

Explorers Preschool Curriculum

# Let's Explore Songbirds and Squirrels



Developed by  
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Program Coordinator

Arkansas State University Childhood Services  
JoAnn Nalley, Director





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# Let's Explore Songbirds and Squirrels

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If Explorers Preschool Curriculum is new to you, or if you would like to review big ideas about this curriculum, see the Using Explorers section at the end of this packet.

An expanded Getting Started guide can also be found under the resources tab at [www.ASUChildhoodServices.org](http://www.ASUChildhoodServices.org)

# Let's Explore: Songbirds and Squirrels

Birds and squirrels can be found everywhere – in cities, forests, and fields – all through the year. Children can often slip close enough to watch these creatures nesting and foraging for food and to hear their chirps and chatter. Most of all, children can relate to the many moods and behaviors of birds and squirrels: sometimes curious, sometimes fussy, sometimes nurturing, and sometimes playful. This topic can easily expand to include hummingbirds or birds of prey, as well as chipmunks and other backyard wildlife.

**This topic might be a fit for you if...**

- You've noticed that children in this group are interested in birds and squirrels that they see from their window or outdoor play area.
- You'll have ample access to outdoor areas in the weeks to come.

## Let's Talk About Songbirds and Squirrels

Use words like these during everyday conversations with children.

adaptation  
beak  
birdsong  
feathers  
feeder  
flock  
forage  
habitat  
markings  
migration  
nest  
predator  
shelter  
wildlife  
wings

**Interesting Verbs:** scamper, forage, chirp, chatter, peck, flap, and so on.

**Uncommon Adjectives:** downy, furry, sharp, shrill, colorful, and so on.



## Birds and Squirrels Collectibles

Collect objects like these to investigate with children. Families can help!

field guides  
Birds of Arkansas poster

bird feeders, including window feeders, tube feeders, hummingbird feeders, and platform feeders

birdbath

## Preparing to Explore Songbirds and Squirrels

1. With your teaching team, think about, and discuss:
  - What experiences have our children had with songbirds and squirrels? What background knowledge do they most likely have? What seems to interest children most?
  - What resources could be helpful as we explore this topic with children? Are there any special places we might go, or people who might visit our program? How will we help children have firsthand experiences with songbirds and squirrels?
  - What are some things that children might learn and do as we explore songbirds and squirrels? What new words or concepts could they begin to understand?
2. Let families know that the group is interested in songbirds and squirrels. What can they tell you about their family's experiences? Think together about ways that families can be involved. For example, a parent might be able to cut lumber to build [nest boxes](#) for children to paint and hang, or a grandparent might be interested in sharing their birdwatching hobby.
3. Gather books and materials to add to learning centers and to use during small group experiences. You'll find suggestions on the pages that follow.



## Learning Center Extensions – Songbirds and Squirrels

Here are some examples of materials that can be added to learning centers for daily play times. Not everything needs to be added at the same time. Choose materials based on what you have available and the ages, interests, and abilities of the children in your group. You may also choose to add more – or different – materials during your investigation. For more information on incorporating materials in your classroom, see the *Learning Everywhere* section in the Getting Started packet.

### Science Area

- Bird nests\*
- Collection of acorns, hickory nuts, and black walnuts if no child in your program has a tree nut allergy; sorting tray and balance scale for investigating nuts and acorns
- A device that plays North American bird calls, such as Birdsong Identifier, Audubon plush birds with sound, or *The Little Book of Woodland Bird Songs*, Firefly Books, 2018
- Photos of squirrels and Arkansas songbirds
- New (unused) squirrel-proof bird feeder. Children will experiment with the mechanisms that open and close the feeding ports.
- Factual books about songbirds and squirrels such as:

*A Nest is Noisy*

Diana Hutts Aston and Sylvia Long, Chronicle Books, 2017

*Feathers: Not Just for Flying*

Melissa Stewart and Sarah Brannen, Charlesbridge, 2014

*Gray Squirrels*

G.G. Lake, Capstone Press, 2016

### Window Birdwatching Area

This may be part of your science area or established elsewhere in the room.

- Outside the window: feeders for birds and squirrels
- Sturdy binoculars
- Bird guides and/or bird identification poster
- Tally sheets for recording birds and squirrels spotted on the feeders

\*Collect abandoned nests in fall and winter. Sanitize nests by saturating with bleach-water solution, air drying in sunlight, and freezing in a sealed container for at least 48 hours.

## Learning Center Extensions – Songbirds and Squirrels

### Block Building Area

- Realistic craft birds, available at hobby shops
- Grapevine ropes and wreaths
- Wooden eggs and/or plastic Easter eggs
- Tree blocks
- Loose parts: twigs, smooth-sanded tree branch slices

### Fine Motor/Table Toy Area

- Bird matching and BINGO games
- Sneaky, Snacky Squirrel game by Educational Insights
- After being introduced to children, materials from the **Investigating Beaks** small group learning experience may be offered for free choice use.

### Art Area

- Craft feathers for collage
- Laminated photos of birds for children to choose and use alongside clay and/or easel paints
- After being introduced to children, materials from the **Nest Building** small group learning experience may be offered for free choice use.

### Sand Play Area

- Birdseed
- Scoops, cups, canisters, funnels

### Other

Realistic bird and squirrel hand puppets can be added to a dramatic play area, library area, or stand-alone puppet theater area.

## Book Area

Add some of these books and/or your favorite books about birds and squirrels.

*Apples and Robins*, Lucie Felix, Chronicle Books, 2016

*The Big Book of Birds*, Yuval Zommer, Thames and Hudson, 2019

*Birds*, Carme Lemniscates, Candlewick Studios, 2019

*Fly with Me: A Celebration of Birds*, Jane Yolen and Heidi E. Y. Stemple, National Geographic, 2018

*Frooodle*, Antoinette Portis, Roaring Brook Press, 2014

*Have You Heard the Nesting Bird?*, Rita Gray and Kenard Pak, HMH Books, 2017\*

*Hummingbird*, Nicola Davies and Jane Ray, Candlewick, 2019\*

*Mama Built a Little Nest*, Jennifer Ward and Steve Jenkins, Beach Lane Books, 2014\*

*The Nest That Wren Built*, Randy Shonenshine and Anne Hunter, 2020\*

*This is the Nest That Robin Built*, Denise Fleming, Beach Lane Books, 2018 \*

*Nuts to You*, Lois Ehlert, HMHM Books, 2004

*Ol' Mama Squirrel*, David Ezra Stein, Nancy Paulsen Books, 2014

*Pigeon Math*, Asia Citro and Richard Watson, The Innovation Press, 2019

*Quiet*, Tomie dePaola, Simon and Schuster, 2018

*Ruby's Birds*, Mya Thompson and Claudia Davila, Cornell Lab, 2019

*Squirrels Leap, Squirrels Sleep*, April Pulley Sayre and Steve Jenkins, Henry Holt and Co, 2016

*Those Darn Squirrels!*, Adam Rubin and Daniel Salmieri, Clarion Books, 2011\*

**\*Recommended read-aloud to share with groups of children.**

### Talking About Books

As you share books with individuals, small groups, or larger groups of children, ask questions like these:

- **Beginning:** There's a squirrel in this story. What other stories have we read about squirrels?
- **Middle:** What do you think might happen next?
- **End:** Did this book tell you anything new about birds? What did you learn?

**Talking together about books is an essential part of every preschool day!**

## Conversations about Songbirds and Squirrels

Use prompts like these as you talk with children throughout the day. For more information on incorporating planned conversations into your daily schedule, see the *Learning Every Day* section in the Getting Started packet.

### Bird and Squirrel Conversations

daily - during meals, play times, transitions, or group times

Try asking one or two questions like these when you have opportunities to talk with individuals, small groups, or the larger group of children.

- What do you wonder about birds?
- What would you like to find out about squirrels?
- Are birds the only animals that have wings? What makes you say that?
- If you were a bird, what kind of bird would you be? Why?
- Where do you think the squirrels do with the seeds and nuts that they carry away from the feeder?
- How is a squirrel like a chipmunk? How is it different?
- How is a duck like a robin? How is it different?
- If you could fly like a bird, where would you go?
- How are binoculars like eyeglasses? How are they different?
- How do you think a bird decides where to build a nest?
- When a bird or squirrel is spotted: Where do you think it is going?
- When a bird is heard: What sounds do you hear?

At least once a week, make a chart to write down children's answers to a question. Talk with children one, two, or a few at a time to collect answers. Later, read the responses back to the group. Post the chart where it can be viewed by children and families.

What do we wonder about squirrels?



Do squirrels have a family? - Donovan  
Why do squirrels dig so much? - Ava C.  
Where do squirrels go at night? - Eli  
Do squirrels change colors? - Kaylin  
Do squirrels play with birds? - Ava W.  
What do squirrels eat if they can't find any nuts? - Ben.  
Do squirrels lay eggs? - Grace  
How does a momma squirrel take care of the babies? - Jervae  
Can you have a pet squirrel? - Mason  
Do squirrels bite you? - Bella  
Why do cats chase squirrels? - Sofia  
Do squirrels have names? - Ajay  
Do squirrels eat flowers? - Sam  
Why is a squirrel's tail so fluffy?  
- Xander

## Conversations about Songbirds and Squirrels

### Bird and Squirrel Polls

1-3 times per week – at arrival or group time

Choose a question from the list below or think of one of your own. Make a chart with the question and two possible responses, using picture cues when possible. Invite children to write their names or place name cards to respond to the question.

- Have you ever seen an eagle?
- Which do you like better? Noisy birds?  
Or quiet birds?
- Have you ever seen a chipmunk?
- Can you make a sound like a chickadee?
- Do you think the eggs in the nest by our shed  
have hatched yet?
- If you were a bird, would you rather be big like  
a hawk? Or small like a hummingbird?
- If you were a bird, would you rather be colorful?  
Or camouflaged?

Have you ever used  ? binoculars	
yes	no

### Sharing Our Experiences So Far

several times a week - during meals or play times

As you talk with individuals and small groups of children, tell about your own, positive experience with songbirds and squirrels. You might talk about a silly squirrel that comes to your window, seeing busy birds looking for earthworms after a rain shower, or helping your grandfather feed birds when you were a child.

Listen carefully as children talk about their experiences, too. Help children make connections between shared experiences. (“It sounds like you and Ruby both have hummingbird feeders at home.”)

## Songs, Rhymes, and Games about Songbirds and Squirrels

These playful songs, rhymes, and games can be incorporated into group times and transition times.

### **Busy, Busy Squirrel** - *to the tune of Grand Old Duke of York*

The busy, busy squirrel,  
He gathers nuts and seeds. (pretend to pick up nuts)  
He stashes them for winter months (pretend to put nuts down)  
So he'll have all he needs.

Oh, up, up, up he goes, (make a climbing motion with hands)  
And down, down, down he comes. (shimmy down toward the floor)  
He runs around, and up and down,  
His work is never done!

### **Two Little Birds** - *traditional nursery rhyme*

Two little blackbirds, (hold up two fingers)  
Sitting on a hill,

One named Jack, (hold up one hand, tapping thumb and index finger together like a beak)  
and one named Jill (hold up other hand, tapping fingers together like a beak)

Fly away Jack, (put one hand behind back)  
Fly away, Jill. (put other hand behind back)

Come back Jack, (bring on hand back)  
Come back, Jill. (bring other hand back)

Variants:

- Two little redbirds sitting on a gate, one named Early, and one named Late.
- Two little bluebirds flying in the sky, one named Low, and one named High.
- Two little yellow birds sitting on a car, one named Near, and one named Far.
- Two little gray birds sitting on a stick, one named Slow, and one named Quick.
- Two little green birds, flying through a cloud, one named Quiet, and one named Loud

What other rhymes can your group think of?

## Songs, Rhymes, and Games about Songbirds and Squirrels

### Gray Squirrel, Gray Squirrel – *traditional rhyme*

Gray squirrel, gray squirrel, swish your bushy tail. (Shake body, pretending to shake tail)  
Gray squirrel, gray squirrel, swish your bushy tail. (Shake body, pretending to shake tail)  
Hold a nut between your toes, (Pretend to hold a nut between your hands)  
Wrinkle up your little nose, (Try to crinkle and wiggle your nose)  
Gray squirrel, gray squirrel, swish your bushy tail. (Shake body, pretending to shake tail)

### Who Took the Nut from the Squirrel's Cache? – *circle game*

Adapt the classic children's call-and-response game, "Who Stole the Cookie from the Cookie Jar?" If this game is new to you, see instructions in the **Insects** packet of this curriculum.

A cache is a place where a squirrel hides its food. A cache might be a hole in the ground, in a flowerpot, or in a tree. You can use a real hickory nut or a paper nut as a prop for this game.

### This is the Way – *to the tune of Here We Go Round the Mulberry Bush*

Mimic bird behaviors as you act out this simple song. "Sunny summer morning" can be changed for any season.

This is the way we flutter and flap, flutter and flap, flutter and flap (flap arms)  
This is the way we flutter and flap on a sunny summer morning.

Variants:

- This is the way we scratch and peck (for food).
- This is the way we hop and dance.
- This is the way we feed our brood.



### Birds and Squirrels Playlist

Los Pajaritos (Little Birdies) – Sonia De Los Santos  
Red Bird – Dan Zanes and Friends  
Rockin' Robin – Bobby Day, many other versions also  
Squirrely the Squirrel – Lucky Diaz and the Family Jam Band  
Three Little Birds – Bob Marley

## Small Group Learning Experiences – Songbirds and Squirrels

Share learning experiences like the ones on the following pages with small groups of children each day. Groups should usually consist of three to seven children, rather than the whole group at once. Small group experiences may take place as children choose to join a teacher during free play time, or there might be a special small group time included in the daily schedule.

Use these questions to guide you as you choose daily learning experiences.

- **What is it about songbirds and squirrels that this group of children seems most curious about?**  
Children in the group might be especially interested in creating feeding stations for birds and squirrels. Or, they might seem more curious about birdsongs or habitats. Some groups may “zoom in” on a particular kind of bird. Let your observations and conversations with children be your guide as you choose experiences that invite children to pursue their interests and seek answers to their questions.
- **What are our learning goals for individual children and for the group as a whole?**  
Choose experiences that support specific objectives for learning. Strive to create well-rounded plans that support all domains of development.
- **How can we extend children’s thinking and learning?**  
Choose activities that can be connected to children’s experiences so far. Remember that it is often appropriate to “re-run” planned experiences. Offering an experience two or more times over a few days or weeks invites children to gain expertise and deepen their understanding.



Pair planned learning experiences with ample opportunities for open-ended, free choice exploration indoors and outdoors.

## Animal Actions

Let's go outdoors to observe songbirds and squirrels. We'll think about the behavior of these small creatures. Why do they do the things they do?

### Materials

- Index cards with words written in different colors (see notes below)
- Investigator's kit – backpack with a tape measure, ruler, magnifying glasses, small notepad, and pencil

Talk with children about their observations of birds and squirrels so far. Have they seen songbirds and squirrels outdoors around your school? Where were they? Decide together on a natural space where you can go to look for birds and squirrels. This could be the edge of a wooded area, a single large tree, a garden area, or an area where grass and weeds grow taller. There are many possibilities.

Today, you'll act like detectives to find out more about birds and squirrels. Introduce the index cards with these four words to children:

- **Foraging** (orange)  
Foraging means searching for food. A bird might forage by scratching with its feet and pecking with its beak. A squirrel might forage by scratching or digging with its feet, or by sniffing and rooting with its nose. Invite children to act like foraging birds and squirrels with you before introducing the next card.
- **Guarding** (red)  
Guarding means protecting territory: "This tree is mine! Go away!" Birds and squirrels might guard by making loud warning calls or by chasing another bird or squirrel away. Sometimes, small birds even team up to chase a large predator – like a hawk – away. With children, try imitating the [chatter of a territorial squirrel](#).\*
- **Nesting** (blue)  
Nesting means gathering materials for a nest. You might see birds and squirrels carrying twigs or bits of grass. Or, you might see them working busily around a nest to put it together or clean it out. Invite children to use their fingers like beaks in front of their mouths to gather twigs or straws scattered around your group area. A squirrel doesn't have a beak. How might it carry nesting materials?
- **Traveling** (green)  
Traveling means moving through your area on the way to somewhere else. Squirrels can travel by leaping from tree to tree. Birds fly through the sky, alone or in flocks.

\*When using video platforms with advertisements, always start videos ahead of time, pausing at the beginning of the content that you want children to see. This helps protect children from potentially inappropriate advertisements.

## **Animal Actions (cont.)**

As you prepare to go outdoors to look for foraging, guarding, building, and traveling behaviors, remind children that they'll be best able to observe birds and squirrels if they make their bodies very still and quiet. You'll use your eyes and ears to figure out what a bird or squirrel is doing.

Go outdoors to your observation site, taking your word cards with you. Find a place to sit together and look for a bird or squirrel. Focus intently as you watch one animal for at least 30 seconds. Afterward, spread out the word cards and talk about your observations. Did you see signs that the bird or squirrel you were watching was foraging, guarding, nesting, or traveling? Or other behaviors? How did your animal move and act?

### **Helpful Hints**

Plan a route that allows children to walk for a while before getting to your observation site. They'll be better able to focus if they've had a few minutes to be more active beforehand. Intentionally slow down and calm your bodies once you're ready to begin the observation.

Your group could see other behaviors, too. Young squirrels may play, and birds may sing to one another or "dance" in courtship. You may see birds or squirrels preening or grooming. Would children like to make another card to represent a newly-discovered behavior?

### **Including Every Explorer**

The activity can be conducted in a fenced area and/or shortened as needed to ensure that every child has a successful experience. Adjust expectations according to the ages and abilities of the group. Some children may be too excited to watch quietly, but can still enjoy looking for birds and squirrels.

### **More to Do (optional)**

- Encourage children to make drawings about what they observed. Is there anything they would like to write – or have you write – on their papers to remember this experience?
- Place the word cards in a small basket near your window birdwatching station. The color-coding may help children remember the words, but you could also invite children to think of a picture symbol for each card.

This experience offers special opportunities to build and strengthen:

**Cognitive Development – CD 1.1, CD 2.1, CD 2.2, CD 2.3, CD 2.4, CD 3.2**

**Language Development – LD 1.1, LD 2.1, LD 3.1**

**Science and Technology – ST 1.1, ST 3.1**

## Using Binoculars

Let's try out a tool that bird watchers and biologists use.

### Materials

- Binoculars – at least 1 pair per two children in the small group
- Using Binoculars** cards from this curriculum

To prepare for this activity, print or copy the **Using Binoculars** cards. Full-color versions may be printed from the curriculum website. Cut the four cards apart. They may be laminated or covered in contact paper if desired.

As children join you, show them a pair of binoculars. What experiences have they had with binoculars so far? Binoculars are a tool that makes something far away appear larger. Binoculars have eyepieces, lenses, and a focus ring. They may also have a wrist or neck strap.

Lay the cards out one by one as you tell a simple story about using binoculars, such as:

1. I was walking in the woods one day when I spotted a frisky squirrel, far away. I wanted a closer look, and I was in luck: I had my trusty binoculars hanging around my neck!
2. When I put the binoculars up to my eyes, I was surprised. Everything looked blurry!
3. I remembered what to do. I sloooowly turned the focus ring – right here. (Demonstrate.) That was better, but not quite right.
4. I sloooowly turned the focus ring a little more until... it was just right! Now I could see the squirrel perfectly!

Ask children if they would like to try using binoculars. Explain that, to be safe, we don't walk around while we're looking through binoculars; we stand or sit in one place. We can look at many different things with binoculars, but not the sun. That could hurt our eyes.

Children can work with partners to try out binoculars. One child can move about 20 feet away and wave while their partner looks through binoculars. Then, swap roles. Check whether individual children seem to be using the focus ring and talk with them about what they notice. This should be a playful investigation.

Children may also want to try looking out the windows (if indoors) or looking at distant trees or buildings (if outdoors). Conclude the activity by encouraging children to retell the squirrel story with the cards, and by explaining where they can find your group's binoculars if they would like to use them later.

## Using Binoculars (cont.)

### Helpful Hints

Accidents happen; you won't want to borrow expensive binoculars for children to use. Sturdy binoculars designed for children are made by Bresser, Learning Resources, Carson, and others. Children's binoculars should be easy to grip and sized for smaller faces. Check that binoculars provide magnification and aren't just toys.

Neck straps on children's binoculars should have a safety release mechanism that pops apart to reduce the risk of accidental strangulation. Remove neck straps that do not have a safety mechanism.

### Including Every Explorer

Some children may prefer to hold the binoculars sideways and look through just one lens, with their other eye closed. Children who wear eyeglasses should continue to wear them while they use binoculars. Some binoculars have eyecups that can fold down for eyeglass wearers.

This investigation offers an opportunity to talk about vision. If children notice that things look blurry – like the squirrel picture – when they aren't using binoculars, they should tell a parent or teacher. They might be able to wear eyeglasses to help them see better.

### More to Do (optional)

- Add the squirrel story cards to your science area. Notice whether children retell the story. Add binoculars to your science area or window birdwatching station and/or prepare a birdwatching kit to take when you go outdoors to play.
- Investigate other tools that magnify, such as hand lenses and microscopes. How are they like binoculars? How are they different?
- Create an opportunity for your group to teach an adult or children from another class how to use binoculars.

### Did You Know?

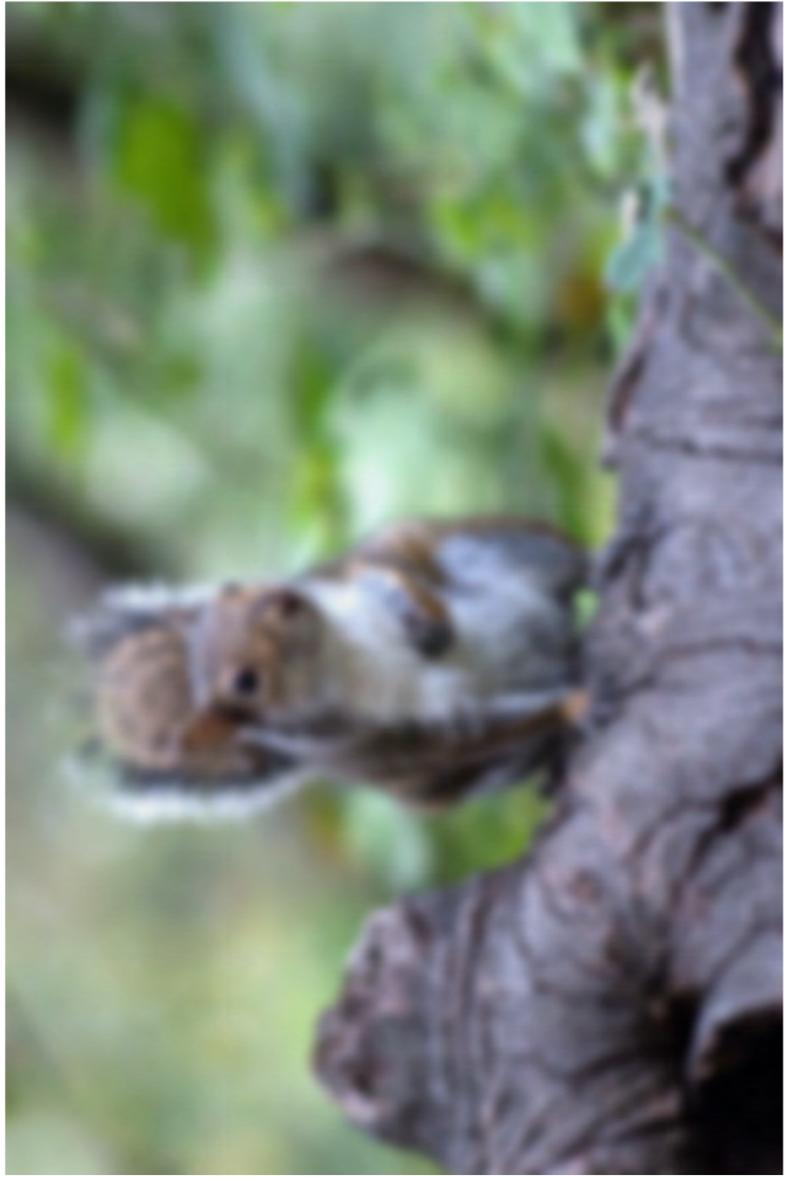
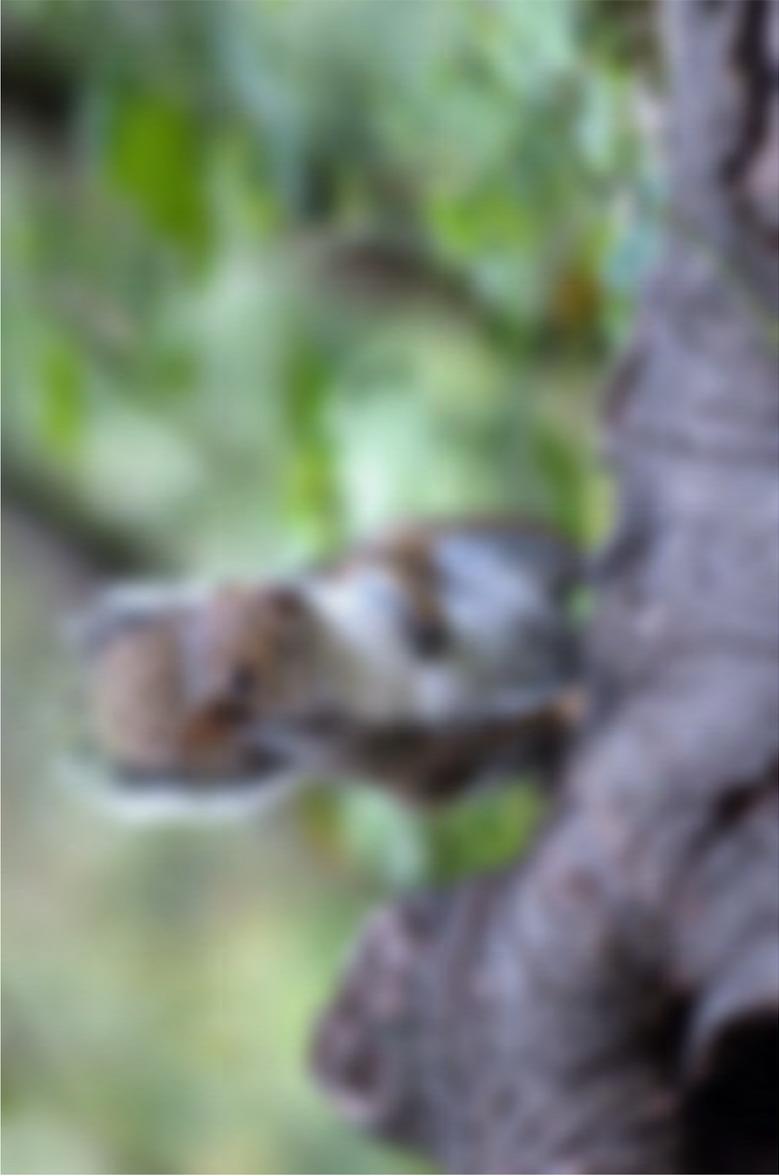
While we want to provide many opportunities for open-ended investigation and play, children generally benefit from direct instruction to learn how to use tools successfully. Tools that they don't understand are likely to be ignored or misused. Does your group know how to use other classroom tools - like balance scales, hole punches, and magnifiers?

This experience offers special opportunities to build and strengthen:

**Physical Health and Development – PH 2.1, PH 2.2, PH 3.2**

**Science and Technology – ST 1.1, ST 3.1, ST 3.3**

**Social Studies - SS 2.2**





## Songbird and Squirrel Buffet

Let's offer foods to birds and squirrels. Will they find it? Will they eat it?

### Materials

- |   |   |
|---|---|
| <input type="checkbox"/> Platform bird feeders and/or window-mounted bird feeders with open trays | <input type="checkbox"/> Variety of foods such as blackberries, celery, apples, cob corn, uncooked oats, plain popcorn, and less-sweet cereal like Cheerios |
| <input type="checkbox"/> Butter knives for children   | <input type="checkbox"/> Binoculars (optional)  |
| <input type="checkbox"/> Adult knife  | <input type="checkbox"/> Bird field guides (optional)   |
| <input type="checkbox"/> Plates or cutting boards to work on                                      |   |
| <input type="checkbox"/> Clipboards and paper   |   |

Talk with children about what birds and squirrels eat. They may have observed birds eating insects, seeds, or fruit. Explain that you'll try offering them some human foods. To protect their health, you'll need to remember three rules:

1. You'll invite birds and squirrels to try fruits, vegetables, and grains, but not meat or dairy products.
2. Foods with added sugar are not healthy for songbirds and squirrels. That means that you won't offer them sweets like candy or cookies.
3. Foods with added salt are not healthy for songbirds and squirrels. That means that you won't offer them salty foods like crackers or potato chips.

Based on these rules, what specific foods can children think of? Brainstorm a list. Once you have a long list, narrow it down to two or three foods that the children would like to offer birds and squirrels. Children can help write down their choices on a shopping list for the person who buys groceries/supplies for your program.

Once the foods are available, children can help prepare them. This could involve washing berries, shucking corn, dicing apples into small pieces, popping popcorn in an air popper, and so on. Add the foods to the feeders and place them outside a classroom window or in sight of the outdoor play area.

Keep an eye out for visitors. It may take a while for birds and squirrels to discover the feeders, but once they do, they'll visit often. Children can use clipboards to record what kinds of animals visit the feeder and how many animals visit the feeder.

As you observe your feeders, notice and talk about what the birds and squirrels do. Do any of them seem to prefer one food over others? Why might that be? Use math talk as you count visitors, talk about full and empty feeders, and notice the time of day.

## **Songbird and Squirrel Buffet (cont.)**

### **Helpful Hints**

This activity works best when it takes place over several days. Each small group can plan a menu on the first day. Once food has been purchased, each group can have a day or two to fill and monitor the feeders.

Cake stands and plant stands can be used as platform feeders if desired.

Some birds are omnivores or carnivores and could eat some meats. However, meat is excluded from this experience because of health and safety concerns.

### **Including Every Explorer**

With younger, less experienced children and children with special needs, you may wish to steer children toward foods that they will be able to help prepare. For example, round grapes are tricky to slice and should be avoided if they are a choking hazard for some children in the group, but soft bananas are safer and easier to slice.

The brainstorming activity can be simplified with picture cards for children to help sort.

### **More to Do (optional)**

- Are foods that are healthy for birds also healthy for humans? Read about nutrition and taste test the same foods that you are offering to birds and squirrels.
- Schedule a visit or video call with a naturalist, veterinarian, or birding expert. What ideas can they give for other healthy foods that you could offer to birds and squirrels? Make a list and welcome families to bring in wild berries and fruits and veggies from their gardens.
- Are birds and squirrels ever a nuisance for gardeners? Talk with a gardener about how they keep birds and squirrels from eating their crops.
- Experiment with placing some of the same foods in hanging feeders and ground-level feeders. Do some kinds of birds seem to prefer one feeder or the other?
- Take photos of visitors at your feeders for a wall display or class book.

This experience offers special opportunities to build and strengthen:

**Physical Health and Development – PH 2.1, PH 2.2, PH 3.1, PH 3.2**

**Emergent Literacy – EL 1.1, EL 3.1, EL 3.2, EL 3.3**

**Mathematical Thinking – MT 1.1, MT 1.2, MT 3.1**

**Science and Technology – ST 1.1, ST 3.1**

## Investigating Beaks

Let's find out how beaks work. Are all beaks the same? To prepare for this activity, print or copy the **Bird photo cards**.

### Materials

- |   |  |
|---|--|
| <input type="checkbox"/> <b>Bird photo cards</b> from this curriculum | <input type="checkbox"/> Tray of paper Easter grass, silk leaves, or cut/shredded construction paper grass |
| <input type="checkbox"/> Eyedroppers or pipettes*                     | <input type="checkbox"/> Birdseed and yarn bits to represent caterpillars                                  |
| <input type="checkbox"/> Bowl of colored water                        | <input type="checkbox"/> Pecans or other nuts in shells if no child in your program has a tree nut allergy |
| <input type="checkbox"/> Tweezers                                     |  |
| <input type="checkbox"/> Nutcracker or small pair of pliers           |  |

Spread the bird cards out on the table for children to look at and talk about. They may want to spend a few minutes naming the birds, talking about ones they have seen, or using the cards in other ways. When children seem ready, call their attention to the birds' beaks, which are also known as bills. Although all birds have beaks, they aren't all the same. The size and shape of each bird's beak are suited to the food it eats.

Look at the hummingbird card. What do children think a hummingbird eats? What do they notice about the hummingbird's beak? Use a dropper or pipette to try sucking up some of the colored water. How is a long, thin beak helpful for a hummingbird?

Next, look at the mockingbird. What do children think a mockingbird eats? What do they notice about its beak? Use tweezers to pick seeds and "caterpillars" from the tray of grass. How is a sharp, tweezer-like beak helpful for a mockingbird?

Look at the cardinal. What do children think a cardinal eats? What do they notice about its beak? Use pliers or a nutcracker to crack nuts. Clarify that cardinals don't eat nuts like pecans, but a sunflower seed can be as tough for a little bird to crack as a pecan is for us! How is a broad, strong beak helpful for a cardinal?

Children may want to look at the beaks of other birds on the cards. The hawk's beak is different from all the rest. A hooked beak is used for tearing meat. The hawk is a predator that eats mice, squirrels, and even other birds.

Before concluding this experience, offer children some open-ended time to investigate with the tools. Stay nearby to respond with enthusiasm when children want to show or tell you something and to provide social support as children ask for turns with materials.

\*A pipette is a laboratory tool used by chemists to transfer liquids. Disposable plastic pipettes are an economical option for preschoolers, too.

## Investigating Beaks (cont.)

### Helpful Hints

Full-color versions of the **bird photo cards** may be printed from the curriculum website. The cards may be glued to chipboard and/or laminated or covered with clear contact paper if desired.

### Including Every Explorer

Substitute larger materials for very young children and children with limited use of hands. A turkey baster can be used in place of an eyedropper, and tongs or therapy tweezers can be used to pick up large pompom “seeds” or toy insects.

If a child has a tree nut allergy, try crushing dried corn instead of nuts.

### More to Do (optional)

- If you have enough disposable pipettes for each child to take one home to keep, pretend to be hummingbirds as you drink juice using the pipettes. It’s silly fun – and excellent fine motor practice!
- Make a second set of bird cards. With two photos of each bird, you can play a memory matching game. Older children can also use one hawk card and duplicates of all other birds to play a version of the traditional card game, Old Maid.
- Call children’s attention to the beaks of different birds that you observe. If your program takes field trips, consider visiting a wild bird store to find out about various kinds of food and feeders for different birds.

### Did You Know?

Even though it isn’t a songbird, the hawk was included on our bird cards intentionally. Many preschool-aged children are drawn to big, powerful creatures like dinosaurs and eager to act out scenarios with good guys and bad guys. In the context of backyard birds, the hawk is one of the biggest and most fearsome. Notice how children in your group respond to the hawk card in your collection.

This experience offers special opportunities to build and strengthen:

**Cognitive Development – CD 1.2, CD 2.1, CD 3.2**

**Language Development – LD 1.1, LD 2.1, LD 3.1**

**Mathematical Thinking – MT 2.1, MT 3.1**

**Science and Technology – ST 1.1, ST 2.1, ST 3.1, ST 3.2**



hummingbird



chickadee



woodpecker



cardinal



nuthatch



sparrow





goldfinch



indigo bunting



blue jay



robin



mockingbird



hawk



## Observational Drawing: Feathers

Birds are the only animals that have feathers. Let's take a closer look.

### Materials

- |   |   |
|---|---|
| <input type="checkbox"/> Pheasant or turkey feathers          | <input type="checkbox"/> Drawing tools such as pencils or colored pencils |
| <input type="checkbox"/> Magnifying glasses (aka hand lenses) | <input type="checkbox"/> Toothpicks (optional)                            |
| <input type="checkbox"/> Blank paper                          | <input type="checkbox"/> Rulers or Unifix cubes (optional)                |

Create a comfortable, attractive space for drawing together. You may wish to place feathers on dark paper or dark placemats to help draw the eye.

Talk with children about what they know about birds so far. What makes a bird a bird? Here are some things children may come up with:

- Birds have beaks, but so do some turtles.
- Birds have wings, and most can fly, but so can bats and insects.
- Birds lay eggs, but so do snakes and fish.
- Birds have feathers... and they're the only ones!

Introduce the feathers to children. Begin by looking together at the feathers, describing the lines and shapes that you see. Try turning the feathers or looking from different angles. Children may also wish to use magnifying glasses to look at the feathers. Use toothpicks to gently move the barbs of the feather as you investigate. If desired, children can also measure their feathers with rulers or Unifix cubes.

Invite children to draw what they see. An observational drawing is a way to tell about what they notice. Explain that they can look back and forth from their feather to their paper as they work. They can work slowly to show things about their feather that feel important to them.

Each child should be allowed to work at their own pace, ending when they feel finished. You might suggest, "Let's look at the feather one more time. Is there anything else you would like to add to your drawing?" – but refrain from making specific suggestions. Avoid the temptation to show children how to draw. Drawing is more meaningful when their role involves thinking, interpreting, and deciding – rather than simply copying.

After children have finished drawing, invite them to tell you about their work. Ask if there are any words that they would like for you to write on their paper, or if they would like to write words of their own.

## Observational Drawing: Feathers (cont.)

### Helpful Hints

Pheasant and turkey feathers can be purchased from craft and hobby shops.

Many teachers introduce children to observational drawing using black markers or regular pencils. Children focus first on replicating the lines and shapes that interest them. Older/more experienced preschoolers can draw with a fine-line permanent marker first before adding color with watercolor paints during a second session.

### Including Every Explorer

If you have a child with limited use of hands, offer adaptive drawing tools that are easier to hold and handle.

Some children’s drawings may not be identifiable to adults yet, but every line on the page has meaning to the child. Praise effort and invite all children to talk about their work. Avoid judging or comparing one child’s work to another’s.

Some children may become frustrated if their drawing doesn’t look “right.” It may be helpful to reassure them that drawings don’t have to be perfect to be important. Think together about other skills that get easier the more you practice.

### More to Do (optional)

- Add feathers to your science and/or art areas.
- How do birds take care of their feathers? Do feathers fall out? Use books or a digital device to research with interested children to help them find answers to their questions.

### Did You Know?

Often, children engage in *imaginative drawing*. They use art materials to create characters or tell a story. This type of drawing promotes creativity and self-expression. It may also lead to open-ended scientific exploration as children mix and manipulate art materials.

*Observational drawing* encourages children to draw what they really see. It promotes communication, logical reasoning, and mathematical thinking as children observe and replicate shapes, sizes, textures, and lines. Both imaginative drawing and observational drawing are valuable for learners!

This experience offers special opportunities to build and strengthen:

**Emergent Literacy – EL 3.1, EL 3.2, EL 3.3**

**Mathematical Thinking - MT 1.1, MT 3.1, MT 4.1**

**Science and Technology – ST 1.1, ST 2.1, ST 3.1**

# The Story of Little Wren

Let's share a trickster tale about familiar birds.

## Materials

- The Story of Little Wren page from this curriculum
- Blank paper
- Tools for writing and drawing

This story is based on an old folktale from Ireland. It has been adapted and retold by the author of this curriculum.

Choose a comfortable place to gather together. Explain to children that you have a story to share with them. There's a photo of a wren on the story page, but no other illustrations. That means that children will need to listen carefully and make a picture in their mind as you tell the story.

Read or tell *The Story of Little Wren*. When you reach the end of the story, talk with children. Invite them to recall the events of the story. What problem were the birds trying to solve? How did Little Wren win?

What do children think of Little Wren's trick? Should Little Wren become the leader of the birds? Why or why not? Some children may feel that Eagle should be declared the winner since he did all the work. Others may think that Little Wren was clever and deserves to win. Write down what children have to say and help them listen to one another. It's OK to disagree.

Invite children to make illustrations for the story. They may wish to draw pictures of the events they heard about or imagine what might happen next. After each child has finished drawing, invite them to tell you about their work. Ask if there are any words that they would like for you to write on their paper, or if they would like to write words of their own.

## Helpful Hints

Read and practice the story before sharing it with children. You want to know the story well and be ready to read or tell it fluently.

Think about how you can bring the characters to life, build suspense, and generate excitement. You may wish to have a conversation with a colleague about the habits of strong storytellers. Thinking together is often a useful tool for deepening our understanding.

## The Story of Little Wren (cont.)

### Including Every Explorer

If you have a child with limited use of hands, offer adaptive drawing tools that are easier to hold and handle.

Some children's drawings may not be identifiable to adults yet, but every line on the page has meaning to the child. Praise effort and invite all children to tell about their work. Avoid judging or comparing one child's work to another's.

Older, more experienced children may want to create a plan to make an illustrated book. Help them work together to identify key events in the story. Each child in the group can choose one of these to draw and caption.

### More to Do (optional)

- Use art materials to make costumes or masks to act out the story.
- If children have differing opinions about the ending of the story, consider taking a vote. Should Wren be the leader? Or Eagle? Children can make signs to support their pick and cast a ballot in an election. Work together to tally the votes to figure out who your class prefers as the leader of the birds.
- Trickster characters can be found in folktales all over the world. If your group enjoyed Little Wren, try more trickster tales such as these:

*Anansi and the Talking Melon*

Eric A. Kimmel and Janet Stevens, Holiday House, 1994

*Fire Race: A Karuk Coyote Tale*

Jonathan London and Sylvia Long, Chronicle Books, 1997

*Love and Roast Chicken: A Trickster Tale from the Andes*

Barbara Knutson, Ala Notable Children's Books, 2004

### Did You Know?

Beautifully illustrated storybooks help inspire young readers, but oral storytelling (without pictures) is *also* important. As they listen to a storyteller, children gather information from spoken language and use their imaginations to visualize characters and events.

This experience offers special opportunities to build and strengthen:

**Cognitive Development – CD 2.1, CD 2.4, CD 3.2**

**Language Development – LD 1.1, LD 1.2, LD 1.3**

**Emergent Literacy – EL 1.1, EL 1.2, EL 3.1, EL 3.2, EL 3.3**

**Creativity and Aesthetics – CA 2.1, CA 3.1**

# The Story of Little Wren

Long, long ago, the birds of the forest decided that they needed a leader.

"I should be the leader, because I'm the most colorful bird of all," chirped bright blue Bunting. "Goodness, no," chipped Canary. "I should be leader! I have the most beautiful voice of all!" "Goodness, no," snapped the Heron. "Clearly, I should be leader. After all, I am the tallest bird of all."

The birds argued and squawked until, at long last, it was decided that their leader should be the bird who could fly the highest of all. They planned to have a high-flying contest to pick their leader once and for all.

On the morning of the contest, the best flyers in all the forest gathered at the starting line. There was wide-winged Falcon, and brash Jay, proud Woodpecker, and, of course, big, bold Eagle. Just before the race began, Little Wren hopped up to take a place at the starting line.

All of the birds began to twitter and hoot with laughter. Wren? Little Wren?! They all felt certain that Little Wren was too tiny and too plain. "Silly Wren," they teased, "You'll never win!" Little Wren replied, "Just let me try."

"Ready...set...go!"

There was a furious flapping of wings as the racers took flight. At the very last second, just as the race began, Little Wren flitted onto Eagle's back and held on tight. In all the commotion, nobody noticed – not even Eagle.

The birds flew higher and higher. They soared above the trees and into the clouds. One by one, they grew so tired, so exhausted, that they turned around and coasted back down to the ground. At last, only Eagle was left in the sky, with Little Wren still clinging to his back.

Eagle was tired now. His wings ached. He paused in the air. Just then, Little Wren flew from his back and flitted higher into the sky. "Eagle!" Wren called, "It's just the two of us now. Come, come – let's fly to the sun!"

Eagle screeched with frustration. He tried to catch up with Wren, but Eagle was just... too... tired. With a heavy sigh, he turned and coasted down, down, to the ground.

Wren turned and followed. When Little Wren landed gently on the ground, the other birds crowded around. They couldn't believe their eyes! Could it be true that tiny, plain Little Wren flew highest of all?





## Who Do You Hear?

Let's go outdoors to listen to bird and squirrel songs and calls. Can we imitate their sounds?

### Materials

- ❑ A digital device that can play sound (optional)

Talk with children about the sounds that birds and squirrels make. Do all birds sound the same? Birdwatchers and ornithologists – scientists who study birds – can identify birds by the sound of their songs and calls, even when they can't see them.

For example:

- A [Tufted Titmouse](#) sounds like it is saying “peter-peter-peter!”
- A Black-capped [Chickadee](#) sometimes sounds like it is saying “fee-bee...fee-bee.” Other times, it sounds like it is saying its name: “chicka-dee-dee-dee.”
- A [Nuthatch](#) makes a sound like “ank-ank-ank-ank.”
- A [Carolina Wren](#) sounds sort of like it is saying “teakettle, teakettle, teakettle.”
- A [Northern Flicker](#) sounds like it is saying “pick-pick-pick-pick-pick.” And because it is a woodpecker, you might hear it tapping on a tree with its beak, too.

A call is a short, repetitive noise that a bird or squirrel makes to sound an alarm or say, “I'm here!” to other members of its flock. Birds also sing, and their songs are usually longer and more complex than calls. Can children imitate any other bird and squirrel calls or songs that they have heard?

As you prepare to go outdoors, remind children that they'll be best able to observe birds and squirrels if they make their bodies very still and quiet. You'll use your eyes to spot birds and squirrels, and you'll use your ears to figure out what they are doing. Practice a signal that you can use – like a raised hand – if you want to pause to listen to a bird. Show children how to cup their hands behind their ears. Some birdwatchers feel that this helps them hear better – especially if they turn the cup in the direction of the sound.

Go for a walk together. Pause now and then when you hear birds or squirrels. Point in the direction of the animal and cup your ears to hear. After 10-15 seconds of listening, invite children to imitate the sounds. Walk a little farther and repeat, listening to a different bird or squirrel this time.

When you return indoors, take a few minutes to debrief. Can children recall the calls and songs that they heard? What other observations do they have?

## Who Do You Hear? (cont.)

### Helpful Hints

Plan a route that will take you away from noisy traffic. You might go to a garden, courtyard, or wooded area, or to a quieter side of your building.

Audio recordings can be heard at Cornell Lab's All About Birds site: [www.allaboutbirds.org](http://www.allaboutbirds.org). If you don't have a digital device with speakers – or prefer not to use one – you can still enjoy this experience by describing and imitating the bird sounds.

### Including Every Explorer

If your group includes a child with limited mobility, such as a child who uses a wheelchair or walker, plan an accessible route. Walk your route ahead of time to check for clear paths, curb cuts, and ramps where you might encounter steps.

Think of ways to provide extra supervision for children with more impulsive behavior. This could be a good opportunity for family volunteers. The activity can be conducted in a fenced area and/or shortened as needed to ensure that every child has a successful experience.

### More to Do (optional)

- Can children recognize one another's voices? Find out in this listening game. While one child ("it") stands with their back to the group, an adult quietly points to a classmate. This child makes a realistic or imaginative bird or squirrel sound. When the child who is it turns around, can they guess who was calling?
- Read the book *Froodle* by Antoinette Portis. Notice onomatopoeia – words that sound like actual bird calls. Chip! Caw! Coo!
- Investigate wooden bird call tools that children can manipulate with their hands. (Avoid calls that must be played with the mouth.)
- Invite families to an evening owl calling event at a local nature center. Owls will swoop in to investigate when they hear owl calls.

This experience offers special opportunities to build and strengthen:

**Cognitive Development – CD 1.1, CD 2.1, CD 2.2, CD 2.3, CD 2.4, CD 3.2**

**Language Development – LD 1.1, LD 2.1, LD 3.1**

**Science and Technology – ST 1.1, ST 3.1**

## Nest Building

Let's use natural materials to make nests of our own.

### Materials

- Photos of bird nests in books or on a digital device
- Materials for nest building such as twigs and sticks, long grass, straw, pieces of grapevine, pine needles, yarn, strips of paper, downy craft feathers, and/or moss
- Sturdy paper plates, such as Chinet brand – 1 per child
- Clay or uncolored homemade playdough (optional)

Invite children to talk about what they know about bird nests. This could be a meaningful time to make a chart together.

Bird nests hold eggs and help keep them warm. Once baby birds hatch, nests give them a safe place to sleep and grow. Birds of the same species – such as robins - build nests that look similar, but different species of birds build different nests. A robin's nest looks different from a barn swallow's nest. Look together at photos of nests.

What do children think determines the size of a nest and the materials used to build it? Small birds lay smaller eggs and build smaller nests. Large birds lay larger eggs and build larger nests. Birds use materials that they can find in their habitat to build nests. Many birds will even collect animal hair and manmade materials for their nests! Can children help you sort your nest-building materials into two groups: natural materials and manmade materials? Which category has more?

Explain that all of the materials can be used for nest building today. Children can choose to make a nest with many materials, or just a few. Nest building is tricky, and it will take some trial-and-error problem solving to try to create a nest that stays together. Recommend that children build on a plate so that their nest will be easier to move when they are finished.

Stay near to provide social support as children navigate the space and share materials. Try not to distract children from focused work, but notice when they want to talk with you and show their work. You might talk with children about their material choices and techniques, like weaving and stacking. In nature, a sturdy nest would be able to withstand windy weather.

If problems with materials occur, don't solve them for children. Instead, support children as they work through frustration, consider the problem, and think of solutions that they would like to try. They may want to look around to see what is working for other builders.

When children feel satisfied with their work, write names or initials on the edges of the plates and carefully carry them to a display area.

## Nest Building (cont.)

### Helpful Hints

You may want to go on a nature walk with children to gather materials for nest building.

In real life, birds weave nests but also help hold them together with saliva and mud. In your nest building experience, clay or dough is being used in place of mud. That's because mud needs to dry out in the sun for hours during the construction process.

### Including Every Explorer

Some children will just want to pile materials in a circular shape. You might ask if there is anything they would like to do to make their nest stronger or taller but accept all designs.

This activity requires persistence and strong fine motor skills. For younger, less experienced children and children with limited use of hands, you can simplify the experience by pressing clay or play dough into a paper bowl before adding other materials.

### More to Do (optional)

- Use hardening clay to make eggs for your nest. These can be painted when dry.
- If you're sharing this experience with children in spring or early summer, offer nesting materials for birds and squirrels. A mesh onion bag can be filled with dryer lint and bits of snipped yarn. Arrange the materials so that they protrude from holes in the bag. Hang the bag of nesting material outdoors in a sheltered place where it is unlikely to get soaked by rain.
- What questions do children have about nests? They may wonder whether birds reuse their nests again and again, or how many eggs a nest can hold. How can you help them find and record answers to their questions?
- How big is a hawk's nest? Do some research together and then build a large nest from sticks. Children can bring sticks from home to add to the nest.
- Which birds build the smallest nests? [This short video clip](#) provides a clue and introduces a surprising building material! \*

\*When using video platforms with advertisements, always start videos ahead of time, pausing at the beginning of the content that you want children to see. This helps protect children from inappropriate advertisements.

This experience offers special opportunities to build and strengthen:

**Social and Emotional Development – SE 1.2, SE 2.1, SE 2.2, SE 3.2**

**Cognitive Development – CD 1.2, CD 2.1, CD 3.1**

**Mathematical Thinking – MT 1.1, MT 2.1, MT 3.1, MT 4.1**

**Science and Technology – ST 2.1, ST 3.1, ST 3.2**

## Bird and Squirrel Feeders

Let's create feeders for outdoor creatures. Three possibilities for feeders are listed below. Make your favorite, or try them all!

### Materials

#### For feeder #1:

- Bagels
- Birdseed
- Shortening, such as Crisco
- Butter knives
- Paper plate or tray for seed
- Yarn or twine

#### For feeder #2

- Less-sweet, O-shaped cereal, such as plain Cheerios
- Fruit: blueberries, apple chunks, cranberries (fresh or dried), and/or raisins
- Bowls for cereal and fruit
- Large embroidery needles
- Scissors
- Sturdy string

#### For feeder #3

- Rope
- Yarn or twine
- Hole punch
- Paper or plastic cups or bowls
- Birdseed
- Pushpin (optional)
- Eyehook screws (optional)

### Feeder #1, Bird Bagels

Spread half of a bagel with shortening. Dip into a plate or tray of seed. Seeds will stick to the shortening. Thread a piece of yarn through the middle of the bagel. Tie a knot to make a loop so that you can hang the feeder from a tree branch.

### Feeder #2, Delicious Garlands

Thread an embroidery needled with a long piece of string. Tie a piece of cereal to the other end of the string to keep materials from falling off. Children can use the needles to add cereal and fruit. Stay near to provide supervision while children use needles, and to talk about patterns and preferences that emerge in children's work. When finished, snip off the needles and tie the string in a loop. Drape the garlands on bushes or tree branches, being sure to come back to collect the string later.

## **Bird and Squirrel Feeders (cont.)**

### **Feeder #3, Squirrel Tight Rope**

Stretch rope tightly between two posts or trees. You may tie the rope all the way around or use eyehook screws to secure it. If the rope is in a space used by children, hang it well overhead, out of their reach.

You'll use cups or bowls to hold seed. If you anticipate rain, use pushpins to make small drain holes in the bottom. Stay near to provide very close supervision while children use pushpins. Use a hole punch to make three or four holes near the lip of the cup/bowl, spaced equally apart. Add yarn or twine for hanging.

Fill the cups or bowls with seed and suspend them from your tight rope. It may take some time for squirrels to discover it, but once they do, you'll get to see them perform a fun balancing act!

### **Including Every Explorer**

If a less challenging activity is needed, chenille stems (aka pipe cleaners) can be used to string O-shaped cereal. Tossing handfuls of birdseed for ground-feeding birds is another simple and fun experience for all children.

Some children may have a hard time working with food without eating it. Plan the experience for a time when children aren't hungry. You may also want to offer a tasting portion of foods before or after the experience.

### **More to Do (optional)**

- Ask an expert to explain various types of commercial bird feeders, such as nectar feeders, tube feeders, hopper feeders, nyjer feeders, and suet feeders. Decide together on one, or several, of these to add to your birdwatching station.
- Have you ever seen a squirrel obstacle course? Here's one extreme example: [Squirrel Obstacle Course](#). If you share the clip with children, start it ahead of time, pausing at the beginning of the content that you want children to see. Plan to stop the clip at the 3-minute mark. Building a squirrel obstacle course could be a fantastic project for children to share with family volunteers!

This experience offers special opportunities to build and strengthen:

**Physical Health and Development – PH 2.1, PH 2.2, PH 3.2**

**Mathematical Thinking – MT 1.1, MT 1.2, MT 2.1, MT 3.1**

**Social Studies – SS 2.2**

## Child-Sized Squirrel Nests

Let's work together to build a nest for imaginative play. This experience can take place in your outdoor play area.

### Materials

- Large pieces of cardboard
- Wide masking tape
- Blankets, soft bath mats, and/or pillows (optional)
- Pinecones, large acorns (such as Burr Oak acorns), and/or large, laminated paper acorns (optional)

Children have investigated bird nests, but what do they know about squirrel nests? Squirrels use two kinds of nests. They build drey nests high in trees using gnawed-off branches. A cavity nest, or den, is the hollowed-out cavity of a tree. These holes are usually made by woodpeckers. Squirrels move in once the woodpecker moves on.

Both drey and cavity nests are lined with softer materials like grass, moss, or shredded bark. This may make them more comfortable, and it helps keep babies warm. Squirrel babies (kits) are born alive, like all mammals; they don't hatch from eggs. Unlike birds, who usually use nests only in spring and summer for hatching and raising chicks, squirrels use nests all year round. They use them to raise their kits, but also to store food, for protection from storms and predators, and to stay warm in the winter. Some squirrels will even use more than one nest!

Invite children to think about how they might build a representation of a squirrel nest that is large enough to play in. Will they create a drey nest or a cavity nest? How will that guide their design? Children might decide to build a cavity nest under a tree, and they might want to make a den-like structure that they can climb inside. A drey nest might be round and open in the middle, and open to the sky.

Stay near to provide social support as children build their structure. You might lend a helping hand - "I can hold it while you tape" - but refrain from telling children how to build. Serve as a sounding board if problems arise. Help children think about what they've tried so far, what is working and what is not, and what they could try next. Are there any other resources that would be helpful?

When the nest structure finished, children can line it with soft materials, if desired. They may wish to pretend to gather acorns to bring back to the nest. What other pretend play themes emerge?

## Child-Sized Squirrel Nests (cont.)

### Helpful Hints

Cardboard boxes can be broken down to create strips of cardboard.

### Including Every Explorer

If your group includes a child with limited mobility, leave one side of the nest open to create an entrance and exit that can be walked/scooted through, rather than climbed over. Line the nest with flat materials – like soft bath mats – rather than piles of pillows.

A large appliance box offers another way to simplify this activity for children with special needs. Rather than arranging large cardboard pieces, they can draw branches and leaves with crayons or use glue sticks to affix construction paper branches and leaves. Help them choose and use materials to line the inside of their den.

Older, more experienced children may want to incorporate additional materials in their den. Sticks and long pieces of dried bamboo can be especially satisfying building materials.

### More to Do (optional)

- Go for a nature walk to look for squirrel nests. Can you spot squirrels popping in and out of cavity nests? Drey nests can be seen at any time of year, but are especially easy to spot in winter when the clusters of brown leaves can be seen among the bare branches of trees.
- Invite children to draw pictures and tell stories about squirrel families. Write down what they have to say.
- With older children, create a Venn diagram comparing bird nests and squirrel nests.

### Did You Know?

When children imagine themselves as parent and baby squirrels, they deepen their understanding of empathy, safety, and nurturing roles. Children may also pretend that they are squirrels who are lost, chased by predators, frightened by a storm, or even dead. Many children naturally explore powerful and/or worrisome elements of their world through play.

This experience offers special opportunities to build and strengthen:

**Social and Emotional Development – SE 1.1, SE 1.2, SE 2.1, SE 2.2**

**Cognitive Development – CD 1.2, CD 2.1, CD 2.3, CD 3.1, CD 3.2**

**Science and Technology – ST 3.1, ST 3.2**

**Creativity and Aesthetics – CA 3.1**

## Meet the Birder

Let's learn from a birdwatching expert!

### Materials

- Large, blank index cards
- Dark ink pens or markers

As you plan this learning experience, identify someone who can visit to talk with the group about birds. Possibilities include someone who feeds or watches birds as a hobby, a naturalist from a state park, a wild bird rehabilitator, a wildlife photographer, or an ornithologist.

Invite your bird expert to bring some interesting things to show children. Possibilities include, but are not limited to:

- Binoculars
- Bird guides
- Portable bird blind
- Feeders
- Tripod for a camera
- Bird bands for research
- Mist netting used for research
- Field journal

Explain to your guest that they will interact with a few children at a time. Plan enough time so that every child gets a turn to visit.

Before the guest arrives, invite children to think about questions they would like to ask. Write each child's question on one side of an index card and have them write their name on the back. Remind children that they will visit with the bird expert a few at a time. They will all get a turn.

When your guest arrives, invite them to display the items that they have brought on one of your classroom tables or in an outdoor meeting space. Your guest will become a learning center during a scheduled playtime, with a few interested children at a time coming over to look, touch, listen, and ask questions. Stay near to provide supervision and support.

As children visit with the bird expert, help them find their question card and ask their question. Ask children what they would like for you to write down on their card so that they can remember the expert's answer.

Later, during group times, use the cards to invite a few children at a time to share their questions and answers with the group. What did they learn from the bird expert?

### **Helpful Hints**

Interacting with a few children at a time creates a richer, more meaningful experience for guests and children alike. Children get a closer look and have more individualized interactions. Some children may only want to visit briefly, while interested children will linger longer.

At first, children may crowd around or worry about being left out. With consistent opportunities to practice, they will come to trust that everyone will get a turn.

### **Including Every Explorer**

More impulsive children may have an especially hard time waiting for a turn. Subtly include them in the first group to visit with the guest.

Some children are slow to warm to new people. They may prefer to hang back, watching and listening from a distance. You might ask this child if they would like for you to ask their question.

Some older preschoolers may prefer to use inventive spelling to write their questions and answers.

### **More to Do (optional)**

- If your birding expert is willing, go on a bird walk together. Remember that not all adults are adept at reading small children's cues. Support your guest by helping choose the location and length of your walk.
- If your group takes field trips, consider going for a birdwatching walk at a local nature center. Many nature centers have short, level, looped walking trails that are ideal for young children. If you plan ahead, a nature center staff member may be able to serve as a bird expert during your visit. If you can't take a field trip, share a brochure about the nature center or a link to their website with families.

This experience offers special opportunities to build and strengthen:

**Social and Emotional Development – SE 1.2, SE 3.2**

**Language Development – LD 1.1, LD 2.1, LD 3.1**

**Emergent Literacy – EL 1.1, EL 3.1, EL 3.2, EL 3.3**

**Social Studies – SS 1.1**

## Active Physical Play – Songbirds and Squirrels

Invite children to join in activities such as these during outdoor play times. Some children will want to come and play, while others will prefer to continue with their own free choice activities. Some activities found in this section may also be appropriate for indoor gross motor play or active group gatherings.

### Flying Feathers

Provide each child with a paper or chipboard fan. Can children use their fans to keep downy craft feathers in the air? Children can each have their own feathers or work with a partner or small group to fan a shared feather.

### Acorn Hunt

Run around the play area to gather real or laminated paper acorns as quickly as possible. Bring them back to a designated “den.” This activity pairs well with the **Child-Sized Squirrel Nests** small group experience.

To add challenge for older children, designate one or two children to be hawks or housecats (predators) who chase the busy squirrels. If a child is caught, they must drop their gathered acorns and run back to touch the den before trying again.

### Balancing Squirrels

Lay a jump rope or other long piece of rope on the ground. Can children balance heel-to-toe like a squirrel crossing a power line? (Or your **Squirrel Tightrope**, if children have participated in that small group experience!)

Safety note: Close supervision is needed around ropes. Ropes should never be taken on climbing equipment.

If you’re playing this game indoors, a long piece of blue painter’s tape can be used for balancing. Try a zig-zagged line or two parallel lines that invite brave squirrels to leap from one to the other.

### Sturdy Birdy and Bird Yoga

Sturdy Birdy is a balancing game available from toy retailers. Simplify the rules so that everyone tries the poses together. This game should be non-competitive (just for fun) when shared with preschoolers.

You can also try yoga poses that are inspired by birds or that make you think of birds. For example, a simplified Warrior 3 Pose reminds many children of birds.

## Growing Every Day: Supporting Social and Emotional Development

Carol Evans, A-State Conscious Discipline Coach

*It's a perfect day for birdwatching on the preschool playground. Macy and Seth have their binoculars, tally sheet, and bird guides as they head over to the fence by the woods. A few minutes later, Ms. Leslie notices the abandoned birdwatching backpack. "What happened?", she asks. Seth sounds disappointed when he tells her, "The birds leave as soon as we get here, and they don't come back."*

Ms. Leslie encourages her preschoolers to bring their issues to the group to discuss feelings and ways to solve their problems. During snack time, she prompts Seth to explain how he and Macy wanted to watch birds. How do they feel about birdwatching today? "The kids were making too much noise, and the birds all flew away!", Seth explains. "They were scared. I don't want them to be scared," adds Macy. Ms. Leslie observes, "Our busy playhouse is right there by the fence near the woods."

Asia has an idea: "What if we move the playhouse to the other end of the playground, by the sandbox?" Ms. Leslie asks if any of the children want to be on a committee to ask their director, Ms. Kelly, for permission to change the outdoor area. Of course, they do! The children are excited when Ms. Kelly agrees to their solution and even offers to help. She visits the playground with the children so that they can explain their plan.

The next day, they watch as three adults use equipment to move the playhouse to the spot they picked. The children work together to move the furnishings and props. Soon, Ms. Leslie sees Macy and Seth on the small bench that faces the woods. Their binoculars are up, and they're pointing and telling each other what they see. Even from across the playground, it is apparent that they've found birds to watch!

Ms. Leslie and Ms. Kelly supported social and emotional development when they:

- Created space for children to share their feelings and problems safely
- Fostered empathy for one another and for other living things
- Involved children in thinking of a solution
- Helped children follow through with their ideas and participate in making changes



## Even More Songbird and Squirrel Experiences

- Include children in the ongoing care and maintenance of bird feeders. They can scoop birdseed, mix hummingbird nectar, and fill birdbaths.
- Build hang nesting boxes. A link to instructions can be found on page 2 of this packet. A teacher or volunteer can cut lumber for children to sand and paint. Although these are often called “bluebird boxes,” other species of birds also use them. Squirrels will occasionally build a home in a nest box, too.
- Continue to observe birds as the seasons change. Some birds only live in Arkansas in the summer or winter, while others live here year-round.
- Invite families to take part in Project FeederWatch, sponsored by Cornell Lab. FeederWatch engages amateur birdwatchers all over the world in spotting birds from November to April. Data collected by families like yours helps scientists learn about bird populations and migration patterns. Find out more at [www.feederwatch.org](http://www.feederwatch.org).

### Notes:

## Concluding Your Songbird and Squirrel Exploration

1. With your teaching team, think about, and discuss:
  - What new experiences have our children had during this exploration? What new knowledge and skills have developed?
  - Do the children seem ready to conclude this exploration? Have their questions been answered? Is their interest waning? If children are still excited about songbirds and squirrels, think about ways to continue and extend the exploration.
  - How can we document children's learning and help children share what they have learned with others?

Your songbird and squirrel exploration might end with one of these activities.

- Creating a book of photos of activities and/or children's drawings about songbirds and squirrels. The book can be added to the classroom library and/or copies can be made for each family.
- Hosting a family engagement event. For example, children might lead their families on a birdwatching walk. Or, they might help create displays of their nests, feather drawings, bird sculptures, and other work. Families can tour the displays during a special gathering or as they pick up their child. Lobby and hallways displays work well for pickup times.
- Working together with family volunteers to create a sanctuary for songbirds and squirrels. What features can you plan and build to provide food, water, and shelter? You might even want to certify your space as a National Wildlife Federation wildlife habitat.

2. Encourage children to share their favorite memories about investigating songbirds and squirrels. Model gratitude by creating thank you cards or letters to the families, school members, and community members who supported your exploration.
3. Where will you go next? Use your observations and conversations with children to help you plan your next exploration!

# Using Explorers Preschool Curriculum

*Explorers Preschool Curriculum (EPC)* is designed for early childhood educators and preschool-aged children. It can be used in any setting, including private preschool programs, public school programs, and family child care homes.

## EPC Guiding Principles

**1. Children are naturally curious and eager to understand their world.**

The *Explorers* curriculum promotes authentic, enjoyable, first-hand experiences in a vibrant and encouraging environment.

**2. Domains of child development are interrelated and are all important.**

Physical, cognitive, communicative, social, and emotional development are all vital for success in school and life. *Explorers* supports the *Arkansas Child Development and Early Learning Standards (CDELS)* with engaging experiences that promote learning across all domains.

**3. Children are trustworthy partners in learning.**

*Explorers* is inquiry-driven, guided by children's interests, questions, and ideas. Children take on meaningful decision-making roles and responsibilities as a part of each investigation. The child's right to play is protected and supported as a fundamental component of every day.

**4. Each child, and each group of children, are unique.**

*Explorers* offers choices and flexibility for children and adults. Individualization to include children with developmental differences and special needs is integral to the curriculum.

**5. Learning happens best within the context of family, community, and the natural world.**

*Explorers* strives to promote positive connection between preschool-aged children and their school, community, and environment. Diverse and meaningful opportunities for family engagement are given special importance.

For professional development support with Explorers Preschool Curriculum, please contact Marcy White, [MWhite@AState.edu](mailto:MWhite@AState.edu)

## Big Ideas from EPC

*Explorers* may be different from other curricula you've used in several ways. Understanding these differences will help you use the curriculum successfully.

*Explorers* includes a collection of topics for investigation. These topics include, but are not limited to:

- Bubbles
- Day and Night
- Farmers' Market
- Insects
- Making Music
- Ramps and Tunnels
- Songbirds and Squirrels
- Trees

Each topic supports children's real-life, firsthand experiences.

**Topics of learning – known as investigations – do not have to occur in a predetermined order.** Instead, educators are urged to observe, talk with, and think about children in their group. Which of the topics would be most interesting and engaging to this group of children? Decisions may also be guided by the resources that are accessible to the program. Programs may choose to participate in any of the investigations, in any order.

**Within broad topics, individual groups are urged to “zoom in” and focus most intently on areas of special interest.** For example, one group taking part in a *day and night* investigation might be most interested in city lights that shine though the dark. A second group might be more interested in nighttime creatures like crickets and moths. Although both groups have the same, broad focus, conversations and planned activities in the two rooms may differ greatly. Some activities in the topic packet may be skipped, and different high-value activities may be offered to support children's interests.

**Educators are expected to “re-run” books and activities that especially interest children.** That means that the same activity will be shared again over the course of several days or weeks. Through repeated opportunities to explore, children gain expertise, test new ideas, and work in increasingly complex ways. Repetition helps children build confidence and construct knowledge.

**Investigations are not limited to one week.** In fact, groups may focus on the same topic for two, three, or four weeks – or more! It is believed that deep, comprehensive investigation of any interesting topic is more beneficial to young thinkers and learners than a “sprinkling” of many different topics. Thus, children and adults are invited to continue their investigation as long as it sustains children's interest. An investigation concludes when educators observe that children's questions have been answered. Children seem satisfied and ready to move on to other topics of interest.

## EPC Daily Practices

A resource packet is available to support each investigation topic. These packets support learning throughout the day in these eight ways:

### 1. Learning Center Extensions

Free play is a crucial part of every day! Learning Center Extensions are play objects and other materials that support the topic. These can be added to the indoor play areas that children use every day. The items in this section are examples. Educators may implement their own ideas, as well.

### 2. Books for Sharing with Groups

Suggestions for books are listed in each packet. It is not expected that programs will purchase the entire book list. Rather, the list may provide guidance and inspiration as educators select books from their storage area and/or their local children's library.

These may be added to classroom book areas and can be shared informally with one or a few children at a time during play times. Some of the books on the list are also designated as **\* recommended read-alouds** for sharing with larger groups of children.

### 3. Topical Conversations

Conversations can occur within the context of play or daily routines. Especially with older preschoolers, some conversations may also occur during whole group meeting times. In addition to informal conversations throughout the day, *Explorers* encourages educators to routinely use two additional strategies each week:

#### Response Charts

The educator talks individually with each child and writes down exactly what they say. This interview process takes place during play time or other informal times. Once all of the children have had a chance to respond, the chart is posted where everyone can easily see it. The educator reads all of the responses aloud during a group meeting. Written response charts are recommended at least once a week.

#### Polls

Children and adults respond to a question by writing their name under one of two choices on a chart. Younger or less experienced groups may opt to place name cards on the chart instead. The polling process takes place with one, or a few, children at a time – perhaps as part of the morning arrival routine or as children finish breakfast.

During a group meeting, children and adults look together at the chart. It is recommended that children are invited to complete polls 1-3 times per week.

## **4. Playful Songs, Rhymes, and Games**

These simple activities may be incorporated into group gathering times or used as transition activities. Many are “piggyback songs” – meaning that they offer new words to tunes that children may already know.

## **5. Active, Physical Play**

Most of these activities are intended for the outdoor play area. Some are also suited for indoor gross motor spaces – such as gyms – or active group gatherings.

Educators are encouraged to invite children to join in activities such as these daily. Many children will want to participate, while others would rather continue with their own, free choice gross motor play. When two or more adults are present, one can lead the activity while others supervise children elsewhere in the play area.

## **6. Growing Every Day**

These vignettes highlight strong, positive guidance practices. Educators are reminded that the most valuable learning occurs when adults model, coach, guide, and encourage children in the context of everyday interactions.

## **7. Small Group Learning Experiences**

Ideas for small group learning experiences make up the bulk of each resource packet. These learning experiences are intended to be carried out with groups of 3 – 5 children at a time.

This means that educators will complete each activity with several small groups. For some activities, some children may participate in the morning and some may participate in the afternoon. A few activities may even take place over the course of several days. Using lists or sign-up sheets can reassure children that everyone will have a turn.

**You'll find a key to small group learning experiences on the following page.**

## **8. Concluding Your Exploration**

This final section of each resource packet invites educators to reflect about whether children are ready to wrap up and move on to another topic of investigation. It includes ideas for culminating events and documentation.

# Key to Small Group Learning Experiences

Each double-sided small group learning experiences idea sheet has specific components to assist you with planning and facilitation:

<p><b>Exploring with Flashlights</b> Let's investigate flashlights and go on a low light adventure!</p> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>□ Basket of assorted flashlights (at least one or two more flashlights than children in the small group)</li> </ul> <p>Talk with children about what they know about flashlights. Flashlights are lights that we can carry in our hand. They are usually powered by batteries, and they are tools that let us see in dark places. What experiences have children had with flashlights? They might talk about using flashlights when camping or when the lights go out during a thunderstorm.</p> <p>Invite children to investigate the flashlights in the basket. Notice together:</p> <ul style="list-style-type: none"> <li>• How flashlights switch on and off.</li> <li>• Which ones are brightest, and which are dim.</li> <li>• Which ones have a narrow beam, and which ones have a wide beam.</li> <li>• Other differences and similarities related to size, shape, color, and function.</li> </ul> <p>This may be a good time to support children as they learn to ask for turns and trade materials – "May I use the tiny flashlight next?", and, "I'll trade you the blue flashlight for the green one."</p> <p>After a period of open-ended exploration, invite each child to choose a flashlight to take on a walk. You'll go together to another area where the lights are dim, but not totally dark. This could be another room, a hallway, a gymnasium, or any other child-safe space where you can turn out the lights. Invite children to investigate by walking around and shining their lights on things that interest them.</p> <p>When you return to the classroom, talk with children about what they noticed while exploring with flashlights.</p> <p><b>Helpful Hints</b> Ask colleagues for help building a collection of flashlights. Families may be happy to help, too.</p>	<p><b>Title</b></p> <p><b>Materials: Things to gather and prepare</b></p> <p><b>Procedure: How to facilitate the activity with children</b></p> <p><b>Helpful Hints: Tips for a smooth, successful experience.</b></p>
<p><b>front of page</b></p> <p><b>Including Every Explorer: Ways to individualize and adapt for children with special needs.</b></p> <p><b>More to Do: Suggestions for extending learning, creating displays, and engaging families.</b></p> <p><b>Did You Know?: Fun facts and/or background information for teachers.</b></p> <p><b>Build and Strengthen: Connection to AR Early Learning Standards (CDELS)</b></p>	<p><b>back of page</b></p> <p><b>Exploring with Flashlights, cont.</b></p> <p><b>Including Every Explorer</b> Some children are frightened by dark places. If a child seems worried, invite them to hold your hand or walk next to you.</p> <p>Some children may require one-on-one support to have a safe, satisfying experience outside their familiar classroom. If this is not possible, find a way to explore inside the classroom.</p> <p><b>More to Do (optional)</b></p> <ul style="list-style-type: none"> <li>• Hang pictures of nighttime (nocturnal) creatures in the place where children will explore. Have fun spotting owls, bats, opossums, and more!</li> <li>• Create a flashlight exploration space in your classroom with the basket of flashlights and a large, open appliance box that children can crawl inside.</li> <li>• To challenge older or more experienced preschoolers, place one flashlight without batteries in the basket with the working flashlights. When children discover the non-working light, encourage them to investigate. Offer two different sizes of batteries when they realize that batteries are needed. They'll figure out which size is correct and install them in the flashlight. "I fixed it!"</li> </ul> <p><b>Did You Know?</b> This exploration may seem simple to adults, but we have far more experience with flashlights and dim places than children do! Children may investigate many different things, such as:</p> <ul style="list-style-type: none"> <li>• How a flashlight beam moves when they move their arm.</li> <li>• What happens when light shines on a window or mirror.</li> <li>• How a beam of light changes as it moves closer to a surface that it is shining on.</li> </ul> <p>This experience offers special opportunities to build and strengthen:</p> <ul style="list-style-type: none"> <li>Social and Emotional Development – SE 1.2, SE 2.1, SE 2.2</li> <li>Cognitive Development – CD 1.1, CD 2.1</li> <li>Science and Technology – ST 1.1, ST 3.2</li> </ul>