



Elementary School Program Overview

Updated August 2024



About The Program

Archbold's Elementary Program includes a three-module curriculum titled, "Science in the Scrub", a variety of educational videos, and a half-day field trip to Archbold Biological Station.

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

All resources can be found at:

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

For questions or to book a field trip, please email: education@archbold-station.org



Outline

Pre-visit Activities

- “Science in the Scrub” Lessons
- Educational Videos

Field Trip

- Overview
- Welcome
- Rules
- Hiking
- Snake
- Discovery Room
- Lookout and Scrub Pledge

Post-visit Activities

Standards

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.

The image displays three overlapping curriculum module pages from the 'Science in the Scrub' program. The top page is 'Module 3: Animal Features are Bone Deep', the middle page is 'Module 2: Florida Scrub Food Chain', and the bottom page is 'Module 1: Florida Scrub-Jays: At Home in the Florida Scrub'. Each page includes sections for Length, Materials, Key Vocabulary, and Next Generation Florida Sunshine State Standards. The pages are arranged in a staggered, overlapping fashion, showing the top and right portions of the top module, the middle and right portions of the middle module, and the left and bottom portions of the bottom module.

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

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

Our selection of videos focus 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.

Field Trip

Welcome

Time: 5 minutes

Location: Entrance of France 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 @
Learning Center

Student Rules

- Listen for Directions
- Follow your Science Guide
- Respect Nature and Each Other
- Use your Animal Senses
- Drink Up!
- Banned Words: eww, yuck, and gross

***For groups with more than 25 students:
After rules, students are split into
two groups for the hike, snake
demonstration, and the Bear's Den
- an interactive discovery room.***



Field Trip

Hiking

Time: 1 hour & 15 minutes

Location: Nature Trail



Hiking Outline

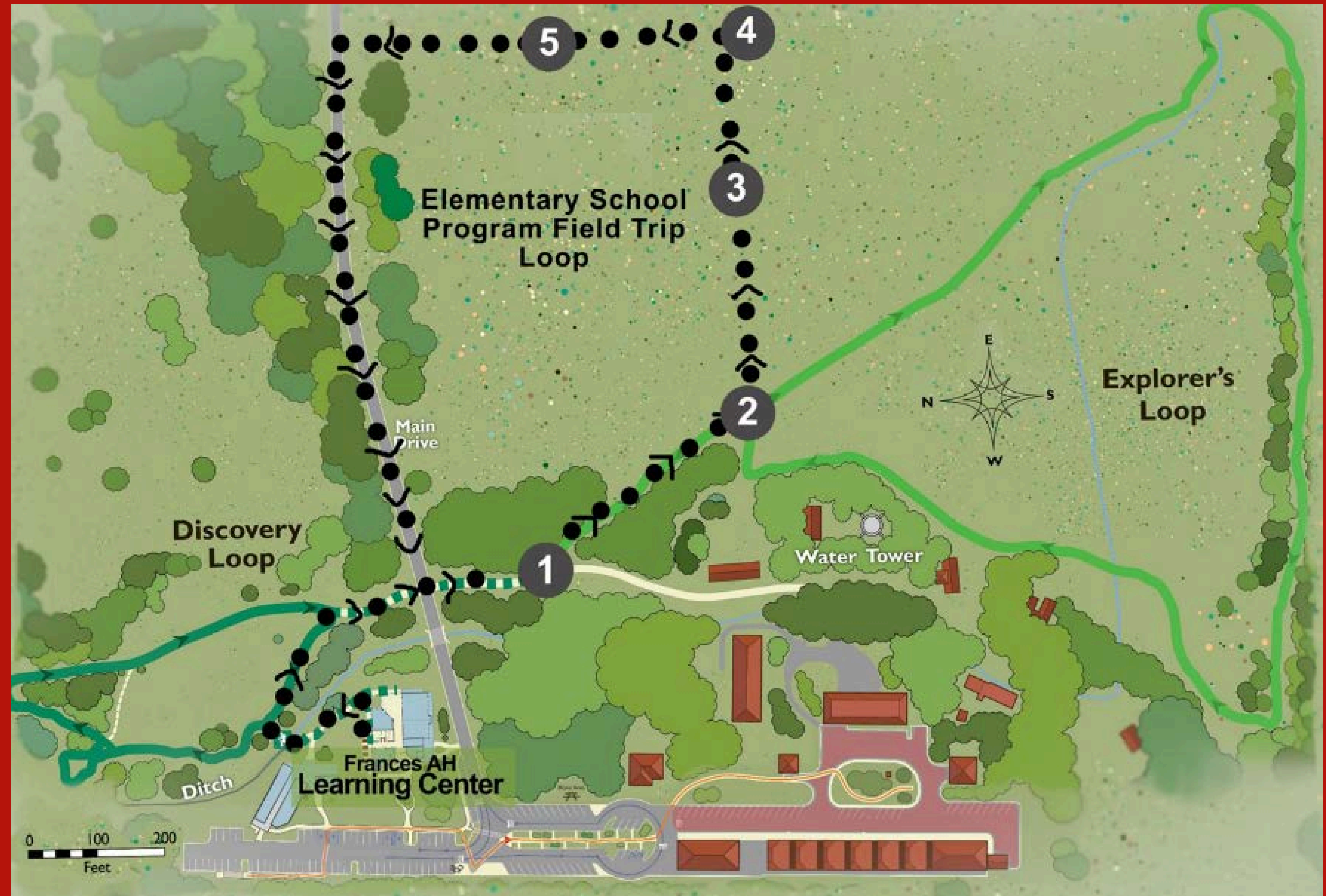
- Scavenger hunt cards
“scrub hunt”
- Animal tracks, antlions,
and earthstars
- Predetermined stops



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

#2: Sand

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.

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

Snake

Time: 15 minutes

**Location: Prairie Porch @
Learning Center**

Snake Rules

- Stay calm
- Bottoms on benches
- Two fingers and one at a time
- Keep hands away from the snake's face
- Pet in one direction toward the tail

Field Trip

Snake

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



Poser the Florida Pine Snake
Poser is about 20 years old. She
was captive-raised and very
friendly.



Field Trip **Discovery Room**

Time: 15 minutes

Location: Bear's Den

Discover Room Features

- a. Interactive Table Activities
- b. Animal Skins
- c. Animal Skulls
- d. Snake Cages
- e. Animal Tracks
- f. Diorama
- g. Insect Collection
- h. Tree Rings

Student Rule

**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. <i>Animals are alike in some ways and different in others.</i>
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.
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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.

For all our current offerings, check out:
<https://www.archbold-station.org/education/>

Questions can be emailed to:
education@archbold-station.org

