



## 2019-20 In-Class Programs

*All classroom programs are offered November through April unless otherwise noted.*

**PreK - Snakes Alive (45 minutes)** - We often fear what we don't understand. Introduce your students to a live snake and learn what makes snakes special.

**PreK - Spiders Aaarrgghh! (45 minutes)** - Learn the body parts of spiders, basic web designs, how they catch food, and why they are important.

**PreK & K - Animals Prepare for Winter (45 minutes; Nov.-Jan.)** - Learn what animals are doing to prepare for the cold winter months.

**PreK & K - Birds of a Feather (45 minutes)** - Discover how birds use their special adaptations.

**K- Furrries (1 hour)** - Explore furs in this hands-on program about mammals and their characteristics.

**K & 1st grade - Happening Herps (1 hour)** - Learn the difference between reptiles and amphibians. Live animals are a part of this hands-on program.

**1<sup>st</sup> grade - Ants Ants Ants (1 hour)** - Investigate insects by studying ants. The program includes a demonstration of various ant jobs, general insect parts, and more.

**1<sup>st</sup> grade - My Woods (1 hour)** - Explore a special habitat by using your senses. Learn why the outdoors is an important place for animals and people.

**1<sup>st</sup> & 2<sup>nd</sup> grade - Who Goes There? (1 hour)** - Be an animal detective! Learn to read the many signs left behind by animals to solve the mystery of "Who Goes There?"

**2<sup>nd</sup> grade - Rainforest Links (1 hour)** - Explore the tropical rainforests of the world. Learn about their form and function through activities and discussion. Help link rainforest creatures to each other and discover how we are linked as well.

**2<sup>nd</sup> & 3<sup>rd</sup> grade - Animal Adaptations (1 hour)** - Students will get their hands on unique animal components and explore adaptations through inquiry based team research.

**2<sup>nd</sup> & 3<sup>rd</sup> grade - EXTREME Reptiles (1.5 hours)** - Through an interactive game, learn what strategies reptiles use to help the survival of their offspring. Students will develop a model to discover many unique adaptations reptiles use to survive in their habitats.

**3<sup>rd</sup> grade - Dr. Dirt (1 hour)** - Let Dr. Dirt teach you about Iowa's million dollar soils through this interactive program.

**3<sup>rd</sup> grade - Raptors (1 hour)** - Learn about raptors and their special adaptations that allow them to function and survive. If available, we will bring a live raptor.

**3<sup>rd</sup> grade - Skins and Skulls (1 hour)** - Look at mammal teeth to determine what they eat and identify eight common mammals by their skull and fur.

**3<sup>rd</sup> grade - Wonders of Weather (1.25 hours)** - Learn the components of weather through hands-on learning stations.

**3<sup>rd</sup> & 4<sup>th</sup> grade - Ancient Animals** (1 hour) - Discover what ancient animals lived in Iowa, extinction theories for Ice Age mammals, and what scientists learn from fossils. Students will make a fossil to keep.

**3<sup>rd</sup> & 4<sup>th</sup> grade - Fabulous Fossils** (1.25 hours) - What was Iowa like 400 million years ago? This program explores Iowa's geologic history and how fossils are made.

**3<sup>rd</sup> & 4<sup>th</sup> grade - Shocking Developments** (1.25 hours; Nov.-March) - It's a shock where electricity can be found in nature! Learn all about electricity and do some amazing hands-on experiments.

**3<sup>rd</sup>-5<sup>th</sup> grade - Nature Inventions** (1 hour) - Great inventors and inventions come alive with an interactive game exploring how nature had a hand in everything.

**3<sup>rd</sup>-7<sup>th</sup> grade - The Wonderful World of Wetlands** (1 hour) - Explore the wonderful world of wetlands and the importance of these vibrant ecosystems and the biodiversity they support! Students are transported to a wetland through audio and visual means, and interactive games of Habitat Hopscotch and Wetlands BINGO are woven throughout the in-classroom presentation.

**4<sup>th</sup> grade - Digestion Discoveries** (1 hour) - We will compare how monogastric, ruminant, avian, and hind-gut fermenters process their food.

**4<sup>th</sup> grade - Rock It** (1 hour) - Explore the three processes that form rocks; it's a real treat!

**4<sup>th</sup> grade - The Garbologist** (1 hour) - This interactive and wacky program introduces students to the garbage cycle. Learn what we throw away, where it goes, and what we can do to reduce garbage.

**4<sup>th</sup> & 5<sup>th</sup> grade - Circulation Spectacular!** (1 hour) - Explore the circulatory systems of various animals. Dissected fish and mammal hearts will be brought into the classroom. If you want the full "hands-on" experience, please provide examination gloves for your students.

**4<sup>th</sup> & 5<sup>th</sup> grade - Dem Bones** (1 hour) - Learn with games and puzzles the bones and skeletal systems of different vertebrates. Explore the unique similarities among them all.

**4<sup>th</sup> & 5<sup>th</sup> grade - Team Building** (1 hour; August) - Team building is a fun, interactive way to get to know your class as a whole and as individuals. This program will challenge your students to think as a group and communicate with one another as a team. Because this program is meant to prepare you and your class for the year to come, it is offered during the first few weeks of school.

**4<sup>th</sup> & 5<sup>th</sup> grade - Traveling Trunk** (1.5 hours) - Meet a pioneer woman and learn about her move west and life on the prairie in the 1860s.

**4<sup>th</sup>-7<sup>th</sup> grade - Biodiversity Bonanza** (1 hour) - Students will learn about the importance of biodiversity, niches within ecosystems, trophic levels (who's eating who!), and more in this highly interactive unit. Activity options, depending on student age and time available, include a super competitive game of Biodiversity Jenga and Musical Oxbows.

**4<sup>th</sup>-7<sup>th</sup> grade - We All Live in A Watershed** (1 hour) - Dive in to the water cycle, watersheds, and water quality with this highly interactive module. We all live in a watershed and play an important role there! Students each receive a "puzzle piece" of land and \$5M, then are given free reign to be creative and build whatever they'd like with their money. How will the shared water resources be impacted by the cumulative effect of everyone's choices?

**5<sup>th</sup> grade - Endangered Species** (1.25 hours) - Understand why animals become endangered and discover ways to help them.

**5<sup>th</sup> grade - Enviroscope** (1 hour) - Hands-on learning about water pollution connects what we do on land to what happens in our rivers, lakes, and oceans.



## 2018-19 Outdoor Experiences

*Two half-day outdoor experiences can be combined for a full-day experience.  
\*Teacher and/or parent led activities are a part of this outdoor experience*

**All grades - Discovery Hike** (1-2 hours; Sept.-May) - Spontaneous interpretation. Nature only knows what we will find.

**PreK- I Spy** (45 minutes; Oct.-Nov. & late April-May) - Explore nature using letters, colors, and numbers.

**K- \*Nature Detectives** (1.5 hours; late April-May) - Using their senses to uncover clues, “detectives” will investigate the forest through inquiry and hands-on observation.

**1<sup>st</sup> grade - Bird Nerds!** (2.5 hours; late April-May) - Discover how adult bird behaviors help young birds survive and thrive. Students will design a safe nest, protect and feed their “nestlings,” and hike to meet the birds in their habitats.

**1<sup>st</sup> & 3<sup>rd</sup> grade - Insectology** (1.5 & 2 hours; Sept.-Oct. & May) - Learn the characteristics of insects and their survival strategies. Collect insects to observe and identify.

**2<sup>nd</sup> grade - Plant Parts and Pollination** (1.5 hours; Sept.-Oct. & late April-May) - Learn about plant parts and life cycles, pollination, and how animals interact with a forest plant community.

**2<sup>nd</sup> grade - \*Pond Study** (2.5 hours or 9:00 AM -2:30 PM; Sept. & May) - A lake is an amazing habitat full of critters. Students will learn about the food chain and use nets to explore and discover pond life.

**2<sup>nd</sup> grade - \*Tree-rific!** (2.5 hours; October) - Students learn about the inner workings of trees, their benefit to wildlife, and tree identification.

**3<sup>rd</sup> grade - \*Birding Bonanza** (2.5 hours; late April-May) - Students scour different habitats to learn about bird adaptations, practice using binoculars, and identify birds by sight and call.

**3<sup>rd</sup> grade - \*Prairies** (2.5 hours; Sept.-Oct.) - Through hands-on discovery, students learn about Iowa’s once vast prairies and their animal inhabitants.

**4<sup>th</sup> grade - \*Naturally Sensational** (2.5 hours; Sept.-May) - Discover how local organisms use their senses to survive within their habitats. A series of hands-on experiments, a naturalist-led hike, and journaling make this program “*Naturally Sensational*.”

**4<sup>th</sup> & 5<sup>th</sup> grade - \*Pioneer Day** (9:00 AM-2:30 PM; late April-May) - Students travel back to 1869. Cooking, making soap, and doing laundry are a few of the hands-on activities offered.  
*Prerequisite: Traveling Trunk in-class program.*

**4<sup>th</sup> grade & up - \*GPS and Geocaching** (2.5 hours; Oct.-May) – Understand how to use a GPS to find a location based on latitude and longitude, find a location using new coordinates, and learn the sport of geocaching.

**4<sup>th</sup> grade & up - Service Learning** (*half or full-day; Sept.-May*) - Help your students learn the importance of giving back to the community through volunteerism. Many of our county areas need help! Your class can help remove invasive species or collect prairie seed. The service project will depend on the season and the time will depend on the activity.

**4<sup>th</sup> grade & up - Snowshoeing** (*1.5-2.5 hours; Dec-Feb.*) - Snowshoeing is a great way to spend a winter day. After learning about equipment, techniques, and safety, students will venture through McFarland Park.

**5<sup>th</sup> grade - \*Hatchet** (*2.5 hours; Oct.-May*) - After your students finish reading *Hatchet* or another wilderness survival-based book, bring them to McFarland Park to experience survival shelter and fire building. *Please tell us which book you will read.*

**5<sup>th</sup> & 6<sup>th</sup> grade – Outdoor ½ Day** (*9:00-11:30 AM or Noon-2:30 PM; September or May*) - Orienteering, and team building are taught at McFarland Park.

**5<sup>th</sup> grade & up - Ice Fishing** (*2.5 hours; Dec.-Feb.*) - Ice fishing is a great way to spend a winter day. After learning about equipment, techniques, and safety, students will venture onto the ice to try catching fish.

### **Story County Conservation's Weather Policy**

- Students need to come dressed for the weather conditions. You can learn in the rain.
- Outdoor experiences will be postponed or canceled if there lightning.
- **Busses need to stay onsite** in case the weather becomes severe and the program must be canceled.
- We have a multi-purpose room at the conservation center to utilize for some rainy outdoor experiences. However, not all experiences can be moved indoors and may need to be canceled.
- On days of questionable weather conditions, if you call before 8:30 AM, please leave a message on Jerry's direct line 515-598-4765.

### **Story County Conservation Contact Information**

Phone: 515-232-2516

Jerry Keys, Environmental Education Coordinator: [jkeys@storycountyiowa.gov](mailto:jkeys@storycountyiowa.gov)

Heather Hucka, Naturalist: [hhucka@storycountyiowa.gov](mailto:hhucka@storycountyiowa.gov)

Jess Lancial, Naturalist: [jlancial@storycountyiowa.gov](mailto:jlancial@storycountyiowa.gov)

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Beth Waage, Naturalist: [ewaage@storycountyiowa.gov](mailto:ewaage@storycountyiowa.gov)



# Outdoor Experience Information

- Dress in clothes and shoes that can get dirty. **Requiring students to wear long pants and comfortable close-toed shoes for walking is best.**  
However, shorts and/or sandals (**No flip flops**) may be worn for the following outdoor experiences:
  - *Birding Bonanza.....Shorts permitted*
  - *Outdoor Day.....Shorts and sandals permitted*
  - *Birding Nerds!.....Shorts permitted*
  - *Pond Study.....Shorts permitted*
  - *I Spy.....Shorts permitted*
- **Fall and spring:** It is usually cooler at the parks than in town. Have students dress in layers: t-shirt, long-sleeved shirt, sweater or sweatshirt, and jacket. A hat with a bill provides protection from the sun.
- Bring your own **rain gear** (you can still work and learn in the rain), insect repellants, and sunscreen.
- In the **winter**, wear a warm winter coat, snow or insulated pants, mittens or gloves, and a scarf. Wear a stocking cap and warm (preferably water-proof) boots.
- If your outdoor experience trip includes lunch, encourage your students to pack an environmentally friendly lunch that creates as little trash as possible. Please bring **garbage bags for your trash**. We have a carry-in, carry-out policy at our parks.
- We request **one adult helper for every five students**. Adult helpers are expected to participate fully in all activities, dress appropriately, sit with the children, and help keep them on task. We ask that adult helpers **not** bring young children or smoke in the presence of students. Please ask helpers to quiet AND NOT USE their cell phones.
- **Teacher and/or parent led activities** are a part of the following outdoor experiences:
  - *Nature Detectives*
  - *Pond Study*
  - *Tree-rific!*
  - *Prairies*
  - *Birding Bonanza*
  - *Naturally Sensational*
  - *GPS and Geocaching*
  - *Pioneer Day*
- **Have each student bring a water bottle.** Some areas in the parks do not have easy access to drinking fountains.

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Bekah Beall, Naturalist: [rbeall@storycountyiowa.gov](mailto:rbeall@storycountyiowa.gov)

Beth Waage, Naturalist: [ewaage@storycountyiowa.gov](mailto:ewaage@storycountyiowa.gov)

## Potential Dangers in the field and what you can do to protect yourself:

### Lyme disease



- Transmitted through the bite of a tick.
- Symptoms of the disease include fatigue, muscle aches, headache, low-grade fever, chills, sore throat, and swollen glands.
- Treated by doctor with prescribed antibiotics.
- **Protect yourself by wearing light-colored clothing, pants tucked inside of socks, and close-toed shoes.**

### Poison Ivy



- Allergic reaction is caused by urushiol found in all parts of the plant and is released when the plant is touched.
- It causes an allergic reaction characterized by red, itching welts followed by water-filled blisters.
- Treat rash with calamine lotion, 0.5% hydrocortisone, and/or antihistamines.
- **Protect yourself by recognizing this plant. Wash skin and clothes exposed to poison ivy with soapy water.**

### Wild Parsnip



- Non-allergic reaction is caused by chemicals called psoralens contained in the plant juices. Reaction intensifies in the presence of sunlight.
- Reaction burns the skin causing the formation of blisters.
- Relieve burning by covering the exposed area with a cool cloth. If blisters pop, they should be treated with antibiotic cream and covered with a band-aid.
- **Protect yourself by recognizing this plant and staying clear of it!**

### West Nile Virus

- Carried by mosquitoes that become infected when they feed on birds carrying the virus.
- Most people who are infected don't develop symptoms.
- A minority of people may develop a mild illness with fever, headache, body aches, and swollen glands.
- Infection can lead to a severe illness known as West Nile encephalitis. However, risks for contracting this disease are low.
- **Protect yourself by wearing long sleeves and pants with dense fabric and insect repellent containing DEET.**

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## Preschool & Lower Elementary Nature Tubs

*Tubs can be checked out for two weeks. They must be picked up and returned during business hours to the Conservation Center at McFarland Park, 56461 180<sup>th</sup> St., Ames, IA unless other arrangements are made.*

*To reserve a tub, contact the environmental education coordinator at 515-232-2516, Monday-Friday, 8:30 am - 4:30 pm or email at [jkeys@storycountyiowa.gov](mailto:jkeys@storycountyiowa.gov).*

Tubs contain background information, materials, and activities including puzzles, crafts, finger plays, poems, felt boards, snack ideas, and a bibliography. Tub subjects offered:

**Camouflage:** types of camouflage, insect camouflage, and monarch butterflies

**Creatures of the Night:** night-time animal adaptations, bats, owls, and nocturnal insects

**Dirt:** soil, worms, insects, and seed types and formation

**Honeybees:** bee characteristics and behavior, parts of a beehive, and how honey is made

**Ice Age Mammals:** shape recognition, ordering, alphabetizing, comparing, glaciers, survival techniques, cultures of early people, tools of paleontologists and archaeologists

**Pond Habitat:** life in the pond, including tadpoles, frogs, insects, and ducks

**Prairie Habitat:** prairie insects, grasses, and flowers

**Rocks & Fossils:** rock types, rock formation, and fossils

**Woods Habitat:** parts of a tree, leaf shape, and woodland animals

Fees are assessed to schools and day cares scheduling environmental education programs and outdoor experiences. Two options are offered, to be decided in advance:

1. For multiple programs, the fee is \$1.25 per student enrolled in the school attendance center.
2. For individual programs, the fee is \$1.25 per student per program (minimum charge of \$20).

To schedule in-class programs or outdoor experiences, contact the environmental education coordinator Monday through Friday, 8:30 am to 4:30 pm, at 515-232-2516 or email [jkeys@storycountyiowa.gov](mailto:jkeys@storycountyiowa.gov).

**If we don't have what you are looking for, let us know. We may be able to create a program or field trip for your class.**

