School & Youth Group Programs
Over the past 50 years The Wilderness Center (TWC) has given school classes and youth groups the opportunity to explore the natural world through hands-on experiential learning. Recent research supports our philosophy that childhood nature experiences are vital to developing environmental appreciation and positive stewardship behaviors in adults. There is no substitute, virtually or in the classroom, for the experience a child has learning in the outdoors.

A field trip day generally consists of 1-3 programs with a break for lunch (depending on your arrival/departure time). Our age/grade guidelines are suggestions; you know your students and their educational level best. We can also adapt most programs for any grade level or design a program to meet your needs. Call the education department to discuss options or email programs@wildernesscenter.org

While we believe in the power of field trips to provide an excellent learning experience, we are also happy to take our programs to you! Traveling programs are notated with a leaf and can be conducted in your classroom, school playground or youth center.

Cost
At TWC: $3/child/program unless otherwise indicated, minimum of $45/program. Adults are free.
At your site: $250/day if multiple programs conducted at the same site on the same day. Programs at your site are not available during May or October so we can better serve the high demand for programs at TWC. Star Watches can be scheduled without day or month restrictions. All programs are limited to sites within a 35-mile radius of TWC. Off-hours fee of $25/program for programs before 9 a.m. or after 5 p.m. (except Star Watches). Sorry, no Sunday or Monday programs.

BETWEEN classes

When you are not involved in a TWC led program, take advantage of all these opportunities:

- Explore the educational display room and the bird observation room.
- Play at the Nature Playscape with tunnels, fort building, rocks to climb on and more!
- Take a hike on one of our trails or plan an activity to supplement your learning.
- Visit our Nature Store.
Calling all Scout leaders! Check out our full brochure of badge programs for Boy Scouts and Girl Scouts at wildernesscenter.org!

Reservations & Questions
Call 330-359-5235 Tuesday thru Saturday from 9 - 5, or email programs@wildernesscenter.org to make reservations. Be sure to include alternative date(s), arrival/departure times, number of students, program choices and contact information. Also let us know if there are any special needs students so accommodations can be made.

Confirmation
You will receive a confirmation notice with class schedule, program information and invoice once you are registered. Outdoor classes will continue except during dangerous weather conditions. We have extra raincoats available to borrow. Please check bus time schedules to assure you arrive and depart on time. Invoices can be paid the day of the program or after the visit. If you haven't received your confirmation packet within 2 weeks, please call!

Lunches
Groups eat in our picnic shelters, unless weather conditions are prohibitive. Shelters have electricity and garage doors that can close.

Family Nature Night is an opportunity for your elementary students and their families to learn about the natural world around them. At the beginning of this school event, families watch a slideshow presentation and learn about “nearby nature” from a TWC naturalist. Families will then explore activity stations to discover the plants and animals that make these places their home.

Schedule a Family Nature Night at your school for a Science Night, Right to Read Week or other special event. The Wilderness Center will provide all the supplies for activity stations and craft. Host schools will need to organize about 12 volunteers to work the stations (adults or middle/high school students). The program will last an hour and a half and require an additional hour before for set-up and volunteer training.

Cost is $250 per program, plus $1.00 per craft used. Can serve up to 200 people per program.
Amazing Animals & Animals of Ohio
Discover the wonderful world of Ohio animals with specimens and hands-on objects. Distinguish between mammal, bird, amphibian and reptile groups using concepts about basic differences. Animals of Ohio for older (middle and high school) students highlights species’ adaptations. Indoor program.
60 students per one-hour program

Wet and Wild World
The pond is full of macroinvertebrates and other animals adapted for life in the water. Students use nets to collect pond critters and observe them in the lab with hand-lenses or microscopes.
30 students per one-hour program

Terrific Trees
Plant a tree and watch it grow! Each student plants a tree seed to take home. A walk in the woods highlights tree growth, parts and uses.
30 students per one-hour program

The Buzz on Bugs & Investigating Insects
Insects abound! Students collect insects to explore their diversity, observe structures and functions, and compare habitats. In Buzz on Bugs, young children make an insect craft to introduce insect characteristics. In Investigating Insects, older children learn insect families and observe insects with microscopes in the lab.
30 students per one-hour program

For Goodness Snakes
Discover the diversity of snakes that make Ohio their home. Students learn how snakes are adapted for survival, hear snake myths and have a chance to touch a live snake. Indoor program.
30 students per one-hour program

A Bird in the Hand
Observe wildlife biology research methods firsthand! Students learn why scientists band birds, observe bird banding procedures, and may have a chance to touch a live bird!
30 students per one-hour program

Mammals of Ohio
Learn about the mammals that are herbivores, carnivores and omnivores and the habitats where they make their homes. Stations allow children to feel the fur and learn fun facts of the most common mammals. Indoor program.
30 students per one-hour program

General Nature Walk
Enjoy a guided walk on one of The Wilderness Center trails to see the sites and learn seasonal natural history facts.
30 students per one-hour program

Papermaking
Roll up your sleeves and tear right in! Students actually recycle waste paper into a “new” paper for writing, drawing, or an art project. We will also discuss the benefits of paper recycling. Indoor program.
30 students per one-hour program

Star Watch
View the wonders of the universe – planets, double stars, galaxies, and more – through TWC’s Astronomy Club’s telescopes. This is as “hands-on” as astronomy can be!
50 students per one-hour program

Winter Extravaganza
A day of winter activities with time spent outside and warming activities inside. Students learn winter survival, winter stars, and winter birds. Three classes for the price of two!
100 students per 3 one-hour programs / $6 per student

What’s Up Tonight
Since earliest times people from all cultures have looked up at the night sky. They connected the stars into pictures of various animals, monsters, hunters, heroes, everyday tools and even musical instruments. During this planetarium program we will view seasonal constellations, tell star stories from various cultures around the world, and look at planets currently in the night sky. Indoor program.
30 students per one-hour program

Indicates program which can travel to your location.

Many classes listed under grade levels can be adapted for a different age range. Check out Mammal Skull Anatomy, Discovery Hike, Space Day and Rock Hounds to name a few.
Immerse your children in a fulldome learning experience! Each multimedia program will conclude with a tour of tonight’s sky showing seasonal constellations, planets currently in the night sky and the moon. These programs are distributed by Loch Ness Productions. 30 students per one-hour program

**One World, One Sky: Big Bird’s Adventure**
Follow Sesame Street’s Big Bird and Elmo, and Elmo’s friend Hu Hu Zhu from China as they explore the night sky. Elmo and Hu Hu Zhu “travel” to the moon where they discover some basic but surprising scientific facts. Students can interact as they watch, drawing constellations, singing and counting the time it takes the sun to set.

**The Cowboy Astronomer**
In this fulldome planetarium theater show our cowboy regales the students with a wide range of star tales, explaining along the way the daily motion of the stars, seasonal changes in the sky, the processes of star birth and death, and how stars’ temperatures and colors are related. Examples from many different cultures are used to identify familiar celestial objects and constellations, and demonstrate how humans have studied the sky throughout time.

**COS: Cosmic Origins Spectrograph**
Discover what the Cosmic Origins Spectrograph instrument on the Hubble Space Telescope is showing us about the history of the universe. Topics include the age of the universe, quasars as background light sources, red shift and expansion of the galaxy, star birth and death, fusion in stars and galaxies.

**MUSICA — Why is the Universe Beautiful?**
The question — “Why do I sense beauty?” — sets in motion a series of scenes that takes students on a voyage of discovery — from DNA in our cells, to the spiral designs hidden in a sunflower and the spiral grandeur of galaxies. It teaches what every scientist, mathematician, artist, and musician intuitively know — how the physics of sound and color, and the physical laws of nature that contribute to music and art, combine to create and govern everything in the universe.

**Chronicle of a Journey to Earth**
Become a traveler from the depths of interstellar space visiting our solar system for the first time. We pass through the Oort Cloud, past the dwarf planets and gas giants learning a little about them on our way to the inner solar system and the rocky worlds Mars, Earth, Venus and Mercury. We will be drawn to the Earth wanting to understand this planet a little more and discover seasonal climate changes, moon phases and eclipses.

Looking for additional enrichment opportunities for your students and their families outside of the classroom? TWC offers a wide variety of free family programming on the weekends and during the summer months. We offer day-long celebrations of turtles, stars, rocks, snakes and bugs, in which children of all ages take part in hands-on activities. Our Summer Days Family Nature Adventure courses go in-depth on a variety of natural topics. Our Monarch tagging and bird banding programs offer an up-close learning opportunity that cannot be matched. Watch our events’ calendar on wildernesscenter.org, and please share these opportunities with your parents. Let us provide the extra enrichment your students crave!
Wild Animal Antics
A program designed for active preschoolers! Discuss animal groups using hands-on specimens. Children act out behaviors from each animal group. Indoor program.

Preschool Life Science: With modeling and support, identify physical characteristics and simple behaviors of living things.

25 students per 45-minute program

Sensing the Season
Young children are like sponges, soaking in the natural world. Take your "sponges" on a sensory nature hike to explore seasonal changes in nature.

Preschool Life Science: With modeling and support, identify and explore the relationship between living things and their environments.

30 students per one-hour program

Living Things Observation Hike
Take your little hikers out on the trail to compare living things by their physical characteristics. Play games to introduce how plants and animals are each adapted to survive in specific environments.

Preschool Life Science: Students will identify and explore the relationship between living things and their environments, recognize similarities and differences between people and other living things and identify physical characteristics and simple behaviors of living things.

30 students per one-hour program

One World, One Sky: Big Bird’s Adventure
In this fulldome planetarium theater show we follow Sesame Street’s Big Bird and Elmo, and Elmo’s friend Hu Hu Zhu from China as they explore the night sky. Discover facts about the moon. Students can interact as they watch, drawing constellations, singing and counting the time it takes the sun to set. The program will conclude with a tour of tonight’s sky showing seasonal constellations, planets currently in the night sky and the moon. Indoor program.

Preschool Earth and Space Science: With modeling and support, recognize familiar elements of the natural environment and understand that these may change over time.

Kindergarten Earth and Space Science: The moon, sun and stars are visible at different times of the day or night.

30 students per one-hour program

Animal Homes and Habitats
Discover the plants and animals of field, forest and wetland habitats during this hike along The Wilderness Center’s trails. Students learn how living organisms survive in their environment, use their habitat for food, water and shelter, and interact with their surroundings.

This class is offered as a progression of life-science concepts for Kindergarten through Second Grade.

Kindergarten Life Science: Living things have specific characteristics and traits. Living things have physical traits and behaviors which influence their survival.

30 students per one-hour program

A Plot of Plants
Hike to observe and interact with plants in different stages of growth. Explore why plant parts like seeds, leaves, bark and thorns contribute to survival. Play a game demonstrating the connection between seeds and the animals that eat them.

Kindergarten Life Science: Living things have specific characteristics and traits. Living things have physical traits and behaviors which influence their survival.

30 students per one-hour program

More programs for young children include Amazing Animals, Wet and Wild World, The Buzz on Bugs and Terrific Trees. Check them out under Teacher Favorites.
Whitetail Survival
Using the white-tailed deer as an example, students will explore what animals need for survival and how habitat changes affect animal populations. An open area of the classroom, gym, or playground is required for a population simulation game during this program.
*First Grade Life Science:* Living things have basic needs, which are met by obtaining materials from the physical environment. Living things survive only in environments that meet their needs.

30 students per one-hour program

Wilderness Water Walk
Explore the importance of the basic needs of all living organisms through the perspective of water. Examine sources of water for a variety of plants and animals from dew drops to lakes, from moss to maple trees and caterpillars to coyotes.
*First Grade Earth and Space & Life Science:* Water on Earth is present in many forms. Living things have basic needs, which are met by obtaining materials from the physical environment. Living things survive only in environments that meet their needs.
*Second Grade Earth and Space & Life Science:* Water is present in the atmosphere. Living things cause changes on Earth.

30 students per one-hour program

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Animal Homes and Habitats
Discover the plants and animals of field, forest and wetland habitats during this hike along The Wilderness Center’s trails. Students learn how living organisms survive in their environment, use their habitat for food, water and shelter, and interact with their surroundings.
*First Grade Life Science:* Living things have basic needs, which are met by obtaining materials from the physical environment. Living things survive only in environments that meet their needs.
*Second Grade Life Science:* Living things have basic needs, which are met by obtaining materials from the physical environment. Living things survive only in environments that meet their needs.

30 students per one-hour program

Beaver Ecology
Students will examine pelt, skull, and other artifacts to discover a beaver’s adaptations to an aquatic lifestyle. Using a simulation game, students will gather data and analyze the changes in plant and animal communities as a beaver family changes the classroom environment from forest to wetland and back to forest. Indoor program.
*Second Grade Life Science:* Living things function and interact with their physical environments. Living things cause changes in the environments where they live.

30 students per one-hour program

Season Survey
Hike through two habitats to observe and predict the seasonal changes in the plants and animals of each. Discuss the seasonal behavior of animals that live in wetland and woodland environments.
*Second Grade Life Science:* Students will observe, predict and ask questions about the natural environment. Students will compare how living things affect the environment in which they live and how the environment impacts living things from season to season.

30 students per one-hour program

Fossil Fun
Fossils tell scientists about organisms that lived in the past. Students will learn what it takes for a fossil to form and determine where the organism was found by comparing it to organisms that are living today. Indoor program.
*Second Grade Life Science:* All organisms alive today result from their ancestors, some of which may be extinct. Not all kinds of organisms that lived in the past are represented by living organisms today.

30 students per one-hour program
3rd & 4th grade

Rock Hounds ✨
Sort gravel to explore the characteristics of rocks! Students use rock kits to identify rocks and learn about the environment in which they were formed. Indoor program.

*Third Grade Earth Science:* Earth’s nonliving resources have specific properties.

30 students per one-hour program

Under Your Feet ✨
Experiment with soil and get dirty! Discover the composition of soil and conduct experiments on the characteristics of soil. Students explore compaction and erosion issues.

*Third Grade Earth Science:* Earth’s nonliving resources have specific properties.

30 students per one-hour program

In Praise of Plants
Students hike the pond/lake trail to explore the diversity of plants at TWC! Students concentrate on plant life cycles and how plants are adapted for survival.

*Third Grade Life Science:* Plants have life cycles that are part of their adaptations for survival in their natural environments.

30 students per one-hour and 15-minute program

Mammal Skull Anatomy ✨
Students will examine skulls of herbivores, carnivores, and omnivores and distinguish the anatomical features that separate these groups. They will compare features dealing with sight, hearing, sense of smell, and tooth structure. Indoor program.

*Third Grade Life Science:* Plants and animals have certain physical or behavioral characteristics that improve their chances of surviving in particular environments. Organisms have different structures and behaviors that serve different functions.

30 students per one-hour program

Landform and Mapping Hike
After learning basic mapping skills, students will hike to observe landforms. Hills, valleys, streams, and glacial features will be visible both on topographic maps and along the trail.

*Fourth Grade Earth Science:* Earth’s surface has specific characteristics and landforms that can be identified.

*Fourth Grade Social Studies:* A map scale and cardinal directions can be used to describe the relative location of physical characteristics of Ohio.

30 students per one-hour and 15-minute program. Transportation to and from the trailhead (just down the road) will need to be provided by your school bus or car caravan.

Ohio’s Prehistoric People ✨
Discover how people of Ohio lived during the cultures of Paleo, Archaic, Woodland, and Late Prehistoric. Using actual artifacts and reproductions, students learn how the lifestyles and tools of these cultures progressed over time. Indoor program.

*Fourth Grade Social Studies:* Various groups of people have lived in Ohio over time including prehistoric and historic American Indians, migrating settlers and immigrants.

30 students per one-hour program

There Goes the Neighborhood
From field to forest, the natural world always changes. Students explore the natural transition of one type of community to another in this study of succession.

*Fourth Grade Life Science:* Changes in an organism’s environment are sometimes beneficial and sometimes harmful.

30 students per one-hour and 15-minute program

Fossils of Ohio ✨
How do we know about the plants and animals that lived in Ohio millions of years ago? Through fossils! Students will compare specimens to present day animals and follow Ohio’s geologic history from ocean to ice age through fossils. Indoor program.

*Fourth Grade Life Science:* Fossils can be compared to one another and to present-day organisms according to their similarities and differences.

30 students per one-hour program

Indicates program which can travel to your location.

Check out more classes for this age level under Teacher Favorites:
- Animals of Ohio
- Bird Banding
- Wet and Wild World
- Investigating Insects
- For Goodness Snakes
- Planetarium
- Theater Show: Cowboy Astronomer
Space Science Programs

Our Star's Solar System
The eight planets that orbit our home star are uniquely different, yet have a few similarities. We will also examine asteroids, meteoroids, comets, dwarf planets, the Kuiper belt and the hunt for Planet Nine. The program will conclude with a tour of tonight’s sky showing seasonal constellations, planets currently in the night sky and the moon. Indoor program.

Chronicle of a Journey to Earth
In this fulldome planetarium theater show, become a traveler from interstellar space visiting our solar system. We pass through the Oort Cloud, dwarf planets and gas giants learning about them on our way to the rocky planets of the inner solar system. We will be drawn to the Earth and discover seasonal climate changes, moon phases and eclipses. The program will conclude with a tour of tonight’s sky showing seasonal constellations, planets in the night sky and the moon.

Space Day
Introduce or wrap up your study of the planets with a hands-on learning experience. Students tour the solar system to try simple experiments which highlight a key concept about each planet, Earth’s Moon and the Sun. Indoor program.

Fifth Grade Earth and Space Science: Most of the cycles and patterns of motion between the Earth and Sun are predictable. The solar system includes the sun and all celestial bodies that orbit the sun. Each planet in the solar system has unique characteristics.
30 students per one-hour program

Discovery
Discover a special place at The Wilderness Center! Hike to learn about producers, consumers, and decomposers. Use these and other terms (herbivore, carnivore, and omnivore) to classify organisms.
Fifth Grade Life Science: Organisms perform a variety of roles in an ecosystem.
30 students per one-hour program

Predator and Prey
Students will play a version of the Project Wild game “Quick Frozen Critters” to explore the behavioral adaptations of predators and prey. By manipulating the game, students will understand how changes in habitat create obstacles and opportunities for these animals.
Fifth Grade Life Science: Organisms perform a variety of roles in an ecosystem. Processes within organisms require energy.
30 students per one-hour program

In Praise of Plants
Students hike the pond/lake trail to explore the diversity of plants at TWC! Classify plants according to their external and internal structures as well as their reproductive strategies.
Sixth Grade Life Science: Living systems at all levels of organization demonstrate the complementary nature of structure and function.
30 students per one-hour and 15-minute program

Under Your Feet
Experiment with soil and get dirty! Discover the composition of soil and conduct experiments on the characteristics of soil. Collect data on the soil properties of texture, permeability and porosity.
Sixth Grade Earth Science: Soil is unconsolidated material that contains nutrient matter and weathered rock.
30 students per one-hour program

Rock Hounds
Learn how sedimentary, igneous, and metamorphic rocks are formed! Students use rock kits to classify the rocks into categories using terms such as clastic, foliated and intrusive. Indoor program.
Sixth Grade Earth Science: Igneous, metamorphic and sedimentary rocks have unique characteristics that can be used for identification and/or classification. Igneous, metamorphic and sedimentary rocks form in different ways.
30 students per one-hour program

Ohio Rocks
Compare distinct properties of Ohio rocks to learn how they were formed. Discuss uses of Ohio rocks and visit our Rock Walk. Includes a discussion of vast geologic time.
Sixth Grade Earth Science: Igneous, metamorphic and sedimentary rocks form in different ways. Rocks, minerals and soils have common and practical uses.
30 students per one-hour program

Mystery Minerals
There are about 2,000 minerals in the world. How do geologists tell one from another? Students will experiment with properties of some common minerals in order to identify them. Indoor program.
Sixth Grade Earth and Space Science: Minerals have specific, quantifiable properties.
30 students per one-hour program
— middle & high school —

TWC middle and high school classes study interactions between the biotic and abiotic elements of our local natural areas. Teachers can choose the class type that best meets their educational and scheduling needs. Comparative Studies require four hours to complete, Field Experiences require two hours to complete and Space Study classes are one hour long.

— Comparative Studies:
These classes investigate interactions within forest, wetland or prairie communities with data collection and analysis. In each four-hour class, students learn background information, participate in data collection at two sites and conclude with data comparison. Up to 25 students per four-hour program/$6 per student.

**Forest Succession**
In the 1960’s The Wilderness Center property was comprised of treeless farm fields and rocky areas that remained forested because they were too difficult to farm. After sixty years of conservation, these areas provide an excellent opportunity to observe different stages of succession. Students will work in small groups to identify the trees and measure tree DBH (diameter at breast height) in each area. The types and sizes of the trees in each plot will be discussed in terms of succession and compared to historical photographs of the property.

**Macroinvertebrate Relative Abundance**
Biodiversity in natural areas, or the types and numbers of species that can survive there, is influenced by many factors. Relative abundance refers to how common or rare a species is relative to other species in the area. Students use this measure of biodiversity by collecting, identifying and counting macroinvertebrates in a pond and lake to formulate a hypothesis regarding potential influencing factors.

**Environmental Water Quality**
The health of a lake, pond or stream can be impacted by the land use of the immediate surrounding area. Students will conduct chemical tests of two different water bodies to determine water quality and investigate the drainage area for contributing factors.

**Stream Morphology**
The physical structure of a streambed is a component in many processes and functions including habitat, water quality and flooding. Students will create a cross-section profile of a stream in different locations to learn how the shape or morphology of it has an impact on these processes.

— Field Experiences:
Data collection and analysis occur in many ways and the focus of these classes is for students to experience ecological monitoring processes or field study techniques. Up to 25 students per two-hour program/$3 per student.

**Assessing Water and Habitat Quality with Macroinvertebrates or Fish Populations**
Biological surveys are used to assess the environmental water and habitat quality of streams, ponds and lakes. Students will participate in collecting, identifying and recording species to learn how these protocols are conducted. Teachers can choose between monitoring macroinvertebrates in a pond, macroinvertebrates in a stream or fish in a stream.

**Watershed Walk**
Watersheds can be used to understand how the hydrologic cycle interacts with the surface of the Earth and how different types of pollution move through our waterways. We will identify the local watershed, examine point and non-point pollution sources and then hike to the stream for a brief chemical water quality test.

We prefer to keep class sizes small in order for all students to be involved in the field experience. Please encourage students to dress in long pants, sturdy shoes and clothes that may get dirty. If conducting stream work, students can bring waterproof boots and waders.
Mapping and Landform
Topographic maps are an important tool for reading the shape of our landscape. After learning how to read topographic maps and recognize landforms, students hike to find and observe the mapped landforms. Along the hike we will discuss the origin of landforms, the glacial history of Ohio, and how the shape of the land affects our lives.

Natural History Studies
We will happily craft a natural history field experience class to compliment what you are teaching. We offer experiences relating to birds, mammals, reptiles, insects or amphibians. Sessions can include anatomy, species identification and adaptations. Let us know!

— Space Science:
The Wilderness Center offers a unique experience in our digital planetarium theater. Students learn about Astronomy through full dome theater shows, produced by large planetariums and streamed to our small dome! All programs conclude with a tour of the current night sky showing seasonal constellations, planets and the moon. Up to 25 students per one-hour program.

Earth's Seasons
Why does the Earth have seasons? We will explore the tilt of the Earth's axis, the rotation of the Earth on its axis, the orbit of the Earth around the sun, direct and indirect sunlight and resulting differences in temperature.

Chronicle of a Journey to Earth
In this full dome planetarium theater show, we are a traveler from the depths of interstellar space visiting our solar system for the first time. We pass through the Oort Cloud, past the dwarf planets and gas giants learning a little about them on our way to the inner solar system and the rocky worlds Mars, Earth, Venus and Mercury. We will be drawn to the Earth wanting to understand this planet a little more. We'll discover seasonal climate changes, moon phases and eclipses.

COS: Cosmic Origins Spectrograph
In this full dome planetarium theater show, we look at what the Cosmic Origins Spectrograph instrument on the Hubble Space Telescope is showing us about the history of the universe. Topics discussed include the age of the universe, quasars as background light sources, red shift and expansion of the galaxy, star birth and death, fusion in stars and galaxies.

MUSICA – Why Is the Universe Beautiful?
In this full dome planetarium theater show, the question, “Why do I sense beauty?” is asked. This question sets in motion a series of scenes that take students on a voyage of discovery – from DNA in our cells, to the spiral designs hidden in a sunflower and the spiral grandeur of galaxies. Learn how the physics of sound and color and the physical laws of nature contribute to music and art.

Classes Meet Ohio’s Learning Standards:

Seventh Grade Earth Science Statement:
Ecosystems are dynamic in nature; the number and types of species fluctuate over time.

Seventh Grade Earth and Space Science Statements:
The relative patterns of motion and positions of Earth, moon and sun cause solar and lunar eclipses, tides and phases of the moon. The relative positions of Earth and the sun cause patterns we call seasons.

Eighth Grade Earth Science Statement:
A combination of constructive and destructive geologic processes formed Earth’s surface.

High School Biology and Environmental Science:
Species biodiversity, ecosystems (equilibrium, species interactions, stability) and population dynamics.

High School Physical Geology and Physics:
Investigations are used to understand and explain the behavior of nature in a variety of inquiry and design scenarios that incorporate scientific reasoning, analysis, communication skills and real-world applications.

High School Content Elaboration:
The Universe: History of the universe, galaxies and stars.