

Self Guided School Program Activities

The Brooker Creek Preserve Environmental Education Center is the perfect place to connect classroom concepts to the natural world. A variety of resources are available to help students learn about Florida's unique natural systems and how humans and the environment have shaped each other throughout time. Schools may choose one of two ways to visit.

Exhibits, hiking trails, and picnic facilities are available at no cost to teachers and students. These activities are self-guided. Teachers and chaperones are responsible for guiding and supervising students.

Brooker Creek Preserve: Windows to Our Wildest Place

Experience Brooker Creek Preserve in Brooker Creek Preserve: Windows to Our Wildest Place, our 6,000-square-foot exhibit hall. Students learn about Brooker Creek Preserve ecosystems and the importance of individual species, seasonal changes in Florida, the water cycle and watersheds through hands-on, discovery-oriented exhibits. A 12-minute object theater video highlights changes in the local landscape and its uses over time. Other short videos feature information about water, fire, the water cycle, and vultures. Students learn that individuals can find balance between human needs and the needs of the environment by making wise choices to reduce their impact. Exhibit activities are self-guided with supplemental materials available to assist students in their learning experience.

Interpretive Trial Hike

Teachers and students can easily stroll along the Education Center Loop of Brooker Creek Preserve's Wildlands Hiking Trail. Elevated boardwalks keep everyone's feet dry as the trail meanders through bottomland swamps toward drier, shady oak hammocks. Strategically placed along the trail are interpretive trail signs that treat students to a multi-sensory experience as they discover how everything in nature is connected through dynamic relationships.

Some or all of these benchmarks can be addressed with this activity. Please consult with the education staff of the Weedon Island Preserve Cultural and Natural History Center if you have specific goals or benchmarks that need to be covered.

Correlations to Sunshine State Standards Benchmarks for the Brooker Creek Preserve Environmental Educational Center Exhibit Gallery and Interpretive Trial Hike

Extension programs are open to all persons without regard to race, color, sex, age, disability, religion, or national origin.



Social Studies

GRADE: K

Strand: American History

Standard 2: Historical Knowledge

Benchmark Code

Benchmark

SS.K.A.2.1

Compare children and families of today with those in the past.

Standard 3: Chronological Thinking

Benchmark Code

Benchmark

SS.K.A.2.1

Use words and phrases related to chronology and time to explain how things change and to sequentially order events that have occurred in school.

Strand: Geography

Standard 1: The World in Spatial Terms

Benchmark Code

Benchmark

SS.K.G.1.1

Describe the location of people, places, and things by using positional words.

SS.K.G.1.2

Explain that maps and globes help to locate different places and that globes are a model of the Earth.

Standard 3: Physical System

Benchmark Code

Benchmark

SS.K.G.3.1

Identify basic land forms.

SS.K.G.3.2

Identify basic bodies of water.

SS.K.G.3.3

Describe and give examples of seasonal weather changes, and illustrate how weather affects people and the environment.

GRADE: 1

Strand: American History

Standard 2: Historical Knowledge

Benchmark Code

Benchmark

SS.1.A.2.1

Understand history tells the story of people and events of other times and places.

SS.1.A.2.2

Compare life now with life in the past.

SS.1.A.2.3

Distinguish between historical fact and fiction using various materials.

Strand: Geography

Standard 1: Beginning Economics

Benchmark Code

Benchmark

SS.1.G.1.1

Use physical and political/cultural maps to locate places in Florida.

GRADE: 1 cont.

Strand: Economics

Standard 1: The World in Spatial Terms

Benchmark Code

Benchmark

SS.1.E.1.6

Identify that people need to make choices because of scarce resources.

GRADE: 2

Strand: American History

Standard 2: Historical Knowledge

Benchmark Code

Benchmark

SS.2.A.2.1

Recognize that Native Americans were the first inhabitants in North America.

Strand: Economics

Standard 1: Beginning Economics

Benchmark Code

Benchmark

SS.2.E.1.1

Recognize that people make choices because of limited resources.

GRADE: 3

Strand: Geography

Standard 1: The World in Spatial Terms

Benchmark Code

Benchmark

SS.3.G.1.1

Use thematic maps, tables, charts, graphs and photos to analyze geographic information.

SS.3.G.1.2

Review basic map elements (coordinate grid, cardinal and intermediate directions, title, compass rose, scale, key/legends with symbols).

GRADE: 4

Strand: American History

Standard 6: Industrialization and Emergence of Modern Florida

Benchmark Code

Benchmark

SS.4.A.6.1

Describe the economic development of Florida's major industries.

Strand: Geography

Standard 1: The World in Spatial Terms

Benchmark Code

Benchmark

SS.4.G.1.1

Identify physical features of Florida

Science

GRADE: K

Big Idea 1: The Practice of Science

Benchmark Code

Benchmark

SC.K.N.1.1

Collaborate with a partner to collect information.

Cognitive Complexity/Depth of Knowledge Rating: Low

SC.K.N.1.2

Make observations of the natural world and know that they are descriptors collected using the five senses.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.K.N.1.3

Keep records as appropriate – such as pictorial records – of investigations conducted.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.K.N.1.4

Observe and create a visual representation of an object which includes its major features.

Cognitive Complexity/Depth of Knowledge Rating: High

SC.K.N.1.5

Recognize that learning can come from careful observation.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

Big Idea 8: Properties of Matter

Benchmark Code

Benchmark

SC.K.P.8.1

Sort objects for observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

Big Idea 14: Organization and Development of Living Organisms

Benchmark Code

Benchmark

SC.K.L.14.1

Recognize the five senses and related body parts.

Cognitive Complexity/Depth of Knowledge Rating: Low

SC.K.L.14.1

Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

GRADE: K cont.

SC.K.L.14.1

Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

GRADE: 1

Big Idea 1: The Practice of Science

Benchmark Code

Benchmark

SC.1.N.1.1

Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.

Cognitive Complexity/Depth of Knowledge Rating: High

SC.1.N.1.2

Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.1.N.1.3

Keep records as appropriate – such as pictorial and written records – of investigations conducted.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.1.N.1.4

Ask “how do you know?” in appropriate situations.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

Big Idea 5: Earth in Space and Time

Benchmark Code

Benchmark

SC.1.E.5.3

Investigate how magnifiers make things appear bigger and help people see things they could not see without them.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

Big Idea 6: Earth Structures

Benchmark Code

Benchmark

SC.1.E.6.1

Recognize that water, rocks, soil, and living organisms are found on Earth’s surface.

Cognitive Complexity/Depth of Knowledge Rating: Low

GRADE: 1 cont.

| | |
|------------|---|
| SC.1.E.6.2 | Describe the need for water and how to be safe around water. <i>Cognitive Complexity/Depth of Knowledge Rating: Moderate</i> |
| SC.1.E.6.3 | Recognize that some things around us happen fast and some happen slowly. <i>Cognitive Complexity/Depth of Knowledge Rating: High</i> |

Big Idea 8: Properties of Matter

| <u>Benchmark Code</u> | <u>Benchmark</u> |
|------------------------------|---|
| SC.1.P.8.1 | Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light), texture, and whether objects sink or float. <i>Cognitive Complexity/Depth of Knowledge Rating: Moderate</i> |

Big Idea 14: Organization and Development of Living Organisms

| <u>Benchmark Code</u> | <u>Benchmark</u> |
|------------------------------|---|
| SC.1.L.14.1 | Make observations of living things and their environment using the five senses. <i>Cognitive Complexity/Depth of Knowledge Rating: Low</i> |
| SC.1.L.14.2 | Identify the major parts of plants, including stem, roots, leaves, and flowers. <i>Cognitive Complexity/Depth of Knowledge Rating: Low</i> |
| SC.1.L.14.3 | Differentiate between living and nonliving things. <i>Cognitive Complexity/Depth of Knowledge Rating: High</i> |

Big Idea 17: Interdependence

| <u>Benchmark Code</u> | <u>Benchmark</u> |
|------------------------------|--|
| SC.1.L.17.1 | Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space. <i>Cognitive Complexity/Depth of Knowledge Rating: Low</i> |

GRADE: 2**Big Idea 1: The Practice of Science**

| <u>Benchmark Code</u> | <u>Benchmark</u> |
|------------------------------|--|
| SC.2.N.1.1 | Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations. <i>Cognitive Complexity/Depth of Knowledge Rating: High</i> |
| SC.2.N.1.2 | Compare observations made by different groups using the same tools. <i>Cognitive Complexity/Depth of Knowledge Rating: Moderate</i> |
| SC.2.N.1.3 | Ask "how do you know?" in appropriate situations and attempt reasonable answers when asked the same question by others. <i>Cognitive Complexity/Depth of Knowledge Rating: High</i> |
| SC.2.N.1.4 | Explain how particular science investigations should yield similar conclusions when repeated. <i>Cognitive Complexity/Depth of Knowledge Rating: High</i> |
| SC.2.N.1.5 | Distinguish between empirical observation (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think). <i>Cognitive Complexity/Depth of Knowledge Rating: Moderate</i> |

Big Idea 6: Earth Structures

| <u>Benchmark Code</u> | <u>Benchmark</u> |
|------------------------------|---|
| SC.2.E.6.3 | Classify soil types based on color, texture (size of particles), the ability to retain water, and the ability to support the growth of plants. <i>Cognitive Complexity/Depth of Knowledge Rating: High</i> |

Big Idea 7: Earth Systems and Patterns

| <u>Benchmark Code</u> | <u>Benchmark</u> |
|------------------------------|--|
| SC.2.E.7.1 | Compare and describe changing patterns in nature that repeat themselves, such as weather conditions including temperature and precipitation, day to day and season to season. <i>Cognitive Complexity/Depth of Knowledge Rating: Moderate</i> |

GRADE: 2 cont.**Big Idea 16: Heredity and Reproduction****Benchmark Code****Benchmark**

SC.2.L.16.1

Observe and describe major stages in the life cycles of plants and animals including beans and butterflies

Cognitive Complexity/Depth of Knowledge Rating: Moderate

Big Idea 17: Interdependence**Benchmark Code****Benchmark**

SC.2.L.17.1

Compare and contrast the basic needs that all living things, including humans, have for survival.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.2.L.17.2

Recognize and explain that living things are found all over the Earth, but each is only able to live in habitats that meet its basic needs.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

GRADE: 3**Big Idea 1: The Practice of Science****Benchmark Code****Benchmark**

SC.3.N.1.1

Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.

Cognitive Complexity/Depth of Knowledge Rating: High

SC.3.N.1.2

Compare observations made by different groups using the same tools and seek reasons to explain the differences across groups.

Cognitive Complexity/Depth of Knowledge Rating: High

SC.3.N.1.3

Keep records as appropriate, such as pictorial, written or simple charts and graphs, of investigations conducted.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.3.N.1.4

Recognize the importance of communication among scientists.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.3.N.1.5

Recognize that scientists question, discuss, and check each others' evidence and explanations.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

GRADE: 3 cont.

SC.3.N.1.6

Infer based on observation.

Cognitive Complexity/Depth of Knowledge Rating: High

SC.3.N.1.7

Explain that empirical evidence in information, such as observations or measurements that is used to help validate explanations of natural phenomena.

Cognitive Complexity/Depth of Knowledge Rating: High

Big Idea 14: Organization and Development of Living Organisms**Benchmark Code****Benchmark**

SC.3.L.14.1

Describe the structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.3.L.14.2

Investigate and describe how plants respond to stimuli (heat, light, gravity), such as the way plant stems grow toward light and their roots grow downward in response to gravity.

Cognitive Complexity/Depth of Knowledge Rating: High

Big Idea 15: Diversity and Evolution of Living Organisms**Benchmark Code****Benchmark**

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.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.3.L.15.2

Classify flowering and non-flowering plants into major groups such as those that produce seeds, or those like ferns and mosses that produce spores, according to their physical characteristics.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

Big Idea 17: Interdependence**Benchmark Code****Benchmark**

SC.3.L.17.1

Describe how animals and plants respond to changing seasons.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

GRADE: 4**Big Idea 1: The Practice of Science****Benchmark Code****Benchmark**

SC.4.N.1.1

Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

Cognitive Complexity/Depth of Knowledge Rating: High

SC.4.N.1.2

Compare observations made by different groups using the multiple tools and seek reasons to explain the differences across groups.

Cognitive Complexity/Depth of Knowledge Rating: High

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.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.4.N.1.4

Attempt reasonable answers to scientific questions and cite evidence in support.

Cognitive Complexity/Depth of Knowledge Rating: High

SC.4.N.1.5

Compare methods and results of investigations done by other classmates.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.4.N.1.6

Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.

Cognitive Complexity/Depth of Knowledge Rating: High

SC.4.N.1.7

Recognize and explain that scientists base their explanations on evidence.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.4.N.1.8

Recognize that science involves creativity in designing experiments.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

GRADE: 4 cont.**Big Idea 9: Changes in Matter****Benchmark Code****Benchmark**

SC.4.P.9.1

Identify some familiar changes in materials that result in other materials with different characteristics, such as decaying animal or plant matter, burning, rusting and cooking.

Cognitive Complexity/Depth of Knowledge Rating: Low

Big Idea 16: Heredity and Reproduction**Benchmark Code****Benchmark**

SC.4.L.16.1

Identify processes of sexual reproduction in flowering plants including pollination, fertilization (see production), seed dispersal and germination.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

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.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

GRADE: 5**Big Idea 7: Earth Systems and Patterns****Benchmark Code****Benchmark**

SC.5.E.7.1

Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.

Cognitive Complexity/Depth of Knowledge Rating: High

SC.5.E.7.2

Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth’s water reservoirs via evaporation and precipitation processes.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

SC.5.E.7.5

Recognize that some of the weather-related differences, such as temperature and humidity, are found among different environment, such as swamps, deserts and mountains.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

GRADE: 5 cont.

Big Idea 14: Organization and Development of Living Organisms

Benchmark Code

SC.5.L.14.2

Benchmark

Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support – some with internal skeletons others with exoskeletons – while some plants have stems for support.

Cognitive Complexity/Depth of Knowledge Rating: Moderate

Big Idea 15: Diversity and Evolution of Living Organisms

Benchmark Code

SC.5.L.15.1

Benchmark

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.

Cognitive Complexity/Depth of Knowledge Rating: High

Big Idea 17: Interdependence

Benchmark Code

SC.5.L.17.1

Benchmark

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.

Cognitive Complexity/Depth of Knowledge Rating: Moderate