



**Archbold**

# Elementary School Program Overview

Updated July 2023



# About The Program

Archbold's Elementary Program includes a three-module curriculum titled, "Science in the Scrub", multiple educational videos, and the field trip. There are optional Zoom classroom visits that may be added.

The program is free to all Florida public schools. It is standard-aligned for 3<sup>rd</sup>-5<sup>th</sup> grade.

All resources can be found at:

<https://www.archbold-station.org/education/>

## Field Trip Info:

- Field trips begin at 9:15am and end around 11:45am—we are happy to work around your specific time needs.
- All students, teachers, and chaperones must fill out a liability waiver. Please bring filled out waivers on day of field trip.
- Large groups will need to be split into multiple days. We recommend a max. of 2 classes (around 40-50 children) for each day.
- Your class may bring lunches to eat at our picnic tables. We ask that all trash leaves with you—this helps us keep our program free.
- Encourage students to wear long pants and close-toed shoes. Light colored clothing and hats are recommended during the hotter months.
- All students will receive a copy of our Florida Scrub Coloring Book.

# Outline



- Pre-visit Activities
  - Science in the Scrub
  - Videos
- Field Trip
  - Before Your Visit
  - Welcome
  - Rules
  - Hiking
  - Weather Station
  - Snake
  - Discovery Room
  - Lookout and Scrub Pledge
- Post-visit Activities

# Pre-visit Activities

## Science in the Scrub

Before your class visits, we highly encourage completing the three “Science in the Scrub” modules.

- **Florida Scrub Jays: At Home in the Florida Scrub**

Students learn how Florida Scrub-Jays rely on family for survival in the Florida scrub, and how scientists use banding and long-term research to understand and protect this endangered species.

- **Florida Scrub Food Chain**

Students learn about the components of food chains in the Florida scrub habitat. Students watch a slide presentation, then work in small groups using print-outs to model food chains and food webs.

- **Animal Features are Bone Deep**

Students learn about how scientists classify animals and how animal skulls reveal clues about how animals live. Students watch a video, then work in groups to complete a skull matching activity.

Available at: <https://www.archbold-station.org/curricula/>

**Module 1: Florida Scrub Jays: At Home in the Florida Scrub**  
By the Archbold Biological Station Education Department, 2014  
with support from the Southwest Florida Water Management District

**LENGTH**  
1 hour prep  
20 minute video  
30 minute activity

**MATERIALS**  
Video  
By Family (pg)

**Module 2: Florida Scrub Food Chain**  
By the Archbold Biological Station Education Department, 2013  
with support from the Southwest Florida Water Management District

**LENGTH**  
1 hour prep  
15 minute presentation  
45 minute activity

**MATERIALS**  
Whiteboard  
Dry-erase markers  
Print-out graphs

**Module 3: Animal Features are Bone Deep**  
By the Archbold Biological Station Education Department, 2013  
with support from the Southwest Florida Water Management District

**LENGTH**  
1 hour prep  
8 min video  
40 minute activity

**MATERIALS**  
Video  
Four sets of Skull ID PowerPoint  
Key Vocabulary  
Anatomical diagrams  
Materials  
Adaptations  
Carnivores  
Herbivores  
Omnivores  
Invertebrate  
Vertebrate  
Furrow  
Fray  
Molar  
Carnivore  
Incisor

**GOING FURTHER**  
Students draw or sculpt skulls from mud or clayed materials

**Compare skulls of other animals**

**NEXT GENERATION FLORIDA SUNSHINE STATE STANDARDS**  
SC.3.N.1.1  
SC.3.N.1.6  
SC.3.L.15.1  
SC.4.N.1.1  
SC.4.L.16.3  
SC.5.F.7.3  
SC.5.L.17.1

# Pre-visit Activities

## Videos

Available at:  
<https://www.youtube.com/user/ArchboldExpeditions>  
<https://www.archbold-station.org/education/>

### Learning videos



**Queen on Red Hill**



**At Home in the Florida Scrub**



**The Science of Life**



**Soil Nutrients with Ma**

We also have a selection of videos focused on a variety of scientific topics. Two of the three Science in the Scrub modules have associated videos—a great option if you cannot complete all modules before your trip.

# BEFORE YOUR FIELD TRIP

1. Make sure your field trip has been registered. You can schedule a field trip by emailing [education@archbold-station.org](mailto:education@archbold-station.org).
2. Send out Guardian Guide, which includes a letter for parents/guardians and the liability form. ALL students, staff, and chaperones must fill out a liability form.
3. Complete pre-visit activities! We recommend completing all the lessons; however, do whatever fits your schedule. Even watching a few videos with the class can provide some foundational knowledge for the field trip.

**WELCOME TO THE ARCHBOLD EXPEDITIONS**

**ACKNOWLEDGEMENT OF RISK AND RELEASE OF LIABILITY**  
Archbold Expeditions is a not-for-profit research, conservation, and education organization—we are not a state/federal park or other government and university-owned facility. All visitors to Archbold properties, including Archbold Biological Station, Archbold's Back Island Marsh and Archbold Reserves, are required to complete the information below. Your information will not be distributed to third parties.

Dr.  M.  Ms. First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_ Suffix: \_\_\_\_\_  
 Dr.  M.  Ms. First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_ Suffix: \_\_\_\_\_  
 (Spouse)

Home Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_  
 Email Address: \_\_\_\_\_ Date of Visit: \_\_\_\_/\_\_\_\_/20\_\_

Children / minors' names (if applicable): \_\_\_\_\_

**Purpose for Visit—please check all that apply:**  
 Archbold Biological Station  Archbold's Back Island Marsh  
 Archbold Reserves

**Type of Visitor:**  
 General Visitor  
 Visiting Researcher  
 K-12 Student Name of School: \_\_\_\_\_  
 K-12 Teacher / Chaperone Name of School: \_\_\_\_\_  
 College Student Name of College / University: \_\_\_\_\_  
 Faculty Name of College / University: \_\_\_\_\_  
 Group Participant Name of Group: \_\_\_\_\_  
 Volunteer

I consent and will abide by the behavioral expectations of Archbold, applicable state and federal laws, and policies and procedures of Archbold. I understand that disregard for the Archbold policies and Applicable laws may be considered grounds for dismissal from programs and activities at Archbold.

I hereby certify that, with or without accommodations, I am in good health and I know of no medical reason why I am not able to visit Archbold and participate in programs and activities at Archbold. I hereby consent to first aid, emergency medical care and if necessary, admission to an accredited hospital when necessary for attending such care for treatment for injuries that I may sustain while participating in any program or activity associated with Archbold. I understand that I am responsible for all medical expenses. If I have a disability requiring accommodations, I will notify the Risk Management Administrator prior to or immediately upon my arrival.

I hereby consent and authorize the use and reproduction— in whatever medium— of the above listed individual's name, voice and/or likeness in any form with or without alterations or omissions by Archbold Biological Station or Archbold Expeditions (individually or jointly) collected by Archbold for the purposes of public recognition or any purpose whatsoever, without compensation to me, including but not limited to posts to Archbold websites, newsletters and social media of various. All video, audio and photographs shall constitute Archbold property, solely and completely.

The person signing this release as parent/guardian on behalf of a minor agrees that this Release of Liability is being signed and delivered to Archbold both individually by the undersigned and as the parent/guardian of the minor.

Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Signature (spouse, if applicable) \_\_\_\_\_ Date \_\_\_\_\_

Archbold Biological Station, 127 Main Drive, Hovell, FL 32963 COMBOLD-CYBER  
 www.archbold-station.org

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 www.archbold-station.org

# Field Trip Welcome

**Time:** 5 minutes

**Location:** Entrance of Frances AH Learning Center



## Welcome Talk

- Archbold Biological Station is a research station and natural classroom where scientists from around the world come to study.
- The Station is just one of the places in this part of Florida where Archbold scientists study.
- Archbold mission includes research, conservation, and education.
- Conservation means thinking win-win with people and nature.

**Official Mission Statement:** The mission of Archbold is to build and share the scientific knowledge needed to protect the life, lands, and waters of the heart of Florida and beyond

# Field Trip Rules

**Time:** 10 minutes

**Location:** Prairie Porch at Frances AH Learning Center

## Student Rules

1. Listen for Directions
2. Follow your Science Guide
3. Respect Nature and Each Other
4. Use your Animal Senses
5. Drink Up!
6. Banned Words: eww, yuck, and gross

After rules, students are split into two groups for the hike, snake demonstration, weather station, and Discovery Room.





# Field Trip Hiking

**Time:** 1 ¼ hours  
**Location:** Nature Trail



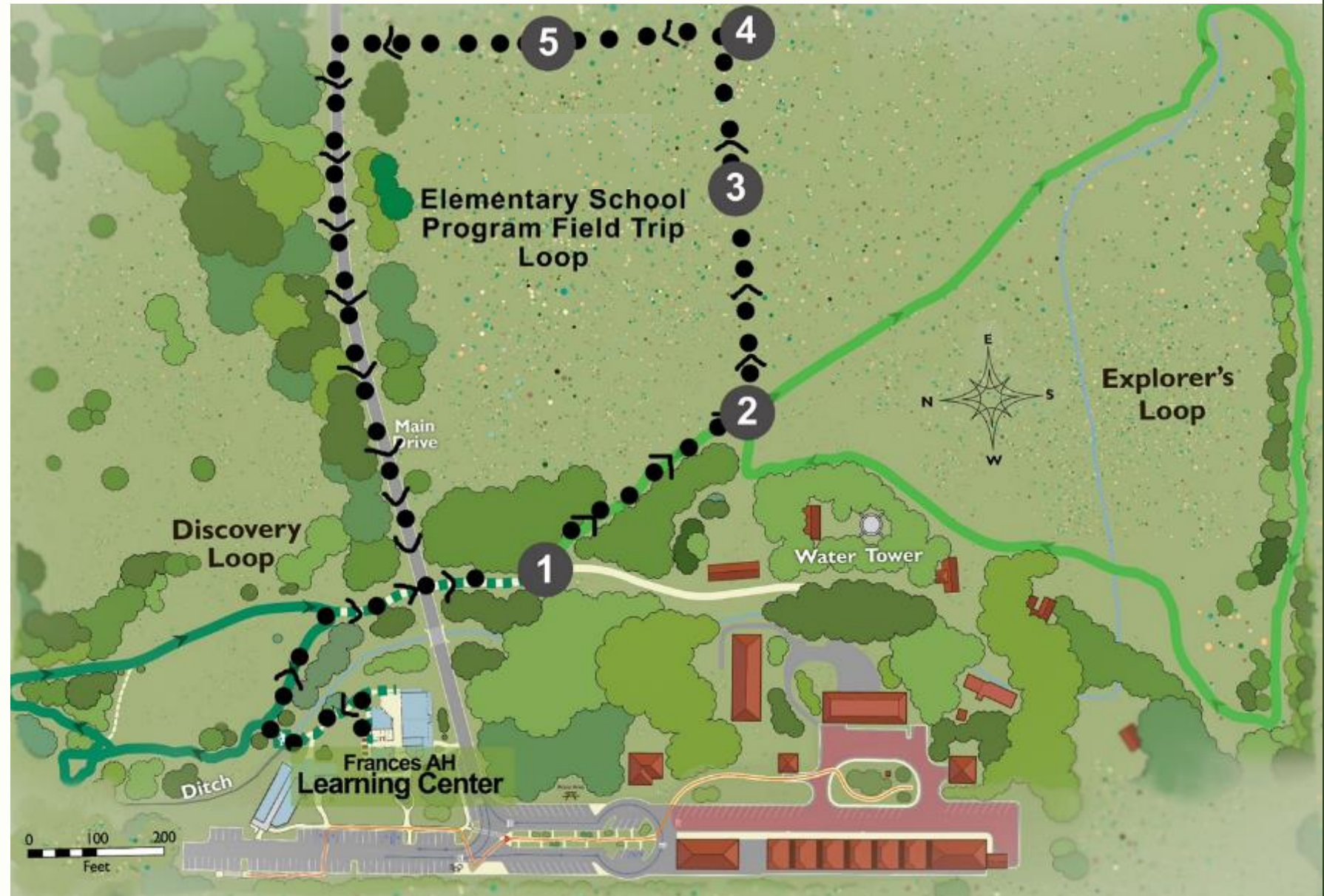
## Hiking Outline

1. Scavenger hunt cards  
“scrub hunt”
2. Animal tracks, antlions, and  
earthstars
3. Predetermined stops

# Field Trip Hiking

## Trail Stops

1. Trailhead
2. Sand
3. Nature's Science Lab
4. FL Scrub-Jays
5. Fire



Field Trip  
**Hiking**

#1: Trailhead



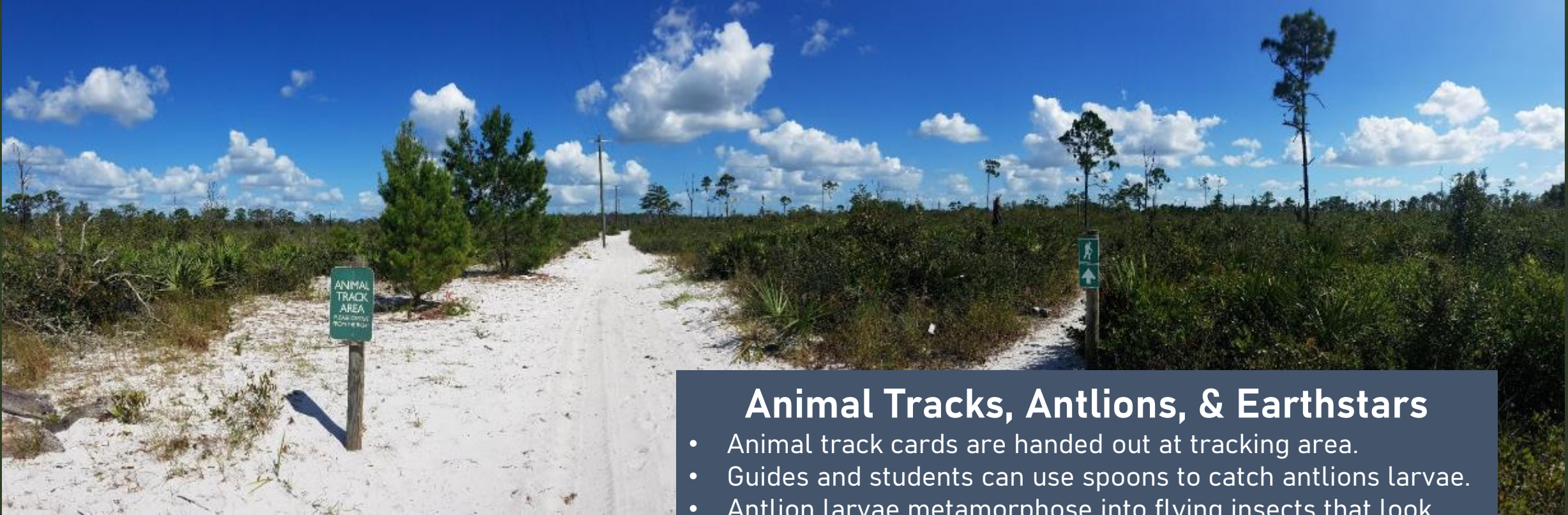
### Scavenger Hunt

- At the trailhead, each student receives a “scrub hunt” card and pencil.
- Students spend most of the hike searching for items on their cards.
- Students are encouraged to talk quietly as they point out what they find to their classmates.

# Field Trip Hiking

We are on the Lake Wales Ridge, an old sandy island over one million years old. Our silica sands came from the natural erosion of the Appalachian mountains millions of years ago. You can see the Lake Wales Ridge from space.

#2: Sand



## Animal Tracks, Antlions, & Earthstars

- Animal track cards are handed out at tracking area.
- Guides and students can use spoons to catch antlions larvae.
- Antlion larvae metamorphose into flying insects that look similar to dragonflies and lacewings.
- Earthstars, or “puffballs,” are the fruiting bodies of a local fungi.

# Field Trip Hiking

## #3: Nature's Science Lab



The Station is more than a place where nature is protected, it is also a research station.

Flags denote ongoing research project along the hike.



Field Trip  
**Hiking**

#4: FL Scrub-Jays



**Florida Scrub-Jays**

Archbold is well known for its long-term observations of FL Scrub-Jays. These birds are found only in Florida (endemic), are very smart, and live with their families (cooperative breeding). Family members help each other, which gives them all a better chance of surviving.

Students learn how to “pish,” a type of call, for birds in a Scrub Jay territory!

Field Trip  
Hiking

#5: Fire



**Fire** is essential for the Florida scrub. Without fire, the habitat wouldn't exist. Prescribed fire is good for wildlife and prevents wildfires.

Field Trip

# Weather Station

Students learn the of the parts of the weather station, how the rain gauge works, and why Archbold keeps track of the weather conditions each day.

**Time:** 15 minutes

**Location:** Demo Weather Station





# Field Trip Snake

**Time:** 15 minutes

**Location:** Prairie Porch

\*Ran simultaneously with the Discovery Room.



## Snake Rules

1. Stay calm
2. Bottoms on benches
3. Two fingers and one at a time
4. Keep hands away from the snake's face
5. Pet in one direction toward the tail

# Field Trip Snake



## Poser the Florida Pine Snake

Poser is about 20 years old. She was captive-raised and very friendly.

Florida Pine Snakes:

- are non-venomous (no fangs or venom)
- are found only in the American Southeast
- are a threatened species in FL due to habitat loss
- are 4-5 feet long (record 7 ½')
- have small sharp teeth
- are constrictors
- spend most of their time underground
- mimic rattlesnakes as a defense
- eat mice, moles, rabbits, squirrels, and lizards

Snakes are:

- vertebrates
- reptiles (along with lizards and turtles)
- cold blooded (ectothermic): they get their heat energy from their environment
- chinless: their jaw bones don't connect and can move separately

Field Trip

# Discovery Room



**Time:** 15 minutes

**Location:** Bear's Den (Discovery Room)

\*Ran simultaneously with the snake demonstration.

## Discover Room Features

1. Interactive Table Activities
2. Animal Skins
3. Animal Skulls
4. Snake Cages
5. Animal Tracks
6. Diorama
7. Insect Collection
8. Tree Rings

## Student Rule

1. If something is closed or behind glass, don't open it up or reach inside

Field Trip

# Lookout and Scrub Pledge

**Time:** 10 minutes

**Location:** Lodge Overlook

## Scrub Pledge

“I pledge to tell at least two people about the Florida scrub.”



# Florida's Next Generation Standards

Each visit to Archbold is unique, but the field trips focus on the practice of science, how ecosystems work, and animal biology. The next few slides are standards that may come up during your visit. Teachers are encouraged to contact our staff ahead of time if they want us to highlight any of these specific standards.

**SC.3.N.1.4** Recognize the importance of communication among scientists.

**SC.3.N.1.5** Recognize that scientists question, discuss, and check each other's evidence and explanations

**SC.3.N.1.6** Infer based on observation.

**SC.3.N.3.1** Recognize that words in science can have different or more specific meanings than their use in everyday language; for example, energy, cell, heat/cold, and evidence.

**SC.3.L.15.1** Classify animals into major groups (mammals, birds, reptiles, amphibians, fish, arthropods, vertebrates and invertebrates, those having live births and those which lay eggs) according to their physical characteristics and behaviors.

**SC.4.L.16.2** Explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment.

**SC.4.L.16.3** Recognize that animal behaviors may be shaped by heredity and learning

**SC.4.L.16.4** Compare and contrast the major stages in the life cycles of Florida plants and animals, such as those that undergo incomplete and complete metamorphosis, and flowering and nonflowering seed-bearing plants.

**SC.4.L.17.2** Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.

**SC.4.L.17.4** Recognize ways plants and animals, including humans, can impact the environment.

**SC.4.N.1.3** Explain that science does not always follow a rigidly defined method ("the scientific method") but that science does involve the use of observations and empirical evidence.

**SC.4.N.1.7** Recognize and explain that scientists base their explanations on evidence.

**SC.4.N.2.1** Explain that science focuses solely on the natural world.

**SC.5.L.15.1** Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.

**SC.5.L.17.1** Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

**Big Idea: Organization and Development of Living Organisms -**

A. All plants and animals, including humans, are alike in some ways and different in others.

B. All plants and animals, including humans, have internal parts and external structures that function to keep them alive and help them grow and reproduce.

C. Humans can better understand the natural world through careful observation.

**Big Idea: Diversity and Evolution of Living Organisms -**

A. Earth is home to a great diversity of living things, but changes in the environment can affect their survival.

B. Individuals of the same kind often differ in their characteristics and sometimes the differences give individuals an advantage in surviving and reproducing.

**Big Idea: The Practice of Science -**

A: Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.

B: The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."

C: Scientific argumentation is a necessary part of scientific inquiry and plays an important role in the generation and validation of scientific knowledge.

D: Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.

**Big Idea: The Characteristics of Scientific Knowledge -**

A: Scientific knowledge is based on empirical evidence, and is appropriate for understanding the natural world, but it provides only a limited understanding of the supernatural, aesthetic, or other ways of knowing, such as art, philosophy, or religion.

B: Scientific knowledge is durable and robust, but open to change.

C: Because science is based on empirical evidence it strives for objectivity, but as it is a human endeavor the processes, methods, and knowledge of science include subjectivity, as well as creativity and discovery.

# Post-Visit Activities

Our YouTube videos and Zoom classroom visits make excellent post-field trip activities. Additionally, we host livestreams during the school year.

For all our current offerings, check out:

<https://www.archbold-station.org/education/>

Questions can be emailed to:

[education@archbold-station.org](mailto:education@archbold-station.org)

