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Sharing Key Experiences

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This book is dedicated to our Arkansas Children's Week advisors, advocates, and Ambassadors, past, present, and future. Thank you for helping guide the way!

Sharing Key Experiences

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This book focuses on five kinds of everyday experiences that support children's learning and development. In each section, you'll find information about child development, ideas to share with children, and ways to support and encourage each child.

Welcome to Arkansas Children's Week 2024. We're glad you're here!!

Constructive Experiences

Constructive Experiences include

- Block play
- Ramp making
- Building dens, hideouts, and other enclosures
- Work with Lego, magnetic tiles, and other interlocking materials
- Sculpture making, especially when a variety of materials are combined
- Engineering challenges

It's all about arranging and combining materials to create something new.
When children engage in constructive experiences, they design, arrange, stack, connect, build, and even demolish things!

On the following pages, we'll take a closer look at the constructive behaviors of infants and toddlers, preschoolers, and schoolagers. In the middle of the section, you'll find some simple ideas to share with children. Then, we'll consider the benefits of constructive experiences for builders of all ages.

Constructive Experiences with Infants and Toddlers

Very young children investigate materials by handling and moving them. These early explorations are vital as infants and toddlers discover their capabilities. They're honing their physical abilities to reach, grasp, and maneuver things and learning about attributes such as size, shape, weight, and texture.

Ideal constructive materials are easy for infants and toddlers to handle and practical for adults to clean or replace as needed. Possibilities include but are not limited to vinyl-covered foam blocks, large Duplo bricks, graduated nesting and stacking sets, and cardboard boxes. Older toddlers may be ready for wooden unit blocks.

You might notice the following behaviors when you observe infants and toddlers at play.

Sensory Exploration

When a child bangs blocks or other materials together, she experiments with the sounds she can create. You might also see her touch blocks to her cheek or lips, taste them, tap them, or lean in for a closer look. These are all examples of sensory exploration. She might investigate softness or hardness, solidity or hollowness, angles or roundness.

Motion and Movement

When a child upends a container of objects, scattering pieces across the floor, he learns about cause and effect, trajectory, and flow. It might feel powerful to know that he made something exciting happen! Other explorations of movement and motion include tossing, swiping, or sliding items. Older toddlers may delight in crashing down towers of stacked materials.

Transporting Pieces

You may see a child gather and carry pieces around the play area. She might bring you one piece at a time or make a pile of things she has moved from one place to another. This way of playing could be an exploration of her physical ability to navigate and make intentional changes to her play space. Grasping, carrying, and releasing materials is a meaningful pattern of movement that she can repeat again and again. She's also building the foundational knowledge that she'll need to make sense of math concepts like *some, more, all,* and *none.*

Container Play
Gathering and carrying become more strategic when a toddler discovers that he can load materials into bins, bags, baskets, or other accessible containers. He might explore size and quantity as he works to make pieces fit. Now that he's using containers as a tool, he can transport items more efficiently while engaging in the satisfying physical challenge of hauling bigger and heavier things.

Rows and Stacks
A child may arrange pieces in a row along the floor or line them up on a low windowsill. Vertical stacks of pieces may emerge, too. For a toddler, this work requires concentration, focus, and the repetition of careful movement. Building something that gets longer or taller with each added piece could feel satisfying!

Planning Constructive Experiences for Infants and Toddlers

Spark interest and scaffold learning by providing fresh invitations to play throughout the year. Here are some possibilities.

- Cardboard boxes for children to use in their outdoor play area
- Sturdy cardboard shipping tubes with balls that can roll through
- Steel baking sheets and metal jar lids, paired with toddler-safe magnetic blocks

As toddlers grow, they'll want more space for their work. They may be interested in using constructive materials on the floor, on a tabletop, or even under the table. Low windowsills and shoulder-height shelf tops may also be intriguing places to work. With very young builders, we strive to balance safety and flexibility. Rather than limiting materials to a single corner of the room, children can be allowed to follow their own ideas. We can supervise and redirect play that becomes dangerous or disruptive to others.

Constructive Experiences with Preschoolers

During the preschool years, children become increasingly immersed in their constructive experiences. We strive to offer materials that enable children to construct sizeable, satisfying structures. Wooden unit blocks are an essential material for preschoolers' constructive play. They are heavy and sturdy enough for complex structures, and because they do not stick together, they help children construct knowledge about balance and stability.

Unit blocks are carefully crafted to support children's mathematical thinking. They introduce a special 1:2:4 ratio; the basic rectangular block measures 5.5 inches long, 2.75 inches wide, and 1.375 inches thick. Other blocks in the set halve, double, or quadruple this measurement.

This invites children to combine and deconstruct shapes as they explore proportions and size relationships. Long before children are ready for formal instruction about fractions, they build vital precursor knowledge with unit blocks!

In addition to wooden unit blocks, preschool constructive materials might include large cardboard or foam bricks, ramp sets with movable parts, and interlocking building sets such as Tinker Toys and magnetic tiles. Repurposed materials like plastic cups, shoe boxes, cardboard tubes, and detergent caps can be used for temporary construction or three-dimensional sculpture.

Children's constructive work reflects the experiences they have had so far. A child who has had many unhurried opportunities to engage in constructive play in toddlerhood will work in more complex ways than a child who has not. A less-experienced child will begin by exploring objects, placing them in rows, and building simple stacks.

As children deepen their understanding of materials, you're likely to observe the following.

Building Longer and Taller
Rows grow longer, and stacks grow taller! Double rows and stacks may appear, too. These are indicators of the child's increasing attention span. He may call on his emerging negotiation skills when his block rows encroach on walkways and play spaces used by other children.

Bridging and Other Clever Ideas
You may notice a child experimenting with block placement. She might try (unsuccessfully) to lean blocks together before discovering that she can create a bridge by placing two blocks apart and resting a third across the top. She finds new ways to stack and balance pieces through trial and error. She's learning to stick with it to solve problems and make things work.

Enclosures
You might observe a child building a box-like structure with connected walls. Once the enclosure is built, he may be eager to fill it with toy cars, animals, or other materials. He's investigating the concept of inside and outside, deepening his understanding of boundaries and perimeters.

Complex Structures
When a child combines what she has learned so far about lines, stacks, bridges, and enclosures, complex block structures emerge. She might repeat the same general design many times, slowly modifying her work across days or weeks. Or, she might suddenly become inspired to imitate another child's work. This shows she is becoming observant and curious about other children's construction strategies.

Representational Work
Constructive play meets imagination as representational structures emerge. A collection of Lego bricks might become a castle, or milk crates and cardboard might become a den for preschoolers pretending to be sleepy bears. They're using constructive materials to reflect their interests and knowledge about the world around them.

Building and Refining Ramps
Ramp play may emerge spontaneously or in response to materials you've arranged for children to discover. With pieces in motion, she investigates gravity, force, and friction. She may notice how and why objects move differently from one another or experiment with changing the length and angle of structures. Roll-away pieces may inspire her to add barriers or baskets for catching balls or toy cars.

Active Deconstruction
Just as in the toddler years, it's exciting to knock blocks down. The big crash as structures tumble over can be an exhilarating release after long periods of intensely focused construction. It also ties to their understanding of force, trajectory, and cause and effect.

Planning Constructive Experiences for Preschoolers

Preschool-aged children need many opportunities to explore constructive materials informally before being ready for more structured activities. We can create play areas that are especially supportive of constructive play. Here are some examples.

- A spacious block-building area with plenty of open floor space to build with wooden unit blocks. Baskets of props such as toy animals or cars and open-ended loose parts such as spools and buttons can enhance play.
- Near a child-sized work table, well-organized baskets of interlocking building toys, such as Duplo blocks and Kid K'nex.
- "Clean junk" collection of cereal boxes, gift wrap tubes, yogurt cups, and other repurposed household materials, offered with tape or glue for making sculptures. Later, children could decorate their work with paint and stickers.

There should ideally be enough constructive play choices and spaces to enable children to find something they are interested in and engage in play without crowding. Play areas can be refreshed throughout the year with materials that reflect children's interests. What might happen if we add pebbles, silk flowers, and leaves to our block-building area? Or how about offering shatterproof mirrors with small table blocks?

Along with many opportunities for informal, child-directed constructive play, we may also plan collaborative, constructive experiences to share with small groups of children. Here are some examples.

- After reading a book about boats, a teacher introduces various materials: newspaper, aluminum foil, craft foam, waxed paper, and wooden popsicle sticks, along with tape, rubber bands, and glue. Children are invited to design, build, and test their own boats.

- After observing a large hawk nest on the nature path near their school, children begin to play that they are nesting birds. Their teacher suggests making a large replica nest out of rolled paper tube "sticks." Children help decide where the nest should be built and look at photos as they decide what shape it should be. Soon, they've built a large enough nest for several children to play in!

- Inspired by *The Three Little Pigs*, small groups of preschoolers work together to build miniature houses from straw, twigs, and small blocks that represent bricks. They use a fan to test the strength of each structure. Later, outdoors, they have a supervised opportunity to try stacking real bricks.

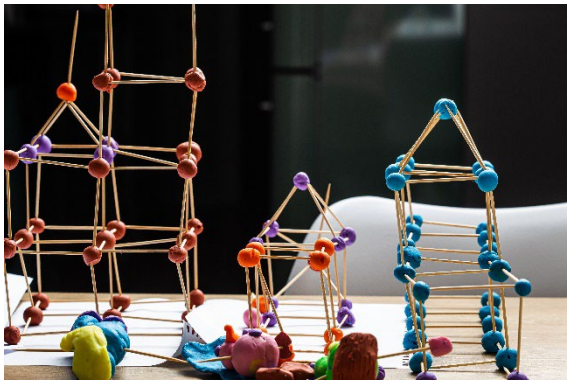
Activities such as these are sometimes known as *engineering challenges*. They invite children to apply their emerging skills in new and exciting ways. For more information about the unique value of design and engineering activities, see *Big Benefits of Constructive Experiences* at the end of this section.

Constructive Experiences with Schoolagers

Schoolagers are more skilled than preschoolers and can concentrate for extended periods when something truly interests them. Children in grades K-2 will continue to enjoy a large set of wooden unit blocks. They're also drawn to tabletop materials like magnetic tiles, Tinker Toys, and Lincoln Logs.

Lego bricks hold their appeal for even older kids, and so do Kapla and Keva planks. Other constructive materials designed for schoolagers included Erector, K'nex, and Engino. They'll want lots of pieces for their work, which is often complex and detail-oriented. With guidance, schoolagers can also use tools for cutting and joining cardboard, woodworking, and other open-ended construction.

Engineering and design activities can be especially appealing to schoolagers. They may enjoy the challenge of building something as tall or strong as possible or making something that moves in a specific way. They're learning through trial and error and can apply the knowledge they gain to future experiences.



Here are some things you might observe as schoolagers work with constructive materials.

Pattern and Symmetry
She has the dexterity and attention span to build highly detailed structures. Mathematical thinking may be evident as she arranges pieces or repeats sequences of colors or shapes. Especially with open-ended materials like Kapla planks, she may be honing her own, unique style, just like an architect.

Complex Representations
When youngsters have time and space to fully engage in their work, block structures are more detailed now than ever before. He might work to create a highly accurate representation of an airport or car wash or use his imagination to create a dream home, space station, or dragon lair. Once construction is done, imaginative interactions with the finished creation may sustain his interest for days.

Creative Combinations
If permitted, schoolagers may combine sets of materials in inventive ways. A marble run might be arranged over and through a block structure, or tissue paper and yarn might be used to craft a parachute for a Lego vehicle. This way of working is inventive and resourceful.

Working Together
Areas with blocks and building sets can be some of the busiest places in out-of-school-time spaces. Kids gather around to work together and admire one another's creations. Building together offers a chance to join forces to create something far grander than one builder could make on their own. Expect to hear excited voices and the occasional disagreement as children share ideas and navigate differences in opinion. Even when things get heated, young people are learning about leadership, communication, and fairness.

Solo Work, too!
You may also notice times when a young person pulls materials to the side to work by themselves. This doesn't necessarily mean that she is feeling unfriendly. It may be her way of saying that she needs room to concentrate.

Persistent Problem Solving
You might notice that a schoolager wants everything "just so." He has a plan in mind but may have to get creative when things don't work out. He might try a different tool, fold a little piece of cardboard to fill a gap, or rearrange pieces several times to get the angles just right. Sometimes, he wants to walk away for a little while before returning to try again. In the end, he uses innovation and perseverance to make things work.

Planning Constructive Experiences for Schoolagers

Choose materials that are adequately challenging for your group. While many preschoolers and kindergarteners are happy to mix and match random, multi-colored pieces, older schoolagers are more detail-oriented. They may search for pieces that are precisely the correct size, shape, and color. Thrift stores and yard sales may be good places to find specific building kits on a budget. You might also ask families of older students to donate outgrown constructive toys.

Schoolage groups sometimes find themselves sharing spaces with others. For example, they might meet in a cafeteria or gymnasium after school or use spare rooms in a church or school building during the summer. Creative solutions may be called for when shelf space is limited. Consider sorting building sets into stackable, lidded storage boxes. Labels can help builders choose the sets they want from your construction library.

Open-ended free play with constructive materials is vital throughout the schoolage years. Many students enjoy casually building with Lego and other materials as they socialize with friends and decompress after a long school day. When possible, a "saving spot" for ongoing work can encourage more complex work that stretches across days or weeks.

We can also invite schoolagers to participate in more structured construction activities regularly. Here are some possibilities.

- Use constructive materials to create a replica of your downtown, sports stadium, favorite playground, or another local landmark. Or, build a skate park for finger-sized skateboards.

- Look for foam pipe insulation tubes at your local hardware store. (They look like super long, skinny pool noodles!) Cut these in half lengthwise and pair them with chairs and/or boxes to build a massive marble rollercoaster!

- Create a cardboard arcade. The star of the Caine's Arcade mini-documentary (YouTube) is a grown-up entrepreneur now, but his clever ideas can inspire a whole new generation of creative kids.

Find more free ideas, especially for schoolagers, at the Science Buddies site, https://www.sciencebuddies.org/stem-activities. They also invite your group to take part in an annual Engineering Challenge. Past challenges have included tall towers, a kid-created ball run, and rubber band-powered cars.

Because ages and experience levels often mix in out-of-school time settings, we focus on collaborative challenges. Everyone should feel welcome to join in without undue pressure from competition. You don't have to be the best to be a builder! Clubs are another way to support special interests. Consider gathering small groups that want to focus on Lego contraptions, balsawood bridge-building, robotics, or birdhouse-making.

Constructive Experiences to Share with Children

Shoebox Blocks

Ask families and friends of your program to donate shoeboxes. If desired, the boxes can be filled with crumpled newspapers, paper sacks, or recycled office paper. This will make them stronger. Tape lids on the boxes with packing tape.

Cover your blocks with craft paper, sealing the seams with packing tape or duct tape. Invite children to decorate the blocks with crayons, markers, or paint.

Shoebox blocks are ideal for toddlers, preschoolers, and kindergarteners. Schoolagers may enjoy making blocks to share with younger children. If you're viewing this book online (https://www.astate.edu/a/childhood-services/links-and-resources/), you can read about a kindergarten group making and sharing a set of box blocks!

Celebrating Cylinders

Partner with families to build a collection of cylindrical containers, such as oatmeal canisters, formula cans, coffee cans, and Pringles chip canisters. Clean, empty containers can be used as is. Or, you can add a scoop of sand or dry rice for weight before sealing the lids with duct tape.

Children will quickly discover that working with cylinders differs from building with rectangular blocks. They can be arranged in satisfying lines and stacks, and they're also fun to roll!

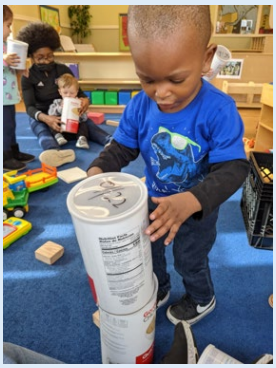


Photo shared by Kelsey James,
A-State Childhood Services CDRC

Outdoor Construction Zone

Gather some of the following materials.

- diaper boxes or other sturdy cardboard boxes
- milk crates
- large plastic spools and/or barrels
- used tires (without steel belts)
- old blankets, flat sheets, or tarps
- smooth-sanded wooden planks
- large commercial building sets, such as giant waffle blocks

Place these materials in a spacious building area, far from slides and other stationary climbing equipment. Decide on a few simple ground rules to share with children. For example, are they allowed to climb on the structures they build? And if so, how high? Your guidelines will depend on your group's age and the ground surface in your building area.

Your construction zone could be a permanent addition to your outdoor play area or a "pop-up event" for short-term use. Either way, you'll be amazed at the creative and clever ways children repurpose these materials for constructive and imaginative play! If you're viewing this book online (https://www.astate.edu/a/childhood-services/links-and-resources/), you can see an elementary group's outdoor construction area here.

Time-Lapse Construction

Take photos of builders and their work as they begin, in the middle of the building process, and when they feel their structure is complete. Later, invite children to look at the photos with you. Ask, "What would you like me to know?" to draw out descriptions, stories, and explanations about their work.

Here are some additional ideas to try.

- Create a "Builders at Work" display for families.
- Gather interested children and project their photos onto a smartboard or screen. Encourage builders to talk about their work.
- Investigate time-lapse photography with schoolagers. If you're viewing this book online, you can watch one teen's incredible time-lapse work here.

Big Benefits of Constructive Experiences for All Ages

Mathematical Thinking

Blocks and other constructive materials are fabulous tools to support mathematical thinking! They help children build shape knowledge and spatial awareness and strengthen their understanding of quantity, size, weight, height, addition/subtraction, balance, proportions, pattern, and symmetry. Even clean-up time is valuable, as children gather and sort pieces and return them to their storage areas.

Educators in Action

- Help children build mathematical vocabulary by admiring and describing their work. "I notice that you've placed a row of small triangles along the top of your structure."
- Ask meaningful questions that help children construct mathematical knowledge. "Which blocks should we use if we want to build a very tall tower?"
- Use and talk about labels on shelves and containers to help children find and return constructive materials in organized workspaces. Materials could be sorted by color and type for toddlers and by size and shape for older builders.

Motor Development, Hand-eye Coordination, Focus, and Self-Control

Children use the muscles in their shoulders, arms, and hands to grasp, carry, and place blocks. It takes concentration, a steady hand, and careful movements to add blocks without knocking the structure over! Towers tumble down eventually, but constructive experiences are so appealing that children are motivated to try and try again.

Educators in Action

- Match materials to the ages and abilities of children in the group. Strive for materials that are challenging but not overly frustrating.
- Describe children's actions. "This is tricky! You're placing each block carefully."

Logical Reasoning, Problem-Solving, and Persistence

Constructive experiences encourage children to formulate plans. Children use critical thinking to apply what they've learned so far to each new structure they create. They also offer problems to solve when things don't go as envisioned. Builders experiment, discover the outcomes of their actions, make changes to refine their designs, and try again.

Educators in Action

- Ask questions to expand children's thinking. "What makes a bridge a bridge?" Invite children to explain their building process and tell how they solved challenges.
- Resist the temptation to solve physical problems for children. Instead, stay present and provide encouragement as children figure things out in their own way.
- Model a growth mindset. When things don't work out, we can regroup and try again. Embrace the power of the word *yet*: "The balls keep falling off before the bottom of the ramp. It doesn't work the way you want it to…yet. What adjustments could you make?"

Social Navigation and Leadership

Constructive experiences become increasingly collaborative as children grow. Even infants are observant of other children's actions. Toddlers play alongside one another and are often inspired by one another's ideas. Preschoolers talk together about what to build and how to build it, and by the schoolage years, collaborative projects can stretch across weeks. As builders negotiate spaces and materials, they learn to communicate ideas, understand different perspectives, and cooperate to achieve shared goals.

Educators in Action

- Learn all you can about how skills develop as children grow. A two-year-old's ability to share materials or explain ideas differs greatly from a five-year-old's. Use your knowledge of child development to guide your expectations as you coach their emerging skills.
- When differences in opinion occur, help builders talk things through to find a fair solution. Everyone wants to feel heard and understood.

Links to Literacy

Constructive experiences provide excellent opportunities to talk together and practice interesting new words like *arch*, *column*, *enclosure*, and *tunnel*. When representational structures emerge, children engage in storytelling and symbolic and abstract thinking.

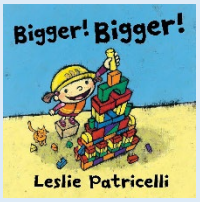
Constructive experiences also allow children hands-on learning with form, pattern, sequence, continuity, and change. These provide an intellectual foundation that can better enable them to understand concepts as they learn to read and write.

Educators in Action

- Engage in rich, serve-and-return conversations. Listen to what children have to say about their work and offer thoughtful responses with rich vocabulary.
- Use self-talk to describe things like attributes, patterns, and sequences. "These two pieces are both rectangles, but one is much longer than the other." This might sound like math talk (and it is!), but letters and words have shapes, too. Learning to recognize similarities and differences is a valuable early literacy skill.

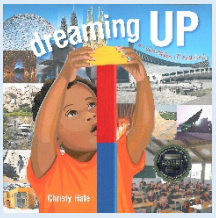
Books to Inspire Constructive Experiences

You'll find books for the youngest children at the top of this list and books for older builders at the bottom.



Bigger! Bigger!
Leslie Patricelli, Candlewick, 2018

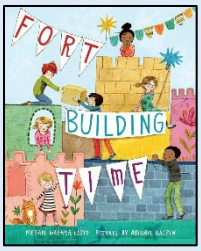
Rex Wrecks It
Ben Clanton, Walker Books, 2014



Dreaming Up: A Celebration of Building
Christy Hale, Lee and Low Books, 2012

Look at That Building: A First Book of Structures
Scot Ritchie, Kids Can, 2011

Fort Building Time
Megan Wagner Lloyd and Abigail Halpin, Knopf Books, 2017



See Inside Towers, Bridges, and Tunnels
Struan Reed and Annie Carbo, EDC Publishing, 2018

Imaginative Play

Imaginative play looks like

- Home and family play
- Acting out other familiar scenarios
- Fantasy and make-believe play
- Superhero play and other active pretend play
- Interacting with small buildings and figures
- Puppet play
- Making up and playing out new stories for book and media characters

It's all about pretending to be someone, taking on new roles, and acting them out. When children engage in imaginative play, they visualize, imitate, create meaningful representations, and improvise!

On the following pages, we'll take a closer look at imaginative play (also known as dramatic play) with infants and toddlers, preschoolers, and schoolagers. In the middle of this section, you'll find some simple ideas to share with children. Then, we'll consider the benefits of imaginative play for children of all ages.

Imaginative Play with Infants and Toddlers

Long before children are old enough to set up make-believe restaurants or race around pretending to be superheroes, they observe and explore their world to make sense of interactions, objects, and roles. This knowledge forms the foundation they'll need for dramatic play later on.

The first signs of pretend play often emerge around a child's first birthday. You'll see them begin to emulate things that parents, teachers, and other important adults do. Pets are a popular pretend-play theme for older toddlers. Many of them know a lot about cats and dogs at home, and they experiment with moving and making sounds like their pets.

Infants and toddlers don't need complex play props like princess crowns, astronaut helmets, and tiger costumes. Instead, stick to simple props that represent the things they know best. Dolls, telephones, car keys, and dishes will surely be popular. To promote creative thinking, you'll also want to include plenty of open-ended materials that can be used in the child's own way. For example, a large plastic jar lid can become a dish for a stuffed toy puppy or a hat for a baby doll.

Depending on where they're growing up and their everyday experiences, your toddlers might also be familiar with things like buses, barns, playgrounds, or parking garages. Playsets with buildings and handheld characters are highly appealing to older toddlers.

Here are some things you might notice when you observe infants and toddlers at play.

Tuning in to Social Exchanges

Back-and-forth interactions with you are where social play begins! You might notice how intently she gazes into your eyes as you talk to her. Soon, she'll mirror your smile, and when you speak to her enthusiastically, she might squeal or kick her legs to show that she's excited, too! She may engage you in whole "conversations" as you babble back and forth. "A-ba-ba-ba?" … "A-ba-ba-ba!"

Object Exploration
Before he's ready to repurpose things creatively (such as pretending a laundry basket is a car), he needs to explore his capabilities to interact with play objects. You may see an infant reach for and pat a toy, pick it up, turn it over, or slide it across the floor. He's figuring out that he has the power to move and change things.

Imitating Actions
Older infants and young toddlers will imitate familiar gestures. You might see her wave bye-bye, clap, or raise her hands in the air just like you do when you sing her favorite song! She may copy your play actions, as well. For example, if you put a toy on your head, she may put a toy on her head, too. Observing and interacting with you this way now will help her interact with other children when she's older.

Showing What Is Known About Familiar Objects
As he interacts with play objects, a child might stir a spoon inside a dish or hold a toy telephone up to his ear. This dramatic play milestone, known as *enactive play*, shows that he recognizes objects and remembers how they are used.

Imagining Daily Routines
You might notice that the first pretend play imitates daily care routines, especially eating and sleeping. A toddler may lie down and pretend to be asleep, or she might pretend to drink from a cup, ending with an exaggerated, satisfied "ahh!" and a wipe of her hand across her mouth. She has developed the ability to imagine that she is doing things that you often do together for real.

Me and You
Sometime between his first and second birthdays, a toddler will increase his efforts to include others in his play. You're likely to be one of his first playmates. He may pretend to feed you or pass you a hat so that you can have a turn to wear it. Simple play with dolls and stuffed animals becomes more important to him, too.

If he can't find what he needs for his play, he may use something else that is similar. A rectangle-shaped block might become a telephone, or a bowl might be worn as a hat. He's decided that they're close enough to represent the real thing. This is the beginning of symbolic play.

Planning Imaginative Play for Infants and Toddlers

We can create opportunities for infants and toddlers to grow into imaginative play at their own pace. Here's how.

- Plan enough time for daily care routines, such as meals and diaper changes, to slow down and connect with each child. These can be times for eye contact and positive interactions.
- Set the stage for exploration by creating play areas where babies can move around to interact with things that interest them.
- Create opportunities for infants and toddlers to observe and interact with one another. You can even model social interactions. For example, when placing one baby on the floor near another, you might speak on their behalf: "Hi, Charlotte! I'm Kody. May I play here by you?" Or you might describe what seems to have caught a baby's attention: "Do you see Ava?"
- Provide props that mobile infants and toddlers are familiar with, such as pots and pans, dolls, and toy telephones. Ride-on cars with steering wheels are popular with toddlers, and so are simple dress-up clothes like hats, vests, and purses. Having plenty of duplicates of popular items will reduce competition over materials and enable toddlers to play together successfully.

Consider the relationship between play spaces and the daily schedule. Infants and toddlers need lots of unhurried time to play every day. Their play development is cumulative, meaning that they gain skills through repetition. Time spent in toddler-directed play is always time well spent!

Imaginative Play with Preschoolers

Imaginative play bubbles up almost constantly in a preschool room. In the mind of a creative child, a handful of pebbles might become a tiny family. A blanket could be a hero's cape, and a bucket and stick are all they need to become a drummer in a band.

And then there's the dramatic play center! Most preschool rooms include at least one play area, especially for dramatic play, furnished with a child-sized couch, table, and kitchen appliances. This is where the baby dolls live, along with play foods, dress-up clothes, toy toolboxes, and other familiar props. Many programs also provide props to support additional play themes, such as restaurant, supermarket, or office.

The examples above highlight unstructured and structured dramatic play. In unstructured play, children decide about the themes of their play and the resources they need to carry it out. We can see unstructured play in action when a playground slide becomes an imaginary ship, with children calling out to warn one another about (invisible) sharks in the pea gravel "ocean" below.

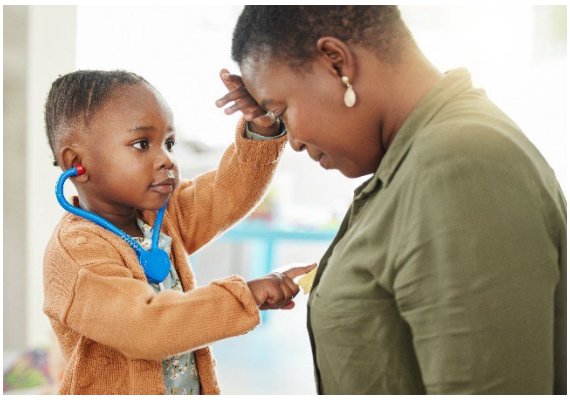
On the other hand, an adult might add a real or replica boat to the playground for children to play in, along with life jackets, fishing poles, and other props, and suggest that children play that they are on a fishing trip. That's structured dramatic play. The adult has provided prompts that will shape children's play.

Both can be valuable for preschoolers. Unstructured play empowers children to be resourceful and optimizes their opportunities to take the lead and make decisions. And, structured play can scaffold topical knowledge and vocabulary as children use props and try out new roles.

Here are some things you may notice when observing preschoolers' imaginative play.

Sequences in Pretend Play

You might see a child perform several actions in a row related to her play. She might gather a bowl and spoon from the shelf, place her baby doll in a high chair, pretend to feed it, and then find a cloth to wipe its face and hands. She has developed the cognitive skills to remember the steps of familiar daily events.



Older preschoolers can often sequence things they've experienced firsthand but less frequently. For example, they might invite you to wait in a waiting room before seeing a nurse who checks your temperature and a doctor who listens to your heart and tells you that you'll need some medicine.

Retelling Stories

You might notice that a child's imaginative play is inspired by a storybook you read together recently or a favorite show he watches at home. This is another kind of sequential play that provides insights about what he remembers. It's also a chance for him to deepen his understanding of characters and settings.

Bringing the Drama to Dramatic Play

Preschoolers show what's on their minds when they engage in imaginative play. They might pretend to be delighted by a birthday party or a new puppy, but their play may also reflect worries and fears. You may observe children pretending about scary storms, getting lost, or getting sick; they may even play that they are dead!

This doesn't mean that children are making light of serious events. Because imaginative play offers a safe way to process big, scary things, it can help relieve emotional tension. Similarly, superhero play, dinosaur play, and other powerful play themes enable children to feel strong, capable, and in control.

Play Negotiations

As children play together, they co-construct play scenarios. Can there be more than one Batman? What happens when one rider on an imaginary train wants to go to the city, and another wants to go to the beach? Watch for exchanges like the one below as children express their preferences and test shared play rules.

Three children are playing under a tree on the playground. Jayden pretends to be the father, Olivia pretends to be a baby, and Alejandro is a cat.

Jayden, pointing to an upside-down bucket: *Don't open that. Babies can't open that.*
Olivia reaches for Jaylen's bucket.
Jayden: *Wait! That's hot poison! Don't open it!*
Alejandro: *I have armor so it's not poison for me.*
Jayden: *Uh-uh, no. Kitties can't have armor.*
Alejandro: *OK, but pretend I'm a robot kitty.*
Olivia: *Yeah, and I'm a robot baby.*

The plot of imaginary play may sometimes feel nonsensical to adults, but these children are co-constructing their play roles. Look closely to notice how leadership, persuasion, compromise, and negotiation emerge.

Planning for Imaginative Play with Preschoolers

Here are some ways to ensure time, space, and encouragement for imaginative play.

- Schedule daily blocks of indoor and outdoor playtime to invite children to become deeply involved in their imaginative play. Our indoor play spaces can include some social areas where groups of three or more children can gather and play together. Avoid scheduling all of your playtime early in the morning or at the end of the day when some children are not present. Interacting with peers through play is essential for every child's development.
- Make time to observe children's play, keeping an eye out for unstructured dramatic play. One teacher described a child at the easel with a paintbrush in each hand. He acted out a rich conversation between the brush characters as he painted. When we pause to watch and listen to moments like these, we gain insight into development and deepen our knowledge about each child.
- Offer multiple spaces for imaginative play. Having many choices of places to play increases participation and reduces crowding. Here are some examples.
    - Homeliving play area and/or playhouse, with many appealing props.
    - Small playsets and building sets that include people, animals, and accessories, such as a dollhouse, a fire station, or Duplo.
    - Puppet play area, with space for performers and a small audience of peers
    - Characters, animals, vehicles, and/or cooking utensils for sand and water play
    - Outdoor props and play areas such as a gas station and repair shop for tricycles, a path for doll strollers, or a gravel pit with construction trucks
- Add prop boxes or play areas to support children's interests and current learning topics. For example, if fruits and vegetables are part of your springtime curriculum, you might create a farm stand play area with produce baskets, a cash register with play money, and other props.
- Consider planning structured role-play activities. For example, children might interact with a shy puppet to give it a tour of their room. This could be ideal for the first weeks of school as new preschoolers gain confidence. Later in the year, children might role-play bears looking for a place to hibernate, help set up a mock restaurant to serve a treat to their families, or create costumes to retell a favorite folktale.

Imaginative Play with Schoolagers

When there's time to play, games with rules such as ball games and board games are increasingly appealing to schoolagers. They're refining their hobbies and interests, too. Free time might be spent drawing comic-style characters, writing stories, or making friendship bracelets. All of this means that imaginative play may take up less of their time than it did when they were four and five, but it still happens and holds value.

Younger schoolagers are at the apex of imaginative play. When given the opportunity, their ideas are more complex, and their intense play is sustained longer than ever before. Most young people in third through fifth grade still engage in imaginative play regularly by pretending to be characters and/or playing with action figures and other small figures. As they head into middle school and beyond, interests in structured role play such as theater, interpretive dance, role-playing games, and flight simulators may amp up.

Here are some things you may notice about schoolagers' imaginative play.

Fresh Ideas

While themes like home, restaurant, and market continue to be popular, schoolagers begin to envision new possibilities. They might play school, complete with roll call and substitute teachers. Or, they might pretend to be dance competition judges, hospital surgeons, or theme park vacationers. Their play reflects the knowledge and understanding they've gained from books, media, and real-life experiences.

Planning to Pretend

"Our ice cream shop will need a menu!" so she might spend the entire playtime designing and making one. Schoolagers are invested in the preparation for play. They gather and make supplies and talk about what will happen tomorrow, the next day, and next week. They're demonstrating self-regulation, planning, and organizational skills by thinking ahead.

Tighter Rules for Co-Players
Children's dramatic play sometimes took surprising turns when they were preschoolers and kindergarteners. A dog might have suddenly been able to fly, or a pirate might have decided he was also a doctor. Now, schoolagers place increasing importance on the logic of their play.

They still engage in fantasy play but create backstories and explanations to help frame their narratives. They are keenly aware of the distinctions between plausible and impossible events and hold one another to a shared set of play boundaries.

Uncertainty Emerges
While most schoolagers engage in imaginative play on their own or with siblings and closest friends, playing this way may feel vulnerable in out-of-school group settings. Young people may be concerned about appearing babyish to peers or being laughed at by staff. With the support of trusted adults, children can take an active role in ensuring that their program has a positive climate, free of teasing and ridicule.

Planning for Imaginative Play with Schoolagers

Your out-of-school-time space for imaginative play does not have to look like a preschool dramatic play area. In fact, your group may feel insulted by materials that seem too young for them. If you have the space and budget for a special play area, stock it with authentic and intriguing materials such as these.

- Real pots and pans, restaurant takeout menus, order pads
- Old computer keyboards and office phones, clipboards with paper
- Veterinarian's set with non-sticky bandages, x-rays, stethoscope and a lab coat
- Dry-erase board with markers and other materials that children can use to create their own signs and props

Materials can be rotated to maintain interest, and your group can actively brainstorm prop ideas and make a wish list to share. Families and friends of your program may be willing to loan or donate their old, unused items.

If your indoor space is limited or you spend most of your time in a gymnasium or outside, consider whether any of the following solutions could work for you.

- In a gymnasium, traffic cones could be used to define a free play zone apart from basketball, jump rope, and other structured activities. Even without props, younger schoolagers will seek this space to engage in imaginative play.
- Zippered pencil pouches can be used to hold small play figures. You might create one bag with tiny horses, another with deep sea creatures, a third with Hot Wheels cars, and so on. These little play packs could be used indoors or toted in a backpack for outdoor play.

- Charade cards on a ring clip can be carried along almost anywhere. They might even be ideal for field trip times when your group must wait between activities.

We can also invite schoolagers to participate in structured drama activities, such as acting games and skits. If you're viewing this book online (https://www.astate.edu/a/childhood-services/links-and-resources/), check out the samples below.

- Preparing for a puppet show or simple play can captivate K-2 groups for a week or more. There are puppets or costumes to create, sets to make, and fun parts to learn. You can find a simple fairy tale script here. It could make a perfect puppet show for a small group or, because most actors enter, exit, and perform in groups, it could be a good play for mixed-age or mixed-ability settings.
- Reader's Theater scripts provide simple skits inspired by familiar books. Groups begin by reading the story, and then cast practice and perform their skit. View a sample Reader's Theater script for the book *The Day the Crayons Quit* here.

- Improvisation games require children to think on the spot in made-up, often absurd scenarios. They're especially appealing to middle schoolers, who appreciate having an outlet to be silly. You can find an extensive collection of ideas from a drama teacher here.

Imaginative Play Ideas to Share with Children

Creative Play Objects

Begin - or enhance - your collection of open-ended play objects. Place a bin in your lobby or cubby area, and send home a note asking families to save and share one of the following.

- Jar lids*
- Clean, empty yogurt cups*
- Milk, juice, and soda caps
- Lids from applesauce and fruit pouches
- Caps and cups from dried-out from playdough*
- Lids from dried-out markers
- Lidded cookie and tea tins

*may be safe for mobile infants and toddlers

Once you have a sizeable collection, wash, sanitize, and place them in a basket in a dramatic play area or offer them for imaginative play elsewhere. Watch to see how many different ways children use them.

Did you know? - Objects like these are sometimes called *Intelligent Play Objects* because children use them inventively.

Made from Scratch

Rather than heading to the toy store to buy thematic props for imaginative play, give children an active role in creating a new play area. Begin with an idea that is well-matched to children's interests and your current learning topics. It should also be something that children have had firsthand experiences with. Here are a few possibilities. You'll also have ideas of your own.

- Bakery
- Campsite
- Fire Station
- Grocery store
- Post Office
- Pumpkin patch

Begin by asking, "What do you find at (your place)?" You may want to look at photos before making a list together. Then ask children, "What feels most important?" Circle some choices on your list. Clear a space for your new play area and talk together about how you could make it come to life.

In many cases, you can repurpose some things you already have and make some others. For example, your bakery might begin with children's construction paper baked goods arranged on a spare shelf alongside your usual play dishes and table. Add a cash register and make a menu; the bakery is ready for business! Children will think of things they want to add as they play.

Big Benefits of Imaginative Play for All Ages

Imagination and Focus

Imaginative play builds the foundation for visualization and creativity in years to come. As children take on different roles, they envision ideas to act out and strengthen their mental flexibility, which is an important executive function skill.

Imaginative play also requires sustained attention for multi-step play. Play grows longer and more complex as children develop organizational skills for planning, multi-tasking, prioritizing, and problem-solving play situations.

Educators in Action

- Follow the child's lead in play. Allow the child to assign you a role.
- From time to time, model actions that help children develop more complex ideas. These should be tiny boosts, not huge leaps. For example, a toddler teacher who has observed a 2-year-old feeding her doll and then discontinuing play might hint at a possible next step: "I think my baby (doll) is getting sleepy."
- Invite and encourage children to repurpose materials in resourceful ways. "What could we use for tickets?"
- Model and encourage children to sometimes play without props. It is possible to carry out whole play scenarios with imaginary objects; this way of playing strengthens visualization skills. "Invisible ice cream is my favorite!"
- Throughout the day, share playful, imaginative activities with children. You might sing *Going on a Bear Hunt*, talk to a puppet mascot, or play a game of follow-the-leader where you pretend to have a wilderness adventure.

Communication and Language Development

When preschool-aged children engage in imaginative play with teachers or peers, they use more words and a more sophisticated language structure than at any other time of day. Imaginative play gives children of all ages lots to talk about as they express ideas and take part in conversations.

Alone or in groups, children strengthen their narrative ability through pretend play. In other words, they learn to think in stories and express those stories cohesively. Oral and written communication skills will be stronger because they had the opportunity to play this way.

Educators in Action

- Connect play materials to concrete experiences. Think about ways to help children build a bank of real-life experiences to draw upon: walk or stroller-ride to see construction happening on your street; bake together; talk about squirrels or dog walkers you can see out the window. Then, find ways to help children incorporate these interests into their play.

- Use rich language as you play alongside children. Help them learn words like *habitat* or *ingredient* that they might not hear every day.
- Use strategies to support individual children. This might mean asking a gentle yes or no question to allow a child who is not yet verbal to nod a response or extending a conversation to challenge a child who has strong communication skills.

Connection and Perspective-Taking

Children first connect pretend play to their own home, family, and daily experiences. Then, they begin to make sense of other's experiences and events in their wider world. Imaginative play offers a safe and effective way for children to process and express strong feelings and powerful ideas.

As children pretend to be characters from familiar stories and shows, they take on new roles and think about what that means. They consider how a character might think, act, or feel - even when it is different from their own feelings and behavior. This is a crucial development in children's ability to understand other perspectives.

They're building connections with other people, too. Imaginative play offers an opportunity to join a group where children work together and share decisions. They notice the effects of their actions on others and come to understand that people have different points of view.

Educators in Action

- Talk about character feelings and motives when reading and playing together. "How do you think Truman Turtle feels? How come?"
- Help children pause to listen to one another's ideas in play. "Ollie is trying to tell us something."
- Notice positive interactions that occur during play. "You found a way to use both of your ideas!"
- Pay attention to who is playing and how they interact. Model and teach specific cooperative play skills such as asking for a turn next. If there are children who linger at the edge of play, invite them to join you in your role. "How about if we're both customers at the restaurant?"

Mathematical Thinking

Imaginative play is rich in opportunities for functional mathematics. For example, a toddler might put one stuffed animal in each seat at the table. A preschooler might decide that the firefighter boots are too large for his feet, and two kindergarteners might debate about prices for their florist shop. In each of these cases, children encounter math in the context of real-life play events.

Educators in Action

- Collect functional math props such as measuring cups with sand. Model their use as you play alongside children.
- "Mathematize" imaginative play by making mathematical connections with children. You might talk about the correspondence of buttons and holes on a vest or count on your fingers to figure out how many ingredients are in the pretend soup. Or, how about figuring out the tip for an imaginary pizza delivery with schoolagers?

Links to Literacy

When children pretend, they often use an object to represent something else. For example, a row of spools might represent a family, or a piece of blue fabric might represent a lake. Those substitutions are evidence of symbolic thinking, which is crucial for later literacy.

That's because written words are symbols that represent spoken words, which represent actions, objects, and ideas. (And letters are symbols that represent sounds!) It's a challenging thing to explain to a child, but they grasp it more readily when they've had lots of practice with symbolic thinking in play.

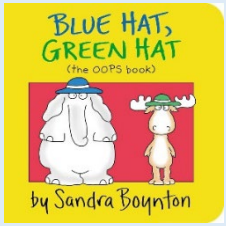
Imaginative play also invites children to retell and talk about stories, deepening their character knowledge. And, there are many opportunities to engage with environmental print. Writing tools can be used to create signs and other props.

Educators in Action

- Follow children's lead in symbolic play and model it yourself. "I'm going to pretend that this stick is my fishing pole."
- Collect print-rich props such as real food containers, coupon flyers, and open/closed signs. Schoolagers might enjoy real ticket stubs, international coins, cookbooks, and atlases.
- Join in play to spark interest and build knowledge in print-rich materials. "Is this a jug of apple juice or a jug of orange juice? How can you tell?"
- Model reading and writing in play; talk about shapes, names, and sounds of letters in ways that interest children. "Let's put bread on our shopping list…"

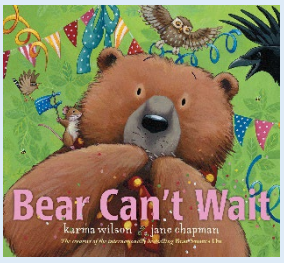
Books to Inspire Imaginative Play

You'll find books for the youngest children at the top of this list and books for older readers at the bottom.



Blue Hat, Green Hat
Sandra Boynton, Boynton Bookworks, 1984

New Baby!
Carol Zeavin and Thona Silverbush, Magination Press, 2020

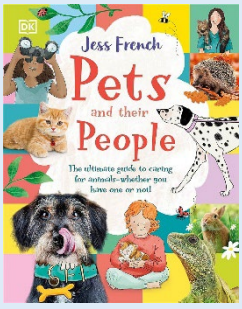


Pet This Book
Jessica Young and Daniel Wiseman, Bloomsbury, 2018

Bear Can't Wait
Karma Wilson and Jane Chapman, 2021

Delivering Your Mail: A Book About Mail Carriers
Community Workers series, Ann Owen, National Geographic, 2010

Three Bears in a Boat
David Soman, Dial Books, 2014



The Camping Trip
Jennifer K. Mann, Candlewick Press, 2020

Meet Me at the Farmers Market
Lisa Pelto and Paula S. Wallace, Reading is Key, 2019

Pets and Their People
Jess French, DK, 2023

Creative Expression

Creative Expression includes

- Drawing
- Painting
- Sculpture
- Making Music
- Dance and Expressive Movement
- Storytelling and Theater
- Creative Writing

It's all about expressing stories, ideas, and feelings.
When children engage in creative expression, they communicate, illustrate, and make visible things that feel important to them.

On the following pages, we'll take a closer look at creative expression with infants and toddlers, preschoolers, and schoolagers. Because storytelling and theater are mentioned in the *Imaginative Play* section of this book, we'll focus on visual arts and music. In the middle of the section, you'll find some simple ideas to share with children. Then, we'll consider the benefits of creative expression for children of all ages.

Creative Expression with Infants and Toddlers

Infants and toddlers often seem to be taking everything in, and we know that their brains are lighting up with connections. They're attentive to the sounds and rhythms they hear, and the shapes, colors, and textures they observe in the world around them. They also enjoy moving to music with their caregivers.

Babies soon discover new ways to use their bodies to respond to music or dabble with first art materials, and they experiment with creating their own sounds. By their first birthday, they're ready to create with mark-making materials, such as chalk and fingerpaint, and simple percussion instruments, such as drums and maracas.

You might notice the following behaviors as you observe infants and toddlers.

Early Interest in Sounds and Song

She loves to hear your voice! In fact, hearing you sing is so comforting to a very young infant that it can steady her heart and respiratory rates, bolster her feeding and weight gain, and help her sleep more soundly. Notice how she responds to you. You might see her perk up and turn her head as you sing playfully, or you might feel her whole body relax as she is soothed by your quiet lullaby.

Studying Pictures

From birth to 14 months, infants are especially interested in high-contrast images such as bold designs in black and white. Photos, especially photos of faces, are fascinating to older infants, and toddlers lean in to study pictures in books. You may notice that a child prefers certain colors or images. As his vision develops, so does his ability to appreciate photographs and illustrations.

Moving to Music

You may see an infant moving her body in response to music. By the time she's one, she'll bob up and down to the beat. Clapping, stomping, and twirling; by the time she's two or three, she's dancing! She's building core strength and learning to coordinate her body in different ways. She's also gaining foundational knowledge about structure, pattern, and concepts like fast, slow, high, and low.

That's Me!
The baby in the mirror fascinates infants and toddlers. Between 18 months and 24 months, he discovers that HE is the person in the mirror. Notice how he smiles, frowns, and engages with his reflection in other ways. This is a big self-awareness milestone!

Making Her Mark
Mark-making might start as a happy accident when the crayon in her hand bumps into the paper on the table. As she realizes she can control the marks, she'll experiment with tapping and scrubbing her crayon on the page. As she grows, she'll learn to make intentional lines, dots, and circular shapes. These sensory and movement explorations in toddlerhood build her fine motor skills and her understanding of her mark-making tools and abilities.

Planning Creative Expression Experiences for Infants and Toddlers

We sing, chant, and dance with children daily. While older toddlers sometimes enjoy being invited to a playful group time, many of our very best opportunities for connection are one-on-one throughout the day. Infant and toddler educators build a bank of songs, rhymes, fingerplays, and creative movement activities to share with children.

You'll find a treasure trove of ideas from the JBrary librarians: jbrary.com/youtube-playlists. These aren't videos for children to watch; they're a friendly way for you to learn songs to share. Singing with **you** is far more valuable for children than pre-recorded music!

First experiences with art materials include using large sidewalk chalk and crayons and dabbling with water and/or non-toxic paint. Toddlers will enjoy paintbrushes, stickers, and clay or playdough. Adults plan to be present to provide close "arm's reach" supervision while talking positively with children about their actions and experiences.

Creative Expression with Preschoolers

In early childhood, we support children's experiences with visual and musical arts in two essential ways.

1. Opportunities to experience great art and music.
2. Opportunities to create their own unique art and music.

We can expose children to all sorts of music, not just "children's music." Let's create deep playlists that include classical music, jazz, blues, folk music, and more. As long as the subject matter and lyrics are suitable for young listeners, anything goes!

Authentic musical materials, especially percussion instruments like drums, maracas, bells, and rhythm sticks, can be offered for free choice use in an indoor or outdoor music center. Pair these with scarves and other props for dancing. Children will also enjoy invitations to sing and dance as part of playful, planned music activities.

Art appreciation begins in the early years, too. Children lean in to look closely at art. Questions and observations bubble up, and they're eager to talk with you about the pieces they enjoy most. Some programs opt to hang laminated posters of artistic masterpieces. If you want to share the world of art with preschoolers, you might begin your collection with prints of some of the works listed below.

Twilight Sounds, Norman Lewis

The Starry Night by Vincent Van Gogh

The Oxbow, Thomas Cole

The Eclipse, Alma Thomas

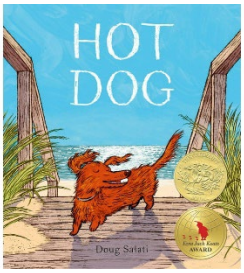
Svanen, Hilma af Klint

Pumpkin (any in this series), Yayoi Kusama

Lake George Reflection, Georgia O'Keefe

Impression, Sunrise by Claude Monet

Composition with Red, Blue, and Yellow by Piet Mondrian



Whether you opt to share art prints or not, there's another place in your room with a beautiful collection of professional artists' work for children to hold in their hands. It's your book area! Picture books bring us many different styles of artwork, including line drawings, collages, realistic and whimsical paintings, photography, and more. As we rotate books on our shelves, we can be mindful about offering a wide variety of artwork for children to enjoy.

To encourage children to create their own artwork, we offer well-organized art-making areas with a selection of materials such as those listed below.

- Lots of different mark-making materials, such as crayons, markers, tempera sticks, chalk, and oil pastels
- Paints, such as watercolor cakes, liquid watercolors, fingerpaints, and tempera paint, with a variety of brushes and applicators
- Collage materials, such as sequins, pompoms, ribbon, die-cut paper shapes, and fabric scraps with tape and glue
- Clay, playdough, wood pieces, and other materials for sculpture
- Additional art tools, such as scissors, stamp pads, and hole punches
- A variety of blank papers such as drawing paper, construction paper, envelopes, kraft paper, and gift wrap scraps

Materials can be introduced gradually at the beginning of your year, guided by the age and experience level of the group. Children build skills and know-how through daily opportunities to use their art materials in their own creative ways.

Here are some more things you might observe with preschoolers.

Music

Details and Sequences

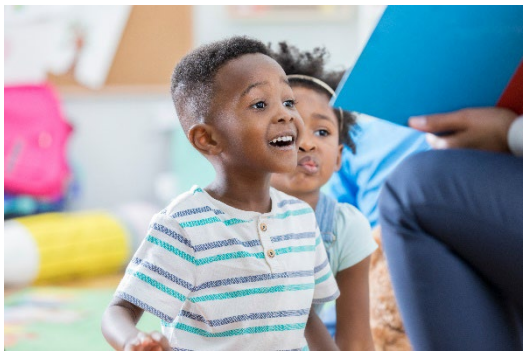
She's usually eager to sing along with you, and you notice that she's singing the correct words more often and skipping fewer words than when she was younger. You might even hear her imitating your higher and lower pitch as you sing. She can also recall increasingly complex movement patterns, such as touching her head, shoulders, knees, and toes in sequence or remembering the steps of the "Tooty Ta" dance. These musical milestones are tied to memory, sequential thinking, and possibly audiation.

Playing with the Patterns of Music
You might notice how a preschooler claps, marches, and moves his body to the beat. He can copy patterns with maracas or rhythm sticks and match loud and soft dynamics. In these moments, music connects to mathematical thinking.

Musical Expression
You might see a child do a little happy dance to celebrate an accomplishment. Or, perhaps you overhear her singing a made-up-on-the-spot song about brushing her teeth. She's beginning to communicate and express herself creatively through music.

Visual Art

Details and Deductions
He leans in to look closely at art prints and illustrations in books. He might talk about the feelings a picture evokes or create stories to explain what is happening. By studying artwork, he can find clues that help him understand the situation: "The mouse got away because the cat can't fit through the hole!"



He's figuring out that the artist is communicating with him and learning to interpret symbolism, perspective, and relationships within the artwork. It's the beginning of art appreciation, and these skills will also boost his ability to understand what he reads in the years to come.

Representational Art
In the toddler years, she used crayons and paint for sensory exploration of movement and mark-making. It probably wasn't about depicting anything specific. Now, she uses art materials to express her stories, ideas, and feelings: "It's my cousins at my birthday and everybody is happy!" An adult might not yet be able to identify what she's drawn, but that's OK. It has meaning to her!

First Figures Emerge

After he's had plenty of unhurried opportunities to scribble and explore mark-making tools in other ways, you might notice that he concentrates on making intentional shapes like circles and crossed lines. Next comes a drawing of a person! It's likely to be just a round head and legs at first, but he'll refine his work as he gets older. If he has many opportunities to draw, his portraits may have hands, hair, and other details by the time he is five.

Drawing stretches his focus and allows him to refine his finger strength and coordination to make lines and shapes. This is a purposeful way for him to discover all the elements he'll use for writing later. (For example, long and short lines going vertically, horizontally, and diagonally; circular shapes; dots; and lines that cross.) And, he's gaining confidence in his ability to communicate symbolically and artistically.

Planning Creative Expression Experiences for Preschoolers

Preschoolers benefit from opportunities to regularly experience music and visual art. This happens through free-choice use of materials in your room and planned activities such as these.

- Listening to and talking about different kinds of music, and moving to the music with ribbons, scarves, or other props.
- Joining in circle dances and activities with rhythm sticks or other instruments.
- Making up their own dances or new verses to songs for the group to try.
- Artist or illustrator studies, when your group talks about several examples from the same artist.
- Looking in a mirror as they draw self-portraits. Younger preschoolers will enjoy drawing or painting directly on the mirror surface.
- Contributing their unique artwork to murals or other collaborative displays.*

*Focus on art that children create in their own way. We can invite each child to make choices about the subject matter and the materials. This stretches their communication and creative thinking skills in ways that look-alike crafts cannot!

Creative Expression with Schoolagers

The arts hold unique value in afterschool and summer programs for children in elementary school, middle school, and beyond. Here are just a few of the reasons why.

- Music, dance, and visual arts invite creative expression. Young people have time to deepen their skills and connect with peers with similar interests.
- The arts reinforce learning by allowing young people to discover or apply academic skills and knowledge in new ways. For example, a first grader might employ math in a cheer or dance, and a fifth grader might create an artistic map inspired by their favorite fantasy novel.
- The arts offer ways for young people to decompress, process feelings, and relieve stress.

To support the arts during out-of-school times, we can provide music players and space to listen and move to music, along with tools for making music. Brightly colored plastic toy instruments won't interest them much, but real hand drums, wood blocks with mallets, and step bells will. They'll also appreciate novel musical materials like thunder tubes and boomwhackers.

Likewise, we can offer an art area with materials that are in good repair and well-matched to our group. Older schoolagers will appreciate fine-tipped markers, colored pencils with sharpeners, and sharp scissors. Also consider beads, embroidery thread, regular and glitter glue, chenille stems, and air-drying clay. A backpack can be used to take art materials, clipboards, and paper outdoors.

Strong artistic interests emerge for many schoolagers. Some of your group members may take dance, music, or art lessons elsewhere. Others may bring special knowledge about knitting, photography, DJ techniques, or other hobbies from home. These kids may help serve as subject matter experts for your group.

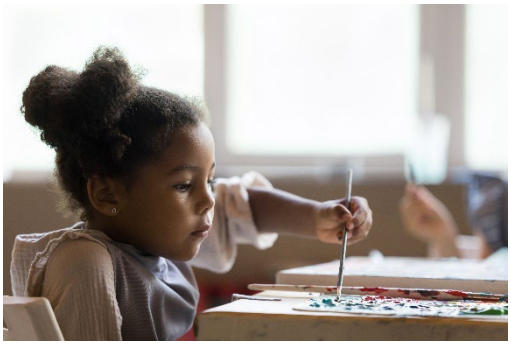
Here are some things you might notice about schoolagers' artistic endeavors.

Detail-Oriented

In kindergarten and first grade, drawings begin to include schematic details like sky above and grass below. Her characters don't just float on the page like they did when she was younger. It feels important to her now to represent spatial relationships. Realism will grow in the next few years as she adds small details and explores scale. Ideation and planning are gaining complexity, too. Many older schoolagers appreciate having time to explore ideas before working, as well as opportunities for long-term projects.

Art Begins to Feel Iffy
Most kindergarteners and first graders are eager to join in art projects, singing, and dancing. In the years that follow, young people grow more self-conscious. He may avoid things he doesn't feel good at and might even become disruptive if required to participate. It's a sign of his emerging self-awareness, but it can also indicate his lack of confidence in his abilities.

The Latest and Greatest
Older schoolagers, especially, are tuned in to the latest pop music and dance trends. Expect to see social media-inspired fads bubble up. Joining these trends can help her feel mature and included in a group. Your guidance can help ensure that lyrics and dance moves are appropriate for your setting.



Finding Their Thing
Schoolagers may discover activities that are deeply appealing and personally meaningful to them. For example, she may develop an affinity for singing show tunes, creating comic books, or weaving friendship bracelets. Some of these may be the beginning of life-long interests!

Planning Creative Expression Experiences for Schoolagers

Our out-of-school-time arts programming begins by creating a safe and supportive environment, free from undue competition or hurtful teasing. Young people can take an active role in discussing the climate they want for their program.

Plan novel art and music experiences such as these to generate interest and build confidence.

- Origami
- Batik
- Paper mâché
- Weaving
- Stop-motion animation
- Line dancing
- Bucket drumming
- Music-meets-science with musical water glasses or a theremin kit

Remind young people that it is perfectly fine to play around with materials. We test out new ideas by dabbling, and we can enjoy the experience even when things don't go as planned. In fact, many fantastic art discoveries began as happy accidents!

If schoolagers join your program for the summer, consider the possibility of an art studio space that different groups could visit throughout the week. Rather than planning a weekly craft, focus on open-ended opportunities for children to try various art materials and techniques. Your studio might showcase chalk and oil pastels one week, acrylic paints the next, and sparkly collage materials on dark paper the week after that. Or, it might serve as a supersized free-choice art area with a broader range of materials than your usual group space can offer.

Clubs or mini-camps can be offered to connect schoolagers with similar interests. Possibilities include mural making, clay work, songwriting, hip-hop dance, and more. Be sure to provide some lighter choices, as well. How about a kazoo club or a mini-camp dedicated to playful, messy paint experiences?

School and community partnerships can strengthen out-of-school-time arts programming. We might connect with an art teacher to discover what our group members are learning in art class. Often, our role isn't to teach art, but to create opportunities for children to apply their new skills and knowledge. For example, when their weekly art class focuses on collage, we might ensure that our afterschool art area also offers magazines, patterned paper, and fabric scraps for collage.

Likewise, a librarian might suggest titles for an artist study, inviting young people to create their own work inspired by picture books. You may even be able to find a family member, college student, or local hobbyist to serve as your summer artist in residence, connecting with children to model and teach percussion, dance, photography, pottery making, or another area of expertise.

Creative Expression Experiences to Share with Children

Prop Songs

The songs below can inspire you and your children as you use scarves, ribbons, shakers, or rhythm sticks. You'll find them on Spotify and your other favorite music sources. Preview them to choose the ones that feel like the best fit for your group, and visualize how you will lead them.

Infants and young toddlers will enjoy sitting on your lap to share songs one-on-one. You can invite older children to join you on a large group rug or take your music player and props to your playground.

Infants, Toddlers, and Younger Preschoolers

Drum and Stop - Lynn Kleiner

Shake Your Scarves - Johnette Downing

Shake! - We Kids Rock

Slow and Fast - Hap Palmer

Tapping on My Sticks - Kathy Reid-Naiman

Pre-K, Kindergarten, and Beyond

Big Rhythm - Kimbo Children's Music

Magic Sticks - Dancing Bears Music

Maracas - Baila Baila

Rainbow Ribbon Dancing - Sing & Grow

Shake Your Shakers - B Minor Music

Tap Your Sticks - Hap Palmer

For stick, scarf, and shaker activities to truly qualify as creative expression, children need opportunities to generate their own ideas. They can suggest new verses and actions for the songs above or even make up their own songs.

Under the Table Drawing

Tape large sheets of paper to the underside of a child-sized table. Place a quilt, mat, or soft rug under the table, along with a basket of crayons, chalk, or markers. Children can lie under the table and reach up to draw on the paper above them. This allows children to use their arms and hands in a challenging new way. Consider taking photos of the artists at work to display with their finished artwork!

"Stained Glass" Windows

Pour about ¼ cup of washable tempera paint into each or several lidded paint cups or repurposed drinking cups. You could also use the cups of a muffin tin. Mix a squirt of baby shampoo or liquid dish soap into each paint cup.

If desired, you can use blue painter's tape to divide your glass into panels before painting. Use sponge daubers or paint brushes to apply your paint mixture to the inside or outside of a large window or sliding glass door. If you used tape, carefully remove it when the paint is dry.

Notice how the light shines through your painted and unpainted windows. Children may be interested in looking at real stained-glass windows in your building or neighborhood and researching together to learn more about how stained glass is made.

Cleaning up
Children will enjoy their painted windows for at least several days. If you painted outside, rain may wash most of the paint away in time. Invite children to help remove indoor paint with damp cloths or a spray bottle and squeegee. Old towels on the floor can reduce the mess from drips. Cleaning the window is just as much fun for children as painting it!

Mixed-Media Portraits

Take close-up photos of each child. Make full-page, black-and-white (grayscale) prints on plain office paper. Children will enjoy marking their photographs with oil pastels, crayons, chalk, or watercolor paints. You can also offer collage materials such as yarn and tissue paper squares with glue sticks if desired.

Big Benefits of Creative Expression for All Ages

Mathematical Thinking

Musical experiences are inherently mathematical! Even infants respond intuitively to musical elements like rhythm and beat; their awareness of music can grow with our support. Clapping or marching to music highlights 1:1 correspondence, one clap or step for each musical note. Counting and patterns are often part of music, too. Through visual art, children explore shapes, lines, proportions, and spatial relationships.

Educators in Action

- Share music with differing tempos and instrumentation. Bop, sway, clap, shake egg shakers, or march to the beat. Point out times when music speeds up or slows down. With older children, use rhythm sticks to tap out patterns.
- Use scarves or other musical props to explore spatial relationships like *up high*, *down low*, *in front*, and *behind*.
- Share countdown songs such as *Five Little Ducks* and cumulative "plus one" songs, such as *The Hole in the Bottom of the Sea* or *Johnny Works with One Hammer*.
- Mathematize your conversations about picture book illustrations. For example, you might talk about a long dachshund, a tiny ant, or an enormous elephant. With older children, talk about perspectives, such as a birds-eye-view of a scene.
- Point out shapes and lines as you look with children at their artwork. "I notice that this blue line starts at the top and runs all the way to the bottom!"

Creative Thinking and Self-Expression

The arts are a way of communicating feelings and ideas. A child's dance might convey her mood, or her made-up song might tell the story of a recent experience. Paintings, drawings, and other artwork also reflect the child's thoughts. Self-expression through art can be an outlet for strong feelings and a way of sharing with others.

Educators in Action

- In addition to structured activities, provide opportunities for children to use scarves and other dance props in their own way.
- When listening to music together, talk about the mood of the music and what the musician or singer chose to convey. With older preschoolers and schoolagers,

consider offering a music player with headphones and several genres of music to match different moods.

- Invite children to show you their artwork. Instead of asking, "What is it?," try asking, "What would you like me to know?"

Motor Development and Hand-Eye Coordination

Playing musical instruments and creating artwork naturally motivate children to coordinate and refine their movements. Whether striking with a drumstick or snipping with scissors, getting things "just right" helps them accomplish their own goals. As they draw, children hone their abilities to make the strokes they'll use for writing later.

Educators in Action

- Match materials to the ages and abilities of children in the group. For example, invite two-year-olds to try plastic safety scissors with clay. Around age three, with supervision, they'll be ready to use blunt-tipped metal-bladed scissors with thick paper.
- Help children recognize their actions. "You're using your finger to press each key on the keyboard." Or "I see you moving your marker around to make circular shapes."
- Use planned movement activities to model and practice skills. For example, toddlers might grasp and shake maracas, or preschoolers might be encouraged to tiptoe, gallop, and skip to music.
- Plan art experiences that build skills while leaving lots of room for children's creativity. For example, you might show schoolagers a score and slip technique to join two clay pieces, but not tell them what they should make.

Focus, Critical Thinking, and Persistence

Tools like hole punches, tape dispensers, spray bottles, and stamps offer fresh challenges for children. In our art areas, they often seem to wonder, "How do I make this work?" Even familiar materials like crayons and chalk invite children to experiment by applying more or less pressure to the page, layering colors, and so on. There are many connections for children to make about their materials and their abilities.

Educators in Action

- Introduce and explain new materials. "This is called a brayer. It's used for spreading paint in a thin layer, like this…" If you notice that art or music tools are unused, consider whether children know how to use them.

- Invite children to talk about their process. "How did you make these big, pink marks?"
- Serve as a sounding board when children get frustrated and encourage them to consider their resources. "It sounds like the liquid glue isn't working well for you. Is there something else you could use to join your pieces?"
- While we don't tell children exactly what to make, there's great value in inviting them to teach us! Try joining a child using playdough to ask, "Can you show me how to make mine like yours?"

Links to Literacy

Singing offers another way to strengthen listening skills and play with the patterns and sounds of language. There are rhymes and alliteration to enjoy, and the syllables of sung words are matched notes. This helps children hear individual parts of the word, strengthening phonemic awareness.

Viewing art and illustrations gives children lots to talk about. They identify symbols and contextual clues in pictures that help tell or clarify a story. These are valuable skills for pre-readers and readers. At first glance, we might assume that this applies only to younger children who read (or are read to) from books with illustrations. However, these interpretation skills will also apply to written text as children grow.

Educators in Action

- Find ways to highlight literacy learning through songs. You could clap on each syllable or invite children to think of new rhyming verses for *Down by the Bay*.
- While looking at artwork and illustrations, ask questions to encourage children to think and respond with multi-word answers. Instead of asking, "Do you see the horse?" (in the picture), you might ask, "Where do you think the horse is going?" and "How come?" Then, turn the page to find out!

Active Physical Play

Active Physical Play includes

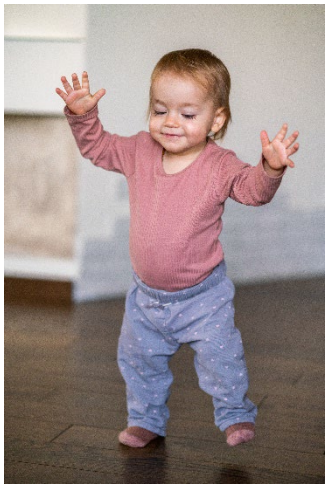
- Racing, chasing, and running
- Climbing up and sliding down
- Hopping and leaping
- Crawling, stomping, tiptoeing, skipping, and galloping
- Ball play
- Riding wheeled and pedal toys
- Pushing, pulling, and carrying large and heavy things

It's all about playing vigorously in ways that give our muscles and lungs a workout and get our heart rate up. When children engage in active play, they stretch their abilities and explore new ways to move.

On the following pages, we'll take a closer look at active physical play with infants and toddlers, preschoolers, and schoolagers. In the middle of the section, you'll find some simple ideas to share with children. Then, we'll consider the benefits of active physical play experiences for children of all ages.

Active Physical Play with Infants and Toddlers

Infancy and toddlerhood are the most rapid periods of physical development that children will ever experience. In the first two years of life, they learn to lift their head, roll over, sit up, scoot, crawl, pull up, cruise, walk, run, and climb. Each emerging milestone reflects their growing strength, balance, coordination, and proprioceptive sense.



You might notice the following behaviors when you observe infants and toddlers at play.

Increasing Steadiness
Brand-new skills seem precarious at first. But, she keeps at it, and those first tottering movements soon become smoother and more stable. She's tentative at first and then more bold. You'll see her strength and confidence grow as she hones her locomotor skills.

Having a Ball
Balls are fascinating right from the start! An infant interacts with balls by grasping, batting, and swiping at them. You may see a toddler throw or kick a ball. He can even catch a tossed ball by trapping it against his body with his arms. He's gaining the coordination he needs to use his hands and feet to manipulate objects. Visual coordination plays a role, too, as he tracks a moving ball or judges the distance between his body and a ball on the ground.

Over, Under, On, and Through
You may notice how ambitiously a child accepts the challenges of her play area: ramps and steps are for climbing, tunnels are for crawling through, and wheeled toys are for sitting upon. Soon, she learns to propel herself by pushing with her feet and turning the steering wheel. She's building core strength and muscles while simultaneously exploring her world.

High and Low Activity Levels
You'll probably notice bursts of very active play followed by quieter lulls. Playing hard is hard work, and it's normal for him to regroup and recharge periodically. Learning to recognize his body's cues will help him build self-regulation skills.

Planning Active Physical Play Experiences for Infants and Toddlers

Create a safe, appealing space for infants to explore at ground level. Tummy time can begin once a baby has enough strength to lift her head. Plan to sit beside her for short tummy sessions to help her strengthen her trunk, shoulders, arms, and neck. You can find out more about tummy time at https://safesleepacademy.org/tummy-time/.

As baby grows, new skills emerge slowly but surely. Give her ample time to learn through trial and error, gently scaffolding her development. For example, once she has mastered sitting, you might hold out a toy to see if she feels ready to maintain her balance while reaching. Offer sturdy furnishings for crawlers to pull up and cruise along but resist the urge to hold her hands to help her walk. She can't learn to balance her body while you're holding her up.

Spark interest and scaffold learning by providing materials that offer just the right level of challenge for your group's ages and abilities. Here are some possibilities.

- Floor gym with hanging items to bat or kick. Watch baby's cues to know whether she is intrigued or fatigued, moving her if she seems ready for a break.
- Balls of different sizes and textures, with an empty laundry basket to toss them into
- Cardboard boxes that are large enough to sit in or crawl through
- Sturdy large objects to push and pull
- Large cushions or pillows that toddlers can carry, pile up, and climb on

Get down on the floor to observe children, showing enthusiasm for their active play endeavors.

You can also plan simple games to share with children. For example, you might use blue painter's tape to make lines on the floor for children to crawl, walk, or hop along. Invite older toddlers to follow your lead with simple yoga activities, dances, and circle games, like Ring Around the Rosie.

Older toddlers are wired to move and eager to test their growing abilities. Challenges may occur as they climb on the table, throw wooden blocks, or engage in other unsafe behaviors. Ask yourself, "If not here, then where?" Where can children find more appropriate outlets for these physical interests? Redirecting them to these options helps them have safe and satisfying experiences.

Active Physical Play with Preschoolers and Schoolagers

Active outdoor playtime is vital for our preschoolers and schoolagers. It's so much more than just a break between learning times or a chance to get a little fresh air. Physical activity is crucial for health and wellness, motor development, and brain development. Ample outdoor time should be a key component of our daily schedule, with options for active play indoors in inclement weather.

Next, we consider the provisions in our outdoor spaces. Do we have enough equipment for everyone? Are our materials well-matched to the skills that children are in the process of building?

To foster locomotor skills, provide lots of room for running, skipping, and galloping. Think about the spaces and structures that invite children to crawl, hop, leap, tumble, climb, and pull up.

To support stability skills, provide obstacles to dodge around, stretch for, balance on, and duck under.

To promote manipulative skills, offer balls, wheeled toys, giant-sized blocks, hula hoops, and other portable gross motor equipment.

When possible, we provide higher and lower-challenge versions of similar materials. For example, a preschool playground might include ride-on toys without pedals, tricycles, and balance bikes. A K-2 schoolage group might have access to traditional and softer foam (Nerf) footballs. This enables each child to find options that suit their experience level and abilities so far.

Here are some things you're likely to observe as preschoolers and schoolagers engage in active physical play.

Whole Body Imaginative Play
Active and dramatic play merge as children race around, pretending to be superheroes or adventurers. Their imaginative play may be far grander and more exciting outdoors, where running feet and outside voices are welcome.

Increasing Power, Accuracy, and Control

Have you ever considered the combination of skills involved in tasks like steering a trike around a track or kicking a moving ball? She's honing her timing and coordination with each new attempt. Over time, you'll see her skills grow.

For example, she might first throw a ball by planting her feet squarely and making a wild, sweeping toss. Sometimes, the ball goes where she wants, but sometimes, it flies way off course. A few months later, you might see her stepping forward smoothly with the foot opposite her throwing arm and following through to toss her ball with far greater precision. Her daily access to your active play space is paying off!

Daring Deeds

You might see a child test his boundaries as he figures out how high, how far, and how fast he can go. He's exploring his physical capabilities and strengthening his ability to assess risk. Mishaps build resilience, while successes boost his confidence. Consider what you know about his age and experience level as you assess opportunities for safe but satisfyingly challenging active play.

Games with Rules

Children begin to craft rules to govern their social, active play. Younger preschoolers may start with a simple agreement: a soccer ball that hits the side of the shed is a goal, or the big tree is base in a chasing game. Gradually, children begin to play games with more complex rules, applying or imitating rules they've learned through playing and watching sports in other settings. As they play, they practice turn-taking and impulse control and work together to accomplish their shared goals. That's teamwork!

Active Interests Emerge

You may notice that a child is intensely interested in gymnastics, disc golf, basketball, freestyle scootering, or other team or solo sport. Active play with you helped her build the foundation skills she needed to pursue her interests. Now, she might be eager to talk about and show off the skills she's building through lessons or team practices! Sports-related hobbies can support her physical and social wellness for years to come.

Planning Active Physical Experiences for Preschoolers and Schoolagers

We can actively show interest in and encourage children's physical ideas and interests. When challenges occur, we can assess and troubleshoot to help children have more successful, satisfying play experiences.

We ask ourselves, "What would be helpful to children?" Perhaps two different kinds of physical activity conflict with one another and could benefit from separate spaces. Perhaps adding more of the most popular equipment could reduce competition over materials. We might also observe that children would benefit from simpler or more challenging equipment.

In addition to unstructured active physical play, we invite children to join in more structured games and activities. These should be selected and planned with the following goals in mind.

1. Our planned activities help children realize that physical activity can be pleasurable and rewarding. Look for games where each child will spend most of their time engaged in movement, rather than waiting for a turn. Then, focus on the experiences your children will enjoy most. Allow children to opt out if they don't want to participate.

2. Our planned activities foster teamwork and connection. Look for games that invite cooperation and collaboration. Avoid games where children get out and must sit on the sidelines. Novel, cooperative games can level the playing field for schoolagers, reducing anxiety for kids with less playing experience.

3. Our planned activities scaffold and strengthen specific gross motor skills. Look for games that support the locomotor, stability/balance, and gross motor manipulative skills emerging for your group.

Active Physical Experiences to Share with Children

Movement Songs

The songs below can get you and your group up and moving! You'll find them on Spotify and your other favorite music sources. Preview them to choose the ones that feel like the best fit for your group, and visualize how and where you will lead them. (Hint: Consider taking a music player outdoors, too!)

Infants, Toddlers, and Younger Preschoolers

Bug 'n Roll - Pink Fong

Choo Choo Train - Patty Shukla

Drivin' in My Car - Ralph's World

Shake My Sillies Out - Raffi

Sleeping Bunnies - Nursery Rhymes 123

Wiggy Wiggles Freeze Dance - Hap Palmer

Pre-K, Kindergarten, and Beyond

The Bean Bag - Hap Palmer

Move and Freeze - The Learning Station

Shake it Like a Duck - Shawn Brown

Stand Up, Sit Down - Patty Shukla

Stop and Go - Ella Jenkins

Tiger Hunt - Ernie, Sesame Street

Popping Popcorn

You'll need a parachute or flat bed sheet for the pan and something to represent popcorn. Rolled socks or large wool dryer balls are good picks for toddlers. Preschoolers and schoolagers can use pompoms or smaller wool balls.

Hold the edges and stretch your parachute or sheet tight. Pretend to add a little oil to your pan, then sprinkle the popcorn on top. Pretend the pan is heating up as you shake the parachute/sheet very gently at first, then harder and harder until all of your popcorn pops up and out of the pan. Run to gather the pieces and repeat.

Skating

Put on some classical music. Place paper plates under your shoes and slide your feet like you are skating. Can you move forward, backward, and sideways without lifting your feet?

Musical Shares (aka Islands)

Place hula hoops, carpet squares, traffic cones, or other bases around a large, open play area. Play upbeat music. While the music is playing, children may dance and move around the play area. When the music stops, they must run to touch a base with at least one toe. Start the music and play again. Each turn, remove a few of the bases so that children crowd playfully around those that are left.

No one gets out in this game. Everyone plays until the end, and it's just for fun! Try suggesting a new way to move each time you restart the music. "When the music starts, we're (hopping, bear-walking, stomping, tip-toeing, etc.)."

Freeze Tag with a Spritz: A Warm-Weather Game

Once your group understands the basics of freeze tag, introduce a cooling twist. Give spray bottles set to mist to one or two players. These children become the un-freezers, with the power to reanimate any child who has been frozen.

Clear the Zone

Divide your playing area into two sides. Scatter crumpled paper balls or ball pit balls on both sides of the playing field. On your signal, both sides race to clear their zone by lobbing pieces on the floor across to the other side. Play just for fun until children tire of the game, then give them a laundry basket or other container to toss the balls into.

Simple as it sounds, the game described above is endlessly entertaining for younger preschoolers. To add complexity for a schoolage summer program, use a line to hang several tarp barriers across the middle of your play area. Provide wet sponges to toss and containers of water to re-soak them.

Big Benefits of Active Physical Play for All Ages

Motor Development

Physical activity helps children build balance, strength, stability, flexibility, and coordination in their arms, legs, and core muscles. They also learn foundational skills, such as running, reaction speed, and ball handling, that they'll need for athletic endeavors later on.

Large motor development is crucial for fine motor development, too. Activities that strengthen the trunk, shoulders, and arms simultaneously help coordinate the muscles and nerves of the hands and fingers.

Educators in Action

- Match gross motor equipment to the ages and abilities of children in the group. Strive for materials that are challenging but not overly frustrating.
- Notice each child's development, providing gentle coaching to build skills. "Let's bend our knees and squat down like frogs. Now, let's JUMP!"
- Know when and how to refer a child for developmental screening. Be on the lookout for significant delays in motor skills, low muscle tone, or ongoing balance problems. Playful, positive early intervention (physical therapy) can help children learn how to move their bodies while providing insights for families and educators.

Health and Wellness

Children who engage in moderate to vigorous physical activity daily strengthen their hearts and lungs. This reduces their risk of many health conditions. There's also evidence that active physical play can reduce anxiety and boost the immune system. Families and educators report that children seem more relaxed and eat and sleep more regularly after they've had opportunities for vigorous physical activity.

- Safeguard active play times. Instead of saving the playground for the prettiest days of the year, go out whenever you can. Partner with families to provide warm clothing, rain boots, and other provisions that make outside time possible.
- Avoid taking away active playtime as a consequence of challenges at other times of the day. Getting out to play is the best way to set them up for success for the rest of their day!
- Notice children who are less active outdoors. Will they be more comfortable joining in if you invite them to play ball or chase with you?

Mathematical Thinking

Children build spatial awareness as they move over, under, and through obstacles. Slides and hills offer angles to explore, and active play there enables children to gain firsthand experience with concepts like *high*, *low*, *fast*, and *slow*. Structured activities often involve timing, sequence, pattern, and back-and-forth turn-taking, as well.

Educators in Action

- Help children build comparative vocabulary by talking about their experiences. "Your ball went farther this time! It rolled all the way to the fence!"
- Join in play to support sequencing and spatial knowledge. "First, let's run up the hill to the wall, then we'll go down and around the tree, and then we'll come back here."

Links to Literacy and Learning

Active physical play, especially outdoors, supports children's developing vision. In addition, children who experience challenges related to motor development often also experience challenges related to learning. It's almost impossible for a child to participate in a preschool storytime if they lack the core strength to sit up on the group rug for 10-20 minutes. Paper and pencil tasks will be frustrating for a kindergartener who lacks the arm and hand strength to work without discomfort and fatigue.

Many families report that children's time at home is more sedentary and screen-oriented than ever before. Thus, it shouldn't surprise us that some children come to pre-k, kindergarten, and elementary school with limited strength and coordination. Educators sometimes mistake indicators of physical distress for defiance or disobedience. This can begin a negative cycle that soon escalates. A child who struggles to sit unsupported on the hard floor doesn't need even more time struggling on the floor; he needs invitations to crawl, duck, bend, and climb to strengthen trunk muscles!

Educators in Action

- Look for ways to infuse daily routines with physical activity. Children might act out a story, toss a ball as they respond to a teacher's question, or walk around to look for letters in their room or around their building.
- Connect with families to share ideas for fun physical activity at home and within your community.

Exploratory and Investigative Experiences

Exploratory and Investigative Experiences include

- Outdoor exploration
- Sand and water play
- Color mixing and other hands-on experimentation
- Baking, gardening, pet care, and other authentic, firsthand experiences
- Real-world investigation, looking closely and asking questions to find out more

It's all about curiosity!
When children engage in exploratory and investigative experiences, they notice, wonder, predict, try out ideas, and make connections!

On the following pages, we'll take a closer look at the exploratory and investigative behaviors of infants and toddlers, preschoolers, and schoolagers. In the middle of the section, you'll find some simple ideas to share with children. Then, we'll consider the benefits of exploratory and investigative experiences for children of all ages.

Exploring and Investigating with Infants and Toddlers

Infants are interested in the people, things, and sensations in their everyday environments. Outdoors on a windy spring day, an infant might notice the feel of the breeze through her hair, the dance of sunlight and shadows from swaying branches overhead, and the tinkling sound of wind chimes.

Infants are also eager to explore. They discover their capacity to make things move and change, first by finding their hands and feet, and then by interacting with objects. Grasping, shaking, and mouthing toys are exploratory behaviors.

Toddlers continue to gather information through their senses by touching, tasting, smelling, looking, and listening. They are curious and often engage in trial-and-error experimentation. They're busily working to better understand the world around them.

To support children's natural curiosity we create an environment with many things for infants and toddlers to explore. We notice the textures children can discover at floor level and consider the view outside our window. Indoors or out, we might add intriguing elements such as these.

- Things that are shiny or reflective
- Things that move in the breeze
- Real, non-toxic plants and animals, such as fish in an aquarium
- Gentle light sources, such as tip-proof lamps, fairy lights or rope lights, and/or a baby-safe light table

We can also focus on play areas with child-powered (rather than battery-powered) materials that invite experimentation. For example, rattles, busy boxes, zig-zag ball tracks, and shape sorters are all cause-and-effect toys. Low platforms, sturdy mats, and other climbing areas invite children to explore movements and perspectives.

Here are some more things you might notice with infants and toddlers.

Gazing at Faces

A young infant may move her eyes or turn her head to gaze at your face. She might study your eyes, mouth, and other features as you gaze warmly back. She wants to know more about you! When she is a little older, she might reach to touch your nose, hair, or eyeglasses as if asking, "What's this?" These essential early social interactions also provide evidence of her curiosity.

Looking Together
Infants will also gaze at things that interest them. When you look together at something that has caught his eye, he experiences shared (joint) attention. He'll learn to follow your gaze to look at the same thing you are. Notice whether he shifts his gaze back and forth between your face and something he is interested in. He begins communicating by pointing, and might even move your hand to get you to do something. He's gaining awareness of your role in helping him understand and interact with his world!

Mouthing Toys
You've probably noticed that infants and toddlers put everything in their mouths! That's because a very young child uses her lips, gums, and tongue to explore the texture, temperature, and other attributes of things. This usually declines between ages two and three as she gradually builds her ability to use her fingertips to touch and investigate things.

"I Did That!"
You may see a child experiment with cause and effect by emptying, dropping, tossing, and banging toys. Later, he might dash to startle birds on the other side of the playground fence, shake milk from his sippy cup, or splash water at the sink. He isn't trying to be troublesome; he's just fascinated by all the new things he can do!

These behaviors are often repetitive. The child seems to be asking, "If I do it again, will I get the same results?" That's how grown-up scientists work, too! He's learning about the properties of items, their trajectory, and the sounds they can make.

Try, Try Again
You may notice that a toddler seems to have distinct play goals. Perhaps she wants to fill a bowl with sand, fit puzzle pieces in their frame, or stack nesting cups inside one another. She learns through trial and error as she tries different strategies, and builds persistence as she sticks with her task. These early problem-solving opportunities strengthen her cognitive skills and help her build math and science knowledge.

First Questions

Very young children construct knowledge about their world through firsthand experiences. Questions emerge as they work to deepen their understanding. He might point at a photo of an unfamiliar insect and ask, "Bug?" or "What's that?" Noticing that the window bird feeder is empty, he might ask, "Where squirrel?" Children who are not yet verbal show us what they wonder when they look puzzled, point, or use other gestures to express themselves.

Planning Exploratory and Investigative Experiences for Infants and Toddlers

Because we know that it is valuable for children to engage in sustained, focused play, we consider ways to minimize disruptions. This includes scheduling long blocks of playtime and focusing on ways to support players. For example, we might gently steer a toddler who is throwing balls away from a toddler who is concentrating on a shape sorter.

We carefully time our interactions with a focused child by watching quietly until the child looks at us, talks to us, or engages us in another way. That's often the perfect moment to make a comment or ask a question to extend learning.

Everyday experiences are rich in opportunities to look and wonder together. If the forecast calls for showers, consider whether you might take a buggy ride under a covered awning to hear and smell the rain. Or, if you're planning to blow bubbles outside on a sunny afternoon, think about how you might notice their iridescent colors or the way they drift on the breeze.

We can also plan novel things for children to explore. Here are some possibilities.

- Non-toxic flowers, such as sunflowers or thornless roses, to smell and handle
- Primary paint (red, yellow, blue) in a sturdy clear zipper bag; tape all four edges to the table or floor and invite children to squish and mix the colors
- A tray of fresh, clean snow, brought in from outside to poke, pat, scoop, and squeeze

We'll stay nearby to provide "eyes on, arm's reach" supervision and to talk with children about what they are experiencing. When possible, we offer each experience several times (at least) because we know that children learn through repetition.

Exploring and Investigating with Preschoolers

Preschoolers are naturally curious! We can nurture that curiosity by providing an environment brimming with things to discover, wonder about, and investigate. Here are a few possibilities.

- Containers of sand and/or water with a collection of tools. Try funnels, sifters, measuring cups, water wheels, squeeze bottles, poultry basters, and containers to fill.
- Intriguing science materials, such as a magnet with a sealed container of iron filings, a bug eye scope, and an illuminated panel with colored cellophane shapes
- Art materials to use in exploratory ways, such as paint to drip and mix, chalk to crush, and crayons to melt on low-temperature warming trays
- Baskets of natural items, such as rocks and minerals, seedpods, dried flower heads, or forest finds (pine cones, acorns, leaves, and so on)
- Tools for investigating natural materials, such as a flashlight, sorting trays, magnifiers, and a balance scale
- Living plants (for example, non-toxic houseplants or container gardens) and living creatures, such as well-cared-for small pets. Also, consider songbird and hummingbird feeders outside the window.
- Resource books with large, clear photos of insects, birds, animal tracks, leaves, and other natural things children experience in real life

As you explore with preschoolers, you're likely to observe the following.

Full of Questions

She'll continue to ask *where* and *what* questions as she did as a two-year-old, but now she also asks questions that begin with *why*, *when*, *how*, and *whose*. She's gathering information that will help her construct knowledge about her world.

Now Let Me Tell You…

In addition to seeking new information, a preschooler also wants to share what he already knows! You might notice that he is eager to recount his recent experiences or explain how he thinks things work. He's honing his expressive language (communication) skills as he talks about things that feel important to him.

Making Connections

She's figuring out connections between past, present, and maybe even future (planned) experiences. For example, she might talk about icicles she saw outside while experimenting with melting ice in your water table. Or, she might ask, "Are the cicada bugs gonna come back?" as you read a book about springtime. She's noticed that insects have been dormant all winter, and she's thinking about what will happen next.

Organized Experimentation

You may see a child work in a structured way as he tries something, refines his approach, and tries again. For example, if he wants to make turquoise paint, he might mix blue and yellow, then add more yellow. "Hmmm, that's not it."

He starts over, this time adding more blue paint to the mix. This is evidence of the critical thinking he uses to make predictions and form logical conclusions. He's also demonstrating persistence and the ability to "try, try again" to meet his goals.

Planning Exploratory and Investigative Experiences for Preschoolers

Once you've added materials and tools to set the stage for exploration, consider these actions and interactions to encourage children's work.

- Model curiosity. As you work alongside individual children, spark conversations with observations and questions: "I notice…" and, "I wonder…."
- Help children observe change over time. The sky changes with the weather, and trees change with the season. Puddles, paint, and clay all change from wet to dry, and seedlings, caterpillars, and babies grow. We can notice, describe, compare, and sequence these changes!
- Plan adult-supported experiences. You might plan an exploratory walk outdoors or through your building or invite a special guest to share something with children. Other possibilities include science experiments and food experiences. If you can, skip passive demonstrations in favor of activities that engage children more actively.

- Teach tool use through both planned and informal interactions. Without our support, children may not know how to use balance scales, cameras, magnifiers, and other tools. We can show (model) and then create opportunities for tool use.
- Follow the children's lead as questions bubble up. For example, when a child asked, "If you keep a yellow dandelion, will it ever go fuzzy?" her teacher recognized a perfect time to share a factual book and short time-lapse video about the life cycle of flowers. The group might also keep a few dandelions in a jar in their science area and visit an outdoor wildflower area to observe changes.
- Find ways to help children organize and communicate what they have learned. You might create a chart or graph together, or arrange children's drawings and photos in a book or hallway display.

Exploratory and Investigative Experiences with Schoolagers

Out-of-school-time programs, such as summer day camps and afterschool programs, play an essential role in fostering curiosity and inquiry! We can create opportunities for unhurried outdoor exploration, field trips, and large-scale science experiments that may not be possible during the traditional school day.

Schoolagers appreciate tools that support their investigations. Examples include but are not limited to binoculars, projection microscopes, illuminated magnifying glasses, and field guides.

Here are some things you might observe as schoolagers engage in exploratory and investigative activities.

Sensory Play
Think schoolagers have outgrown sensory play? Think again! She may seek opportunities to mix paint, mash chalk, or make slime. Process-oriented sensory experiences like these can be stimulating or soothing, and may be just the thing she needs to decompress after a long day at school!

Eager to Experiment
Rather than always sticking to the plan, he's curious to discover what might happen if he makes changes. What if he substitutes an ingredient, adds something extra, or changes another variable? He's focused on making predictions and learning through trial and error.

Diagram and Model Making
She constructs knowledge by sketching, writing, and making representations. For example, she might sculpt a realistic turtle from clay or draw a detailed picture of the recycling center you visited on a field trip. This can be a way of organizing her thinking and reproducing elements that feel important to her.

Excited by Big Ideas
Older schoolagers, especially, can conceptualize things with which they haven't had firsthand experiences. A young person may develop a strong interest in the rainforest, meteor showers, deep sea creatures, or volcanoes. He may also be interested in complex systems, such as the seasons and routes of monarch butterfly migration. He can use media for purposeful research, along with tools like maps and globes, and he may be eager to serve as a subject matter expert for others.

Planning Exploratory and Investigative Experiences for Schoolagers

Plan relaxed opportunities for exploration and experimentation. Schoolagers will enjoy opportunities to play around with color mixing, ice melting, magnet kits, and flashlights, and there doesn't always have to be a learning outcome in mind. You can pair these informal explorations with more structured activities. Here are some possibilities.

- Set up a game camera to find out who comes to the bird feeder overnight. Or, make mud around the feeder's base to capture animal tracks.
- Mix Epsom salt into water until it is supersaturated and can't hold any more. Tint with food color if desired. Brush this mixture onto heavy paper. The salt solution will form crystals as it dries, perfect for examining with magnifiers or a microscope.
- Bake pretzels or bread from scratch, noticing how the dough changes over time. Your group might want to find out more about what yeast is and how it works.
- After researching groundwater systems, work together to clean up a watershed area. Or, try creating a rain garden.

If your group can take field trips, consider sites that support investigation. A museum, bakery, historic site, television station, and shallow creek bed are each rich in opportunities to explore, and you'll find other ideas in your community. Consider the ages and abilities of your group when planning. Before going, talk with children about what they are curious about. After your visit, debrief to talk about what you learned.

Summer clubs offer another way to support children's emerging interests. Consider whether you have program staff or volunteers who might have the interest and skills to lead clubs focused on topics such as gardening, low-risk rocketry, entomology (insects), geology, pet care, or cooking.

Look for ways to connect younger schoolagers with workers, hobbyists, and others who can help answer their questions. For example, someone with a therapy dog might be willing to visit with kindergarteners and first graders. Older schoolagers will also value interactions with professional scientists, historians, and so on. Keep an eye out for opportunities for your group to work alongside science community members. Cornell's Great Backyard Bird Count, https://www.birdcount.org/, is one possibility.

Exploratory Experiences to Share with Children

Umbrella Walk

Collect enough umbrellas to take a small group of children for a walk outdoors on a mild, rainy day. Notice how the rain sounds as it patters on your umbrellas and how the world smells on a rainy day.

Consider rain boots and rain suits or coats if you'd rather engage in more active, splashy rainy-day exploration.

A Tub Full of Grass

Add several inches of dirt to a shallow wading pool or under-bed storage tub. Sprinkle with rye grass seed, mix gently to cover the seeds with a bit of dirt, and water well. Spray with water every day or two. You'll see the first bright green shoots within the week, and soon, you'll have your own lush mini-lawn!

With your support, babies can touch the grass with their hands and feet. Mobile infants and toddlers can run their fingers through the grass or climb right in. And, in the preschool room, children can hide toy insects in the grass or trim it with scissors. Schoolagers will appreciate the novelty of their little patch of turf and can complete this project independently with just a little support from you.

Rainbow Paper

This experience is suitable for older preschoolers and schoolagers, with close supervision.

Fill a bowl with water and drip in a few drops of clear nail polish. Carefully lay a square of black cardstock on the surface of the water. Quickly peel it off again, holding it by one corner to allow excess water to drip back into the bowl. Set aside to dry before enjoying the iridescent rainbow surprise!

Notice how your paper shimmers in the sun. Next, look for iridescent colors in soap bubbles, CDs, and pearly seashells and minerals.

Ice Balls

Fill balloons* with water, tie them tightly, and place them in the freezer for at least two days. Use scissors to cut the balloons and peel them away to reveal large, round ice balls.

*Uninflated and popped balloons pose a serious choking hazard for children of all ages. Provide very close supervision and discard cut balloon pieces immediately. Do not allow children to handle uninflated balloons. All balloon-related steps can be completed for younger groups outside the children's space.

Place your ice balls in shallow containers such as dish tubs and mix several bowls of salty water. You may tint your water with food coloring if desired. Children can use spoons, droppers, poultry basters, and/or other tools to drip water over the ice. Notice how your ice balls change as they melt.

Shadow Play

Look for your shadows on a sunny day. Notice how a shadow occurs when you stand with your back to the sun, blocking light that shines on the ground. On a sidewalk or other hard surface area, try tracing with chalk around one another's shadows or the shadows of toys or other objects. Come back about 30 minutes later and again about 30 minutes after that to see how the shadows have changed. Later, set up an indoor invitation to explore shadows with a projector or lamp shining on a blank wall or hanging sheet. Do these shadows change over time? Why or why not?

More to Try

If you're viewing this book online (https://www.astate.edu/a/childhood-services/links-and-resources/), consider one of these.

Butterfly Feeder

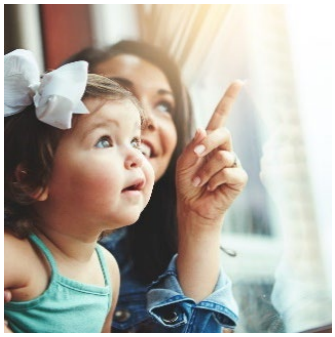
Color Investigation

Sunflower House

Exploratorium Science Snacks for Schoolagers

Big Benefits of Exploratory and Investigative Experiences for All Ages

Mathematical Thinking



These experiences provide excellent opportunities to think mathematically. After a nature walk, your group might sort leaves you've gathered by color, shape, or number of lobes. Or you might measure the growth of your sunflowers and the size of your flowers. You'll notice changes with your sunflowers too, along with weather and seasonal changes, or the changes that happen as you bake something. There's even data to collect as you record the number of birds and squirrels at your window feeder or graph favorites after a fruit taste test.

Educators in Action

- Invite children to lean in and look closely. Observation is a skill you can model and encourage. Holding a baby up to watch the rain outside the window is one example.
- Make comments and ask interesting questions that help children construct mathematical knowledge. For example, you might begin an exploration of symmetry and pattern by asking, "What do you notice about the butterfly's wings?"
- Plan meaningful, age-specific opportunities for children to gather, sort, measure, and/or count and quantify in the context of exploration and investigation.
- Bring mathematical facts to life. For example, if your kindergarten group reads that a barred owl has a wingspan of up to 44 inches but weighs less than two pounds, you could use a measuring tape and scale to bring meaning to those facts.

Critical Thinking and Science Understanding

Children make connections through meaningful, firsthand experiences. Opportunities for active experimentation spark curiosity and empower children to learn about cause and effect. As they join in projects and investigations, they hone their ability to think and work in more complex, structured ways.

Educators in Action

- Evaluate your indoor and outdoor environments. What do you purposefully provide to encourage exploration, experimentation, and discovery? Brainstorm with colleagues about fresh possibilities.

- "Look! Where did the puddles go?!" Ask questions that model a sense of wonder, draw children's attention, and generate enthusiasm for exploration.
- Resist the urge to give children all the answers. Create opportunities for them to investigate and experiment instead. Science isn't just about remembering facts; it's about being able to figure things out.
- Encourage children to talk about their observations, plans, and actions. You can work alongside children in the moment and reflect together afterward. Invite children to tell about how they solved problems and figured things out.
- Focus on helping children build knowledge over time. Young scientists thrive when they can observe, experiment, and talk about the same ideas across weeks, months, and even years. Whether you're exploring color mixing, construction equipment, or the micro-habitats outside your door, circle back often to revisit and stretch what children know so far.

Communication and Literacy

Exploratory and investigative experiences give us opportunities to use the language of science: *observe*, *predict, infer*, *explain*, and so on. Children are eager to talk about their discoveries and are full of questions. They're stretching both expressive and receptive language skills!

They are also motivated to read and research to learn more about the topics that interest them. Infants and toddlers can gather information from large, clear photos of familiar things. And, this is where factual (non-fiction) books truly shine for preschoolers and schoolagers! When we research to find answers to our questions, children learn about *why* we read, as well as *how* we read!

Educators sometimes wonder whether make-believe, fictional books have a place in exploratory and investigative experiences. Children are increasingly interested in describing what is real and not real as they gain expertise, and fictional books give them many opportunities to do so. "Hey! Butterflies don't wear hats! That's silly!"

Educators in Action

- Talk with children about their experiences. Strive for conversations with several back-and-forth turns where children aren't just answering your questions but also sharing their own observations and questions.
- Use rich vocabulary to frame actions, such as *predicting* and *experimenting,* and describe things.
- Instead of answering children's questions directly, sometimes ask, "I wonder how we could find out?" This will often lead you to literacy-rich research opportunities! Look for resource books that pair factual information with large, clear photos or realistic illustrations. You'll find a few of our favorites below.

Books to Inspire Exploratory and Investigative Experiences

You'll find books for the youngest researchers at the top of this list and books for older researchers at the bottom.

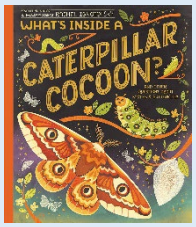
Flutter! Fly! (Indestructibles Series)
Kaaran Pixten, Workman, 2009

Follow the Trail: Bugs
DK, Dorling Kindersley, 2018

Look and Learn: Things that Go
National Geographic Kids, 2014

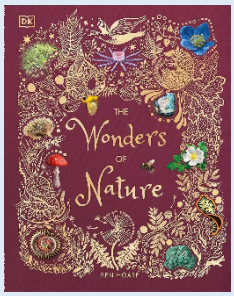
A Seed is the Start
Melissa Stewart, National Geographic Children's Books, 2020

See How They Grow: Farm
DK, Dorling Kindersley, 2021



The Magic and Mystery of Trees
Jen Green, DK Children, 2019

What's Inside a Caterpillar Cocoon?
Rachel Ignotofsky, Crown Books, 2023



A Year at a Construction Site
Nicholas Harris, First Avenue Editions, 2009

The Wonders of Nature
Ben Hoare, Dorling Kindersley, 2019