Table of Contents

Forest Animals Discovery Box Contents
Introduction to the Discovery Boxes
Directions for Using the Discovery Box Activity Booklet
Teaching Methods for the Discovery Box Activities
Activities

- Who Lives in the Forest?
- Where is My Home?
- Animal Charades
- Who Eats What? Game
- “Goin’ on a Bear Hunt” song
- Bears in Caves
- The Tallest Tree
- Bat Sounds Game
- Eagle Investigation
- Bird Binoculars
- “Way Up in the Sky” Song
- Fox Walking
**Fox Walking**

Visitors will have the opportunity to experience movement the way a fox does.

**Age Range:** 3 & up

**Supplies**
- None

**Procedure**

*Explore the visitors’ knowledge on the subject through open–ended questions before explaining how the subject works.*

**Ask:** Has anyone ever seen a real, live fox? What did it look like? What was it doing?

**Say:** Let’s try to move like foxes! Foxes move slowly and notice everything around their feet. They walk in a straight line. Watch how I move my hands and feet. My front paw is always next to my back paw.

**Do:** Illustrate walking like a fox. Encourage the children to join you.

**Say:** (Whisper) Foxes try to move quietly.

**Ask:** How do you think moving like this helps foxes?

**Say:** The soft foot and careful stepping helps foxes stay quiet when searching for prey. One thing foxes like to eat is mice. They use their strong senses of hearing and smell to find them. Let’s see if we can find any mice.

**Do:** Mime catching mice, and encourage the children to do so as well. Foxes pounce on their prey like a cat. The more animated you are, the more fun it will be for the children.

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**Forest Animals Discovery Box Contents**

**Animal charades cards in bag**

**Baby bear (stuffed)**

**“Bat Puppets” box**
- Five (5) small bats
- Two (2) large bats

**Bear gloves and hat**

**Books**
- *A Walk in the Woods* by Caroline Arnold
- *Stellaluna* by Janell Cannon
- *Bat Loves the Night* by Nicola Davies
- *Black Bears* by Kathy Feeney
- *Urban Wildlife* Sarah B. Landry
- *Bald Eagle* by Gordon Morrison
- *The Tree in the Ancient Forest* by Carol Reed-Jones

**“Eagle Investigation” box**
- One (1) eagle foot
- One (1) imitation eagle egg
- Two (2) eagle head binoculars
- Two (2) imitation eagle feathers

**“Plastic Forest Animals” box**
- Plastic badger
- Plastic bear
- Plastic beaver
- Plastic lynx
- Plastic raccoon
- Two (2) plastic trees

**“Tallest Tree” blocks**

**“Where is my home?” board and bag of cards**
Introduction to the Discovery Boxes

The main goal of the Discovery Boxes is to give young children hands on and authentic experiences around a big idea. We can introduce the ideas through storybooks, open-ended explorations of real objects, open-ended questions and conversations, investigations and role-playing.

In this activity booklet you will find many things to help you introduce or further explore a thematic topic with young children. It was also designed for an Educator or Volunteer to choose which works best for them and their space. The materials provided can guide you or you can make up completely new activities for the materials in the box. The choice is yours. **We only ask that you supervise the use of items in the box and return it the way you found it!**

The Discovery Box themes were selected for their relation to the real world. Young children are very egocentric and therefore experience most ideas from a personal perspective. For example, activities associated with how things work, animals, habitat, family dynamics, food, shelter, and survival hold the most meaning for young children. Keep these in mind when discussing how something works. Try to relate it to these ideas, as they are concepts that young children relate to.

Young children are natural scientists, eager to find out about the world around them. Children use the process of play to investigate in much the same way scientists use the scientific method. A comparison of the two processes reveals many similarities:

<table>
<thead>
<tr>
<th>Process of Play</th>
<th>Scientific Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>See</td>
<td>Observe</td>
</tr>
<tr>
<td>Wonder</td>
<td>Hypothesize</td>
</tr>
<tr>
<td>Try</td>
<td>Test</td>
</tr>
<tr>
<td>Make Sense</td>
<td>Conclude</td>
</tr>
</tbody>
</table>

Adult roles during play vary from commenting on play, extending the activity and actively participating, to providing verbal interpretations, emotional support and suggestions or alternatives. By fostering children’s natural curiosity, adults can help them develop positive attitudes toward learning, as well as important critical-thinking and problem-solving skills. The Discovery Box activities were designed to help children develop confidence in their own abilities.

“Way Up in the Sky” Song

Visitors will have the opportunity to sing a song about birds.

**Age Range:** 3 & up

**Supplies**
- None

**Procedure**

*Explore the visitors’ knowledge on the subject through open-ended questions before explaining how the subject works.*

*Say:* I am going to sing a song about birds. You can sing along if you know the words, or just move your hands and arms like I do.

*Sing:*

Way up in the sky,

The big birdies fly. (flap your arms like a bird)

While down in the nest,

The little birds rest. (rest head on hands with eyes closed)

With a wing on the left, (fold left arm by chest)

And a wing on the right, (fold right arm by chest)

The little birds sleep, (rest head on hands with eyes closed)

All through the night.

Shhh. They’re sleeping. (whisper)

The bright sun comes up! (raise arms in circle above head)

The dew falls away. (gruff voice and push away the “fog”)

“Good morning, good morning!”

The little birds say.
Supplies

- Cardboard tubes (2 per child)
- Construction paper cut into strips the same width as tubes
- Masking tape
- Yarn (2 feet per child)
- Hole puncher
- Markers
- Various decorating materials (feathers, stickers, etc.)

Procedure

Explore the visitors’ knowledge on the subject through open-ended questions before explaining how the subject works.

Say: Today we are going to make our own bird watching binoculars! First, everybody pick two tubes. Then, use the tape to attach them.

Do: Illustrate wrapping the tubes in tape.

Say: Now, tape a strip of paper all the way around the outside of the tubes. Now you can decorate the bird binoculars any way you like.

Do: Illustrate attaching paper and decorating.

Say: Let’s find a way to hang these from our necks. First, we can use these hole punchers to make a hole in each tube. Then we can tie the ends of one piece of yarn in each hole.

Do: Help children do this. Show children how to tie a knot.

Say: Great work everybody. Next time you’re outside, you can try to spot some birds using your new binoculars.
Don't be a “teacher.” Be a partner in learning.

Let the child lead with their ideas and suggestions for play. Introduce new concepts through your conversations and actions. Talk ideas through as you’re doing it. Not only does this introduce a new idea and model how to do it, but also models the concept to the child as a way to share their ideas.

Test the theories and construct new knowledge through hands-on exploration, investigation and play.

Model the scientific process, stating it as you do it.

Model this process to caregivers around you.

Body language says a lot. Don’t just sit in front of them and talk about something or ask questions in an intimidating “authoritarian figure” manner. Get on their level. Invite them to find the answer with you. Ask them to tell you what they think.

If you don’t know the answer to a question ask the child what they think the answer is. Try looking for the answer in a book.

Play and be silly.

Go with the flow and expect the unexpected. If a child is not interested in doing what you are suggesting, ask them what they would like to learn, or observe what they are doing with the object and ask them to tell you about it. You could also give them words for their actions. “Oh, I see you like the way the skeleton moves. Can you feel the bones in your body move? Put your hand on your knee and bend it.” Show the child how.

Don’t be offended when a child is disinterested. Be interested in what they are interested in. Learning is a two way street. You may have put out an item that you want to teach a child about, but an opportunity has arisen for you to observe and learn what a child will creatively do with that item. You have a chance to observe how they will place meaning onto it and listen to how they relate it to their own lives.

Say: Reptiles don’t have feathers, so this came from some kind of bird. Let’s see if our next clue will help us find out what kind of bird we are looking for.

Do: Show the children the eagle talon.

Say: This is fragile, so I will hold it. Everyone is welcome to touch it, however. You can feel the soft feathers on the top. Be gentle when you touch the claws; they are sharp.

Ask: What do you think this is?

Say: This looks like the foot of a bird with sharp talons.

Ask: Why do you think a bird would need such sharp talons?

Say: These sharp talons can help a bird perch on branches or catch his prey. Now we know that we are looking at things that have to do with some kind of bird of prey.

Ask: Can you think of what kind of bird we are looking for?

Say: Let’s look at our last clue.

Do: Show the children the eagle’s head binoculars. Encourage the children to look through them.

Ask: What do you see?

Say: When you look through the binoculars, things far away look closer. This bird uses his excellent eyesight to spot small animals and fish from far away. Like when he is flying high up in the sky.

Ask: What kind of bird did we discover? How do you know?

Say: We were investigating a Bald Eagle! We used the clues of an egg, feathers, a claw, and eagle’s head binoculars to discover this. I have a book that can help us learn more.

Explore: Read Bald Eagle. The language is quite dense, so it may be wise to focus your discussion around the pictures. Use some of the information to guide observations and for asking questions. Page 28 shows illustrations of an eagle chick developing in an egg. Pages 20 and 24 show the eagle using his talons.
**Eagle Investigation**

Visitors will have the opportunity to explore various features of eagles.

**Age Range:** 3 & up

**Supplies**
- “Eagle Investigation” box
- *Bald Eagles* book

**Procedure**

*Explore the visitors’ knowledge on the subject through open–ended questions before explaining how the subject works.*

**Say:** I have a box of things that have to do with one certain kind of animal. Let’s be scientists and use these clues to find out what kind of animal they relate to.

**Do:** Show the children the egg, making sure to keep the rest of the box contents hidden. Let the children hold the egg.

**Ask:** What do you think this is?

**Say:** This looks like a model of an egg.

**Ask:** What do you think eggs are for?

**Say:** Adult animals lay and care for eggs. Later, a young animal will hatch from an egg.

**Ask:** What kind of animal do you think this came from?

**Say:** Many birds and reptiles lay eggs. Maybe our animal is a bird or a reptile. Let’s look at our next clue.

**Ask:** What kind of animal do you think this came from?

**Do:** Remove the two feathers, keeping the rest of the box contents hidden. Let the children touch and hold the feathers.

**Ask:** What are these? What do they feel like?

**Say:** These are soft feathers.

**Ask:** Earlier, we guessed that the egg came from a bird or a reptile. What kind of animal do you think this came from?

**Who Lives in the Forest?**

Visitors will have the opportunity to explore what kind of animals live in forest through reading, playing, and conversation.

**Age Range:** 3 & up

**Supplies**
- *A Walk in the Woods* book
- “Plastic Forest Animals” box

**Procedure**

*Explore the visitors’ knowledge on the subject through open–ended questions before explaining how the subject works.*

**Do:** Set out the plastic forest animals. Let the children play with them.

**Ask:** Have any of you ever been in a forest before? What did you see there? Did you see any animals? What kind of animals? If you have never been to a forest, what kind of animals do you think might live there?

**Say:** A lot of different kind of animals live in the forest. These toys we are playing with are just a few examples.

**Ask:** Do you recognize any of these animals? What is its name? What do you think it eats? Where do you think it lives in the forest?

**Say:** I have a book that talks about many of the animals that live in the forest. Let’s see if we recognize any of them

**Explore:** Read *A Walk in the Woods*. Take time to let the children make observations, ask questions, and ask open-ended questions of your own. For younger children, it may not be necessary to read every word on every page. There is a lot to notice in these pictures. On each new page, you may ask the children what they notice. Let the interest of the children guide your exploration.
Where is My Home?

Visitors will have the opportunity to determine where various forest animals live.

Age Range: 2.5 & up

Supplies
- “Where is my Home?” board with Velcro
- Small pictures of animals with Velcro

Procedure

Explore the visitors’ knowledge on the subject through open-ended questions before explaining how the subject works.

Ask: Would anyone like to help me find homes for these animals?

Say: I have a bag filled with animals that need to find a home. This board shows all the different places an animal could live in a forest. You can choose an animal, and then we will find a home for it together.

Do: Let the children pick an animal from the bag.

Ask: What animal did you choose? Where do you think it could live?

Do: Determine the best possible home for the chosen animal. There are many options for some of them, and a few with specific habitats (such as the fish in the water, the beaver on the dam, etc.). If needed drop hints like the following questions.

Ask: Do you think that this animal swims in the water or fly in the air? If it swims should it live in a tree or in the water?

Do: Once you and the child have determined the best possible home, place the animal on the board. You may “walk” the picture animal to its new home, and perhaps make the animal’s sound. The more animated you are, the more fun it will be for the child.

Say: Great work! We found a home for one animal; now let’s try another.

Do: Choose a new animal and repeat the process.

Do: Arrange the adults in a single file line. Let the first adult hold a bat puppet. If there are two adults for one batling, let them each hold a puppet. Have the first adult in line put the blindfold on.

Say: Now the batlings should line up in front of the adults.

Do: Help the children arrange themselves in a single file line in front of the adults, so one child is facing one adult at a time.

Say: Now the first batling will make his sound. Be sure to listen, adult bat. If it is your batling, say “That’s my batling.” If not, say “That’s not my batling.”

Do: Let the first batling make his sound. If he is not the adult’s baby, have him move to the back of the line. Continue this process until the adult finds the right baby. Then, have the adult hand the puppet and blindfold to the next adult. Repeat the process until every batling is reunited with his adult.

Say: Good job everyone, you used your bat senses to find each other!
**Bat Sounds Game**

Visitors will explore bats and their methods of communication through reading and dramatic play.

**Age Range:** 3 & up

**Supplies**
- *Bat Loves the Night* book
- Box with five (5) bat puppets
- Blindfolds

**Procedure**

Explore the visitors’ knowledge on the subject through open–ended questions before explaining how the subject works.

**Ask:** Has anyone ever seen a bat? When did you see it? What was it doing? If you’ve never seen a bat, why do you think that is? When do you think bats go outside?

**Say:** You almost always see bats only at night. I have a book that can help us learn more.

**Explore:** Read *Bat Loves the Night*. Take time to let the children make observations, ask questions, and ask open-ended questions of your own. With younger children, it may not be necessary to read every word on every page. If you would like to go straight to the game, simply explore pages 22-25.

**Say:** Adult bats can recognize the sound of their babies. Let’s pretend to be bats. The adults will be the adult bats, and the kids will be the batling.

**Say:** Alright batlings, I’m going to give each of you a sound to make. Then you will make the sound for your adult bat.

**Do:** Assign each batling a vowel sound (“Ay, ay, ay!” “Ee, ee, ee,” etc.) If there are five or fewer children, let them each hold a baby bat puppet. Tell the children to make their sound for their adult bats. Remind the adults to remember the sound of their babies.

**Say:** Let’s see if the adults bat can recognize the sound of their batling using their bat senses.

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**Animal Charades**

Visitors will act out the movements and sounds of an animal, and see if other visitors can guess what they are.

**Age Range:** 2.5 & up

**Supplies**
- “Animal Charades” cards

**Procedure**

Explore the visitors’ knowledge on the subject through open–ended questions before explaining how the subject works.

**Say:** Would anyone like to play Animal Charades? First, try to guess what kind of animal I am.

**Do:** Draw a card from the plastic bag. Act out the sounds and movements of the animal on the card. It is ok to give some verbal clues as well. For example, if you are a raccoon, you may say “There’s a trash can. I think I’ll knock it over and look for food.” Continue giving clues until someone in the audience guesses what you are.

**Say:** Nice guessing! Would anyone like a turn being the actor? Adults are welcome to act too!

**Do:** Let a child (and his adult) draw a card. If no one wants to be the actor, draw another card yourself.

**Say:** Alright actor, you can show me your card, but don’t let anyone else see it. Everyone in the audience, get ready to look and listen to the clues.

**Do:** Assist the child in acting out his animal. If the child is stuck, give suggestions (“Flap your wings!”). If the child is very stuck, you or his adult can act with him. Do this until someone in the audience figures out the clues.

**Say:** Whoever makes the correct guess first can be the next actor. If you have already had a turn, you can pick who goes next.
### Who Eats What? Game

Visitors will have the opportunity to explore the forest food web through a story and dramatic play.

**Age Range:** 4 & up

**Supplies**

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**Procedure**

Explore the visitors' knowledge on the subject through open-ended questions before explaining how the subject works.

**Ask:** A lot of the time, humans like us get our food at grocery stores and restaurants. Do you think animals in the forest go to grocery stores and restaurants? How do you think forest animals get their food?

**Ask:** What kind of foods do you think a bear eats? How about a deer? What about chipmunks?

**Say:** Animals eat all sorts of foods. Some animals eat plants and some animals eat other animals. Would you like to read this book with me and find out about the food chain?

**Explore:** *Who Eats What?* If the children are young you can skip some of the big paragraphs and talk about the pictures. The first 13 pages illustrate the point the best.

**Say:** I have a game in which we can act out the food web. Would anyone like to play? First, we need to divide into two groups. Half of us will stand here, and the other half will stand over there.

**Do:** Help divide the group and find a place for each group to stand. They do not need to be very far apart (5-10 feet should be enough). This may require 2 adults. One to guide each group.

**Say:** When I count to three, each group will pretend to be either a bear, deer, or grass. This game is a little like "Rock, Paper, Scissors." To be the bear, put your hands high in the air with your claws out. It might help to growl. Bears eat deer. To be a deer, place your hands at the top of your head, cupped to form long deer ears. Deer eat grass. To be grass, place your hands at chest level.

### Tallest Tree

Visitors will have the opportunity to build, explore, and read with tree blocks.

**Age Range:** 3 & up

**Supplies**

- “Tallest Tree” stacking blocks.

**Procedure**

Explore the visitors' knowledge on the subject through open-ended questions before explaining how the subject works.

**Do:** Place the blocks in front of the children. Encourage them to explore.

**Ask:** What do you notice about these blocks? What could you build with them?

**Say:** Each block has pictures, words, and numbers on them. They are all different sizes, making them perfect for building a tower! We could start with the largest and work our way up to the smallest.

**Explore:** Build with the child, exploring each block. You may choose to focus on one side of the blocks at a time. You could read all the poems, or focus on the counting side. Encourage the children to notice how the picture changes on the top of the blocks. Try to locate animals together. Some children may want to build before they do any close observing. You can observe the pictures, numbers, and words before, during, and after building.
**Bears in Caves**

Visitors will explore the habitat of bears through a craft activity.

**Age Range:** 3 & up

**Supplies**

- Brown and/or black construction paper cut into strips large enough to wrap around the paper cup.
- Construction paper cut into bear shapes
- Paper cups with pencil sized holes in the bottom
- Straws
- Scissors

**Procedure**

*Explore the visitors’ knowledge on the subject through open-ended questions before explaining how the subject works.*

**Say:** Today we are going to make a home for bears cut out of paper.

**Ask:** Does anyone have an idea of what kind of homes bears live in?

**Say:** Bears do not live in houses like us. Much of the time, bears live in caves. Some bears will stay in their caves for many months without moving during the winter. This is like hibernation. It is a little like sleeping for a very long time. To make our caves, we first need to wrap construction paper around this cup.

**Do:** Illustrate taping or gluing construction paper around the paper cup.

**Say:** Now, we will attach a bear to a straw.

**Do:** Illustrate taping the bear to the straw.

**Say:** Ok, now that we have our bear attached to the straw let push the straw through the hole in the bottom of the cup. Make sure to punch the straw through the inside out.

**Do:** Provide assistance as needed.

**Say:** Now you can move the bear in and out of her cave.

**Say:** As a team, you will have 30 seconds to decide what you are going to be. Don’t let the other team know! Then, line up with your backs facing the other team. When I count to three, turn around and be what you decided!

**Say:** Ready? One, two, three! Ok, it looks like the… team won.

**Do:** Determine which team won.

**Say:** The winning team can ask someone from the other team to join them.

**Do:** Again, let the teams decide what they will be. Count to three and let the winners choose a new teammate. Continue until one team wins or the participants tire.
“Goin’ on a Bear Hunt” Song
Visitors will have the opportunity to sing about and act out a bear “hunt.”

Age Range: 3 & up

Supplies
- Bear hat and gloves
- Stuffed baby bear

Procedure
Explore the visitors’ knowledge on the subject through open–ended questions before explaining how the subject works.

Say: Would anyone like to go look for a bear with me? We can sing a song while we look. This song is a “repeat after me” song. That means that I’ll sing a few words and then pause so you can sing those same words after me.

Do: As you sing, encourage the children to follow you through the Animal Secrets exhibit. A second educator can wait in the cave wearing the bear hat and gloves, and holding the baby bear.

Sing:
Chorus: Goin’ on a bear hunt (repeat)
I’m not afraid (repeat)
Got a real good friend (children hug each other during this part...repeat)
By my side (repeat)

Oh, Oh (repeat)
What do I see? (repeat)
Oh look! It’s a wide river. (repeat)
Can’t go over it (repeat)
Can’t go under it (repeat)
Got to swim across it. (Repeat and pretend to swim.)

Repeat Chorus

Oh, Oh (repeat)
What do I see? (repeat)
Oh look! It’s the naturalist tent! (repeat)

Can’t go over it (repeat)
Can’t go under it (repeat)
Can’t go around it (repeat)
Got to go through it (Repeat and crawl through the tree)

Repeat Chorus

Oh, Oh (repeat)
What do I see? (repeat)
Oh look! A deep, dark cave. (repeat)
Can’t go over it (repeat)
Can’t go under it (repeat)
Can’t go through it (repeat)
Got to go in it. (repeat, close eyes as you enter the cave)
Oh, oh! It’s dark in here. (repeat)
I feel something (repeat)
It has lots of hair! (repeat)
It has sharp teeth! (repeat)
It’s a bear! (children love to scream at this part)

Notes
- If the children are too excited, bring them back to the song. It will help to calm them down if things get out of control.
- An added layer of fun is to have another person wear the bear hat and gloves and wait in the cave to scare everybody. Be careful of being too scary or of chasing children. Please read your audience. If the children are too young it maybe best to be on your hands and knees and only growl a little. Not ferociously.