

# FAMILY DISCOVERY BOXES

## at Blue Jay Point County Park

"Family Discovery Boxes" are available for parents/caregivers to use in the park **by reservation**. Call (919) 870-4330 or email [bluejaypoint@wakegov.com](mailto:bluejaypoint@wakegov.com) to reserve boxes for use or to schedule a time to review the boxes prior to use.

All boxes come complete with equipment and activity guides including necessary background materials. Discovery Box information cannot be photocopied due to copyright restrictions.

All activities are hands-on and site-specific, and various boxes are appropriate/adaptable for different ages. Parents/caregivers are encouraged to use an interdisciplinary approach by incorporating math, art, language arts, and social studies with these science activities.

Discovery Boxes provide wonderful activities for children and adults to use in learning about the environment and the role each human being plays in it. Parents/caregivers are encouraged to implement pre- and post- activities emphasizing the Discovery Box theme.

### Boxes with special Group Adaptability

Family Discovery Boxes, indicated by a ♣ are activities that can be done in a small group. Boxes especially appropriate for children in grades K-2 are indicated with a ⚙. Boxes especially appropriate for secondary grades and adults are indicated with a ▲.

Boxes with a ⬆ must be done inside the Lodge.



## 1. Plants

### GROW A TREE ⚙ ♣

**Length:** 20 minutes

**Source:** Adapted from "Grow a Plant" USDA FS

**Area:** Indoors or Outdoors – seated

**Summary:** Reinforce what plants need to live and grow (air, sun, water, & soil) in a sit-down board game.

### KEYING OUT TREES ▲ ♣

**Length:** 1 – 1 ½ hours

**Source:** *Naturescope*

**Area:** Indoors or Outdoors – seated

**Summary:** "Key out" participants according to their physical features, then use the same technique to identify common leaves.

### MEET A TREE ⚙ ♣

**Length:** 20 – 30 minutes

**Source:** J. Cornell

**Area:** Outdoors – forest setting

**Summary:** Use the sense of touch to discover and recognize a tree by its bark texture and other trunk features.

### MY TREE ♣

**Length:** 1 hour

**Source:** Blue Jay Point staff

**Area:** Outdoors - forest setting

**Summary:** Use a tree key to learn about an individual tree. Observe forest layers and diversity.

### PLANT BINGO ⚙ ♣

**Length:** 30 minutes

**Source:** Stephanie Avett

**Area:** Outdoors – garden or trail

**Summary:** Play bingo as you search for and identify different types of plants (ex: vine, tree, fern), parts of plants (ex: flower, leaf, seed) and more!

### SEED BINGO ♣

**Length:** 30 minutes

**Source:** Kelley Stanton

**Area:** Outside in "seedy" locations

**Summary:** Play bingo as you search for and identify 8 different types of seed locomotion/travel.



## TERRIFIC TREES ⚙️ ♀

**Length:** 1 hour **Source:** Blue Jay Point Staff  
**Area:** Anywhere  
**Summary:** Use the series of labeled, laminated leaf cards for a giant concentration game or group matching activity. The cards can then be used as an ID guide on non-winter tree hikes.

## TREE COOKIES ▲ ♀

**Length:** 30-45minutes **Source:** Project Learning Tree  
**Area:** Anywhere  
**Summary:** Can you tell how old a tree is just by looking at it? Discover how to read a tree cookie by looking at the tree rings. Determine natural events that occurred during a tree's life just like a scientist would. Create your own tree cookie based on your age and major life events.

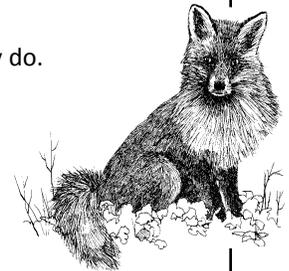
## 2. Animals

### BEAVERS OF BLUE JAY ♀

**Length:** 30 – 45 minutes plus hike time **Source:** Blue Jay Point staff  
**Area:** Anywhere  
**Summary:** Learn about this fascinating mammal that calls Blue Jay Point home. Handle a beaver pelt and beaver chew sticks. If time allows (1 hour needed), take a hike to look for beaver signs at the lake shore—ask Blue Jay staff for tips on locations.

### BIRD BEHAVIOR BINGO ♀

**Length:** 30 minutes **Source:** *Naturescope*  
**Area:** Outdoors - wherever you can see birds!  
**Summary:** Observe birds in their habitat and understand why they behave as they do. A bingo game helps reinforce identification of the behaviors.



### MAMMAL SAFARI ♀

**Length:** 1 hour **Source:** *Naturescope*  
**Area:** Outdoors - forest, field  
**Summary:** Hike to investigate burrows, dens, nests, rubbings, snips & chews, scat & tracks, etc. as clues to mammals and other wildlife.

### REPTILE RELATIVES ♀

**Length:** 30 - 45 minutes **Source:** Sea Turtle Trek EELE and Laura Copeland  
**Area:** Indoors or Outdoors  
**Summary:** Become familiar with the adaptations, anatomy, and natural history of a sea turtle and a terrestrial turtle. Learn how certain adaptations make them well-suited for the habitats they live in and why the sea turtle is endangered and the Eastern box turtle is not.

### SCALES-N-TALES ♀

**Length:** 1 hour or more **Source:** Adapted from lesson plan by Helen Eagleson  
**Area:** Lakefront (Sandy Point works well) and NC CATCH  
**Summary:** Use this box to complement a fishing experience. Participants will learn to recognize the parts of a fish, identify some species of local fish, record and evaluate scientific data based on using different kinds of organic bait. Develop language and writing skills by describing the event of catching a fish and concocting a "fish story." **You must provide your own fishing gear and bait. All NC Fishing regulations apply.**

### 3. Invertebrates

#### BUG BINGO ⚙️ ♀

**Length:** 30 minutes – 1 hour **Source:** *Naturescope*  
**Area:** Indoors or Outdoors  
**Summary:** Introduce insect habitats and look at the ways insects find food, water, shelter, and a place to lay eggs. Test abilities to spot insects and habitats with a bingo game while on a hike or as a sit-down game with clues.

#### CAMO-CREEPERS ⚙️ ♀

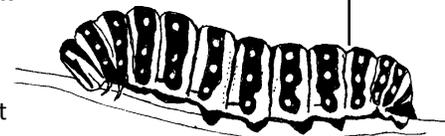
**Length:** 30 minutes **Source:** Project WILD  
**Area:** Outdoors – meadow, wooded trail, parking lot margins  
**Summary:** Experience the thrill of the hunt learning about predator and prey camouflage while searching for pipe cleaner “walking stick insects.”

#### HOPPER HERDING ▲ ♀

**Length:** 1 hour **Source:** OBIS and Kristin Arnebold  
**Area:** Outdoors – tall grass field (mid-May - October); Indoors – seated  
**Summary:** Discuss what makes an insect an insect. Look for insects in their natural habitat and round up a herd of hopping insects (grasshoppers, katydids, and crickets) using sweep nets in the Blue Jay meadow to find what kinds of insects live at Blue Jay Point. For a rainy day activity, unscramble a grasshopper picture and label its parts.

#### ORDERING INSECTS ▲ ♀

**Length:** 1 hour **Source:** Stephanie Avett  
**Area:** Indoors or Outdoors – seated  
**Summary:** Discover how scientists categorize living things. Students use pictures and models to figure out the characteristics common to their order of insects and create their own insect that fits into their order. Several orders of insects are introduced (Coleoptera, Hemiptera, Odonata, Hymenoptera, and Orthoptera), with information on other common orders.



#### WEB IT! ♀

**Length:** 30 minutes **Source:** OBIS  
**Area:** Outdoors - spider habitat (a fabulous Fall activity)  
**Summary:** With the aid of spray misters, investigate the adaptations and behavior of spiders.

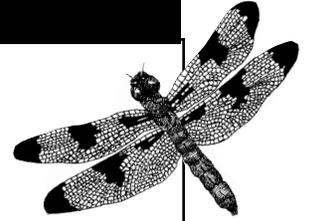
#### WHIRLIGIGS ‘N WATER BUGS ▲ ♀

**Length:** 45 minutes **Source:** Blue Jay Point Staff  
**Area:** Outdoors – Blue Jay Point’s Garden Pond  
**Summary:** Dip a net into the Blue Jay Point pond and get the real scoop on what types of aquatic life inhabit its waters.

### 4. Ecology

#### AM I A BIRD? ▲ ♀

**Length:** 15 – 30 minutes **Source:** Leigh Scott-Prater  
**Area:** Anywhere  
**Summary:** Develop language skills and encourage interaction between students, all while increasing awareness of the wild animals that might be living in our backyards.



### DRAGONFLY POND ▲ ♀

**Length:** up to 2 hours

**Source:** Aquatic Project WILD

**Area:** Indoors

**Summary:** Learn to evaluate the effects of different land uses on wetlands. This activity requires small group decision-making on how to minimize damaging effects on wetlands during community development.

### MIND'S EYE, THE ♀

**Length:** 30 minutes

**Source:** Kelley Stanton

**Area:** Anywhere

**Summary:** Work on descriptive language skills while examining objects found in nature. Participants describe what an object looks like while their partner guesses what it is.

### PICTURE THIS ▲ ♀

**Length:** 30 – 60 minutes

**Source:** Kelley Stanton

**Area:** Anywhere

**Summary:** Develop language and listening skills with this challenging, but quiet activity. A simple line drawing of a natural object is described as a partner tries to reproduce the drawing.

### SOCK IT TO ME ⚙️ ♀

**Length:** 30 – 45 minutes

**Source:** Kelley Stanton

**Area:** Anywhere

**Summary:** Participants test their sense of touch by reaching into a “mystery sock” and trying to guess what it contains. Students can also work on their descriptive language skills by describing what their mystery object feels like to find their match among fellow participants. *Allergy Note: This activity includes whole and “chewed” tree nuts (pecans acorns and black walnuts).*

### WETLAND METAPHORS ▲ ♀

**Length:** 30 minutes

**Source:** Aquatic Project WILD

**Area:** Indoors or Outdoors – seated

**Summary:** Citizens of our rapidly changing world should understand the benefits of wetlands as resources for humans and other species. By matching metaphoric objects and pictures to written wetland functions, this activity brings those benefits to life and encourages a new appreciation for the many important roles of wetlands.

### WOODLAND BINGO ⚙️ ♀

**Length:** 30 minutes – 1 hour

**Source:** D’Nise Hefner

**Area:** Anywhere

**Summary:** Get everyone out on a hike to enjoy Blue Jay’s trails! Participants will enjoy a visual scavenger hunt for things in nature. In case of inclement weather, or as a follow up learning session, play the “sit-down” version of Woodland Bingo with age appropriate clues that teach participants something about each nature item.

## 5. Environmental Studies



### DON'T GET WASTED ▲ ♀

**Length:** 30 – 45 minutes

**Source:** Blue Jay Point Staff

**Area:** Anywhere

**Summary:** Encourage interaction between participants while increasing awareness of how we can avoid sending waste to the landfill with this recycling icebreaker.

### EARTH BUDDIES ⚙️ ♀

**Length:** 30–60 minutes

**Source:** Parts adapted from *Naturescope*

**Area:** Anywhere

**Summary:** Encourage the development of an environmental ethic with three separate, short activities. These activities focus on things that are good or harmful for the Earth; creative thinking about reusing an everyday object; and comparing the environmentally “green” components of bagged lunches rather than the nutritional components. Each activity can stand alone.

### ENVIRO GAMES ♀

**Length:** multiple activities, length varies

**Source:** Various

**Area:** Indoors

**Summary:** Keep your group entertained and dry with many different environmental games good for rainy day fun!

### ETHI-REASONING ▲ ♀

**Length:** 1 hour

**Source:** Adapted from Project WILD

**Area:** Indoors or Outdoors – seated

**Summary:** Participants use critical thinking skills to evaluate situations requiring ethical decisions.

### EYE SPY ⚙️ ♀

**Length:** 30 minutes

**Source:** Kat Bukowy

**Area:** Blue Jay Center for Environmental Education (Mon-Sat 8a.m.-5p.m.)

**Summary:** Participants will increase their skills of observation in this visual indoor scavenger hunt in the Blue Jay Center Exhibit Halls. Most appropriate for younger audiences and students with reading/language differences.

### GARDEN EYE SPY ⚙️ ♀

**Length:** 30 minutes

**Source:** Blue Jay staff

**Area:** Blue Jay Education Garden

**Summary:** Students will increase their skills of observation in this visual all-season outdoor scavenger hunt in the Blue Jay Education Garden. Two sets of cards provide challenges for participants of varying ages.

### INDOOR SCAVENGER HUNT ▲ ♀

**Length:** 20 – 60 minutes

**Source:** Blue Jay Point Staff

**Area:** Blue Jay Center for Environmental Education (Mon-Sat 8a.m.-5p.m.)

**Summary:** Team up to compete in an indoor scavenger hunt through the Blue Jay Center exhibits with this great rainy/hot/cold day activity! Water quality, current environmental issues, habitat types, and more will keep you busy as you search for elusive answers! Following activity, discuss as a group!

## 6. Earth Science

### BIG SWEEP ▲ ♪

- Length:** 1 hour and up **Source:** Keep America Beautiful
- Area:** Outdoors – Upper Barton fishing area, Lower Barton Bridge areas, (these areas require car access; can hike back to Center or Lodge if desired – approx. 1¼ mi. hike), BJP lakeshore in dry weather
- Summary:** Help out wildlife habitat and improve water quality by donning gloves and picking up trash along the Falls Lake shore. Wear closed-toe shoes!! If you would like your group's effort to be counted as official "Blue Jay volunteer time", members of your group must provide us with completed Volunteer Service Agreement and Release Forms available for download at [www.wakegov.com/parks/bluejay/pages/volunteer.aspx](http://www.wakegov.com/parks/bluejay/pages/volunteer.aspx)

### DISCOVER OUR ECOLOGICAL ADDRESS ▲ ♪

- Length:** 30 min. – 2 hours **Source:** Adapted from Proj. WET and NC OEE website
- Area:** Outdoor
- Summary:** Where does the water go when it rains? Learn what a river basin is with the following activities, each lasting approximately 30 minutes. **Water Drop Match:** Discover Blue Jay Point's river basin and what makes it special (this particular activity could be done inside). The following activities use Blue Jay's giant N.C. river basin map. **River Basin Riddler Relay:** This action-packed, trivia-based fact game promotes participant learning about N.C.'s 17 river basins (best for class-size groups). **River Basin Hopscotch:** Participants label the 17 N.C. river basins and increase their fitness by "hopscotching" across the map while practicing the basins' locations (great for small groups!). **Map Makers:** Using the provided information, participants label geological features, cities, etc. on the giant map with sidewalk chalk. Participants draw in the major rivers and tributaries, then trace how the water flows in the basins.



### MINERAL MADNESS ▲ ♪

- Length:** 1 – 2 hours **Source:** Various sources
- Area:** Indoors or Outdoors – seated
- Summary:** Investigate some of the properties of minerals. Learn to identify several common minerals through scientific observation and experimentation.

**Blue Jay Point County Park**

**3200 Pleasant Union Church Rd.**

**Raleigh, NC 27614**

**[www.wakegov.com/parks/bluejay](http://www.wakegov.com/parks/bluejay)**

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