their own pace, by the way, also means there's no hurry to move from one developmental stage to another.

Children develop at different rates. That's fine. Don't rush the scientists. Research indicates that allowing children to direct their own exploration leads to superior learning. So, as much as you can, follow the child's lead. How? Well, we've already talked about modeling persistence. Patiently working alongside a child can help build her persistence. This is a very effective practice, and it helps with another effective practice, providing autonomy. As much as we can, we want messy play to be a child-directed activity. Now children sometimes need help opening a box, squeezing a tube of paint, cleaning out a sponge.

It's fine to help, but be sure you're not swooping in too quickly to do something that the children could do for themselves. The more autonomy you can give to children during messy play, the better. Autonomy is one of the things children enjoy about messy play, and tackling difficult tasks is where a lot of the learning and skill building takes place. Providing autonomy also means that we resist making too many suggestions or giving too many tips. It can be tempting to intervene when a child seems to be doing the same thing over and over or using a tool in an unconventional way, but resist directing the child's experience. If the child is engaging with the material, autonomous exploration is almost always more fruitful than any direction you can give, which is not to say that you shouldn't talk to the child.

Research also indicates that social interaction is a great boost to children's learning, so talk, just don't direct. Make observations. "That is a big swirl of red." "I like that 'shh' sound of the sand." Ask questions. "How did that feel on your feet?" "Do you think this will float?" Not too many questions. Again, there's no need to rush. We want the children to enjoy the materials and the process. Messy play can be a great time to introduce new vocabulary.

Remember to do it in the context of the play, not as direct instruction. Saying something like, "Ooh, I like the squishiness of this. It squirts through my fingers." That's great. You're playing alongside the children, and the conversation is a part of the play, and if you are working with children who are dual language learners, this provides a perfect opportunity to present vocabulary in another language. "Me gusta pintar con agua."

As with all activities, you need to be sensitive to the emotions of the children. Working with materials can be a lot of fun, but it can also lead to frustration. When frustrations rise, be ready to help children, work through their feelings. This is tricky stuff, and it takes practice and patience, but it pays off in the end, and remember, it can be a lot of fun, which is the last thing I'd like to leave you with. Hopefully the children in your care will have fun with messy play, but hopefully you will too, and I say this partly because I think we're all entitled to have some fun in life, but also because this is probably the most effective practice. And since that's true, and since we have so much expertise gathered together here, let's take a moment to share some ideas one last time.

Through the ideas widget you've been sharing some effective wet and dry messy play activities. Now let's share our favorite messy play activities, wet, dry, outdoor, whatever. This time, we'll share them live through the Q&A widget. Open that widget and, without going into too much

detail, let us know what messy play activities you have most enjoyed in your practice. You explored materials with the children in your care. What's been the most fun? Let's share. We can all leave with some great new ideas. So, open the Q&A, and let's chat. Let's do that now.

Sarah: Alright. We're waiting for some responses to come into the Q&A widget here. Here we go, some beginning ones. Some colored shaving cream, and someone has even suggested driving cars through shaving cream.

Dawson: Nice.

Sarah: Painting with our feet, frozen ice with hidden gems inside. I like that one a lot. Outdoor play activities, water play. Veronica says, "One Halloween we washed pumpkins." I love that idea.

Dawson: Oh, yeah.

Sarah: Shaving cream with almost anything, homemade PlayDoh.

Dawson: I spent so much time painting with shaving cream with my own children.

Sarah: Lola says water and dirt, making mud. It's a great outdoor activity.

Dawson: And not just for children.

Sarah: So, some ideas about food. So, Lisa and Amanda suggest dry rice and oatmeal.

Dawson: Yeah, and there's a lot of recipes online for coloring the rice, and you can put different colors of rice near one another and make patterns and things. It's wonderful.

Sarah: I like this one, too. Sarah says, "Painting with pine needles and pine cones." That's a great way to bring some of those outdoor materials inside.

Dawson: Yeah, yeah. Bubbles, yes. Children love bubbles.

Sarah: Oh, I love this. Sorry, one more. This is a good one. "My toddler loves painting with pudding as we read the story of 'Brown Bear.' "

Dawson: Nice. Alright. Those are great ideas and fun, which is great because genuinely enjoying the experience yourself as an adult is the best way to guide children through the experience, too. The more interested you are, the more interested they will be. The more you concentrate, the more they'll concentrate. The more you model curiosity and creativity and persistence, and joy, the more the children will realize that they can experience those things, too.

Children are very often unable to do what adults do. To be in a situation where they are working alongside you, seeing you do things and enjoying them and doing those same things, for children that is exciting. It is inspiring. And isn't it nice to know that your enjoyment is linked to positive outcomes for the children in your care? I think so. And that is it. My final message to you, share messy play with the children in your care. Do it often, mix it up, enjoy.

Sarah: Wonderful. Thank you, Dawson. Before we close the webinar, we want to invite everyone to join us for the Teacher Time series

"Little Scientists: Exploring STEAM." These infant, toddler, and pre-school Teacher Time sessions focus on science, technology, engineering, arts, and math, STEAM concepts. Each

month, we'll review a STEAM component and tips for using art to reinforce learning, explore strategies and teaching practices that help infants, toddlers, and preschools develop reasoning, creativity, problem-solving, and language and communication skills.

Participants will have a chance to ask questions related to children's development of STEAM concepts and skills. Ask your education manager about the Teacher Time STEAM Celebration Box, which includes resources, helpful tips, and activities you can use to engage children and families.

And that brings us to the end of our webinar. A couple of quick reminders before we let you go. If you found this webinar to be helpful, please share the ideas with your colleagues or send them to watch the webinar for themselves. It will be posted on the ECLKC website.