FIELD TRIPS

For all ages

Bring your class, camp, daycare, or other youth group to My Nature Lab for a private field trip! Field trips to My Nature Lab include time to explore our facility and observe our numerous amphibians and reptiles in their enclosures before settling in with a My Nature Lab educator for interactive and engaging lessons featuring hands-on explorations with our live animals.

All lessons support and enrich the Colorado state life science standards. If, however, you have specific standards you would like us to highlight during your visit, let us know. Choose from one of our many program topics below, or we can create a lesson just for you!

Offered: September – May on Tuesdays only; classes from 9-10:30 AM, 10:30 AM - 12 PM, and 12:30-2:00 PM
Duration: 90 minutes (includes 60 minutes of hands-on lessons with our live amphibians and reptiles)
Student Pricing: $380 for up to 30 students; $10/additional student
Adult Pricing: 1 free adult/10 students, additional adults at regular admission price ($15/adult)
Capacity: up to 40 total participants (students + adults)

PROGRAM TOPICS:

Elementary Programs
All programs can be modified to suit the grade level and academic needs of your students.

Life Cycles
In this lesson, students will meet a variety of live amphibians and reptiles and compare and contrast the life cycles of each, noting some of the many adaptations (structural, physiological, and/or behavioral characteristics) that support survival at each stage of the life cycle.

Colorado State Life Science Standards Addressed

- Pre-K - Recognize that living things have unique characteristics and basic needs that can be observed and studied.
- Pre-K - Recognize that living things develop in predictable patterns.
- 1st - All organisms have external parts that they use to perform daily functions.
- 1st - Young organisms are very much, but not exactly, like their parents, and also resemble other organisms of the same kind.
- 2nd - A range of different organisms live in different places.
- 3rd - Organisms have unique and diverse life cycles.
- 3rd - Being part of a group helps animals obtain food, defend themselves, and cope with changes.
- 3rd - Sometimes differences in characteristics between individuals of the same species provide advantages in survival and reproduction.
- 4th - Organisms have internal and external structures that serve various functions.

Adaptations

In this lesson, students will compare and contrast a variety of live amphibians and reptiles from all over the world and discuss the many adaptations (structural, physiological, and/or behavioral characteristics) that support their survival in their native ecosystems.

Colorado State Life Science Standards Addressed

- Pre-K - Recognize that living things have unique characteristics and basic needs that can be observed and studied.
- Pre-K - Recognize that living things develop in predictable patterns.
- K - To live and grow, animals obtain food they need from plants or other animals, and plants need water and light.
- 1st - All organisms have external parts that they use to perform daily functions.
- 2nd - A range of different organisms live in different places.
- 3rd - Different organisms vary in how they look and function because they have different inherited information; the environment also affects the traits that an organism develops.
- 3rd - Sometimes differences in characteristics between individuals of the same species provide advantages in survival and reproduction.
- 4th - Organisms have internal and external structures that serve various functions.

Basic Needs

In this lesson, students will encounter a wide variety of live amphibians and reptiles and discuss the food, water, and shelter needs of each, as well as the unique adaptations (structural, physiological, and/or behavioral characteristics) each animal has to meet those basic needs.

Colorado State Life Science Standards Addressed

- Pre-K - Recognize that living things have unique characteristics and basic needs that can be observed and studied.
- Pre-K - Recognize that living things develop in predictable patterns.
- K - To live and grow, animals obtain food they need from plants or other animals, and plants need water and light.
- 1st - All organisms have external parts that they use to perform daily functions.
- 1st - Young organisms are very much, but not exactly, like their parents, and also resemble other organisms of the same kind.
- 2nd - A range of different organisms live in different places.
- 3rd - Different organisms vary in how they look and function because they have different inherited information; the environment also affects the traits that an organism develops.
- 3rd - Sometimes differences in characteristics between individuals of the same species provide advantages in survival and reproduction.
- 4th - Organisms have internal and external structures that serve various functions.

Local Species

In this lesson, students will encounter a variety of live amphibians and reptiles found in Boulder County, Colorado (and surrounding counties). Emphasis will be on identification and natural history of each species, as well as how to safely encounter these animals in nature.

Colorado State Life Science Standards Addressed

- Pre-K - Recognize that living things have unique characteristics and basic needs that can be observed and studied.
- Pre-K - Recognize that living things develop in predictable patterns.
- K - To live and grow, animals obtain food they need from plants or other animals, and plants need water and light.
- 1st - All organisms have external parts that they use to perform daily functions.

- 1st - Young organisms are very much, but not exactly, like their parents, and also resemble other organisms of the same kind.
- 2nd - A range of different organisms live in different places.
- 3rd - Different organisms vary in how they look and function because they have different inherited information; the environment also affects the traits that an organism develops.
- 3rd - Sometimes differences in characteristics between individuals of the same species provide advantages in survival and reproduction.
- 4th - Organisms have internal and external structures that serve various functions.

Invasive Species

In this lesson, students will define *native*, *non-native*, and *invasive* through encounters with live amphibians and reptiles. The invasive American bullfrog will be the star of the show, as we discuss its impact on our native amphibians and reptiles, as well as other native wildlife.

Colorado State Life Science Standards Addressed

- Pre-K - Recognize that living things have unique characteristics and basic needs that can be observed and studied.
- Pre-K - Recognize that living things develop in predictable patterns.
- K - To live and grow, animals obtain food they need from plants or other animals, and plants need water and light.
- 1st - All organisms have external parts that they use to perform daily functions.
- 1st - Young organisms are very much, but not exactly, like their parents, and also resemble other organisms of the same kind.
- 2nd - A range of different organisms live in different places.
- 3rd - Organisms have unique and diverse life cycles.
- 3rd - Being part of a group helps animals obtain food, defend themselves, and cope with changes.
- 3rd - Different organisms vary in how they look and function because they have different inherited information; the environment also affects the traits that an organism develops.
- 3rd - Sometimes differences in characteristics between individuals of the same species provide advantages in survival and reproduction.
- 4th - Organisms have internal and external structures that serve various functions.

Middle School Programs

All programs can be modified to suit the grade level and academic needs of your students.

Ecosystems

In this lesson, students will learn about the non-living and living components of our global ecosystems through hands-on lessons with live amphibians and reptiles. Students will explore the ecological niches of each animal and how the environment and other interactions influenced adaptations for survival, reproduction, prey, and escape from predators.

Colorado State Life Science Standards Addressed

- All living things are made up of cells, which is the smallest unit that can be said to be alive..
- Sustaining life requires substantial energy and matter inputs.
- Organisms and populations of organisms are dependent upon their environmental interactions both with other living things and with nonliving factors.
- Ecosystems are sustained by the continuous flow of energy, originating primarily from the sun, and the recycling of matter and nutrients within the system.
- Ecosystems are dynamic in nature; their characteristics can vary over time. Disruptions to any physical or biological component of an ecosystem can lead to shifts in all of its populations.
- Adaptation by natural selection acting over generations is one important process by which species change over time in response to changes in environmental conditions.
- Biodiversity is the wide range of existing life forms that have adapted to the variety of conditions on Earth, from terrestrial to marine ecosystems.

Heredity and Genetics

This lesson explores heredity and genetics of reptiles and amphibians using live examples. Students will learn the role of DNA and mutations as species evolve, how genotypes are expressed as phenotypes, and what influences heredity.

Colorado State Life Science Standards Addressed

- All living things are made up of cells, which is the smallest unit that can be said to be alive.
- Organisms reproduce, either sexually or asexually, and transfer their genetic information to their offspring.
- Heredity explains why offspring resemble, but are not identical to, their parents and is a unifying biological principle. Heredity refers to specific

mechanisms by which characteristics or traits are passed from one generation to the next via genes.
- Genetic variations among individuals in a population give some individuals an advantage in surviving and reproducing in their environment.
- Adaptation by natural selection acting over generations is one important process by which species change over time in response to changes in environmental conditions.
- Biodiversity is the wide range of existing life forms that have adapted to the variety of conditions on Earth, from terrestrial to marine ecosystems.

Biodiversity

In this lesson, students will experience reptile and amphibian biodiversity through lessons with live reptiles and amphibians. Students will explore topics including biodiversity hotspots, global conservation efforts, and why biodiversity is critical to healthy ecosystems.

Colorado State Life Science Standards Addressed

- All living things are made up of cells, which is the smallest unit that can be said to be alive.
- Organisms and populations of organisms are dependent upon their environmental interactions both with other living things and with nonliving factors.
- Ecosystems are dynamic in nature; their characteristics can vary over time. Disruptions to any physical or biological component of an ecosystem can lead to shifts in all of its populations.
- Adaptation by natural selection acting over generations is one important process by which species change over time in response to changes in environmental conditions.
- Biodiversity is the wide range of existing life forms that have adapted to the variety of conditions on Earth, from terrestrial to marine ecosystems.

High School Programs

All programs can be modified to suit the grade level and academic needs of your students.

Ecosystems

In this lesson, students will learn about the non-living and living components of our global ecosystems through hands-on lessons with live amphibians and reptiles. Students will explore the ecological niches of each animal and how the environment and other interactions influenced adaptations for survival, reproduction, prey, and escape from predators.

Colorado State Life Science Standards Addressed

- Organisms use matter and energy to live and grow.
- Organisms interact with the living and nonliving components of the environment to obtain matter and energy.
- Matter and energy necessary for life are conserved as they move through ecosystems.
- A complex set of interactions determine how ecosystems respond to disturbances.
- Organisms interact in groups to benefit the species.
- The environment influences survival and reproduction of organisms over multiple generations.
- Humans have complex interactions with ecosystems and have the ability to influence biodiversity on the planet.

Heredity and Genetics

This lesson explores heredity and genetics of reptiles and amphibians using live examples. Students will learn the role of DNA and mutations as species evolve, how genotypes are expressed as phenotypes, and what influences heredity.

Colorado State Life Science Standards Addressed

- DNA codes for the complex hierarchical organization of systems that enable life's functions.
- Growth and division of cells in complex organisms occurs by mitosis, which differentiates specific cell types.
- Organisms use matter and energy to live and grow.
- Organisms interact with the living and nonliving components of the environment to obtain matter and energy.
- Organisms interact in groups to benefit the species.
- The characteristics of one generation are dependent upon the genetic information inherited from previous generations.
- Variation between individuals results from genetic and environmental factors.
- Evidence of common ancestry and diversity between species can be determined by examining variations including genetic, anatomical and physiological differences.
- Genetic variation among organisms affects survival and reproduction.
- The environment influences survival and reproduction of organisms over multiple generations.

Human Impacts on Biodiversity

Humans have had a profound effect on biodiversity on our planet. In this lesson, students will experience reptile and amphibian biodiversity through lessons with live reptiles and amphibians. Students will explore topics through a human impact lens including biodiversity hotspots, global conservation efforts, and why biodiversity is critical to healthy ecosystems.

Colorado State Life Science Standards Addressed

- Matter and energy necessary for life are conserved as they move through ecosystems.
- A complex set of interactions determine how ecosystems respond to disturbances.
- Organisms interact in groups to benefit the species.
- Genetic variation among organisms affects survival and reproduction.
- The environment influences survival and reproduction of organisms over multiple generations.
- Humans have complex interactions with ecosystems and have the ability to influence biodiversity on the planet.

Do you have a Life Science topic you are hoping to explore but don't see listed in the programs above? Contact us, and we will work with you to create a program for your participants.