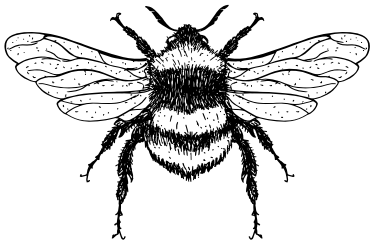
BUTTERFLY PAVILION

Virtual Field Trip Programs

Class Descriptions and Curriculum Standards



Besieged Bees

Ages: 4th - 8th Grade

In this class, students will look beyond honeybees into the diverse world of these important buzzing pollinators. They will compare various types of bees, grasp their critical role in our ecosystems, investigate the concerning decline in their populations, and explore solutions to conserve and restore their numbers.

Curriculum Standards Supported

Colorado Science Standards

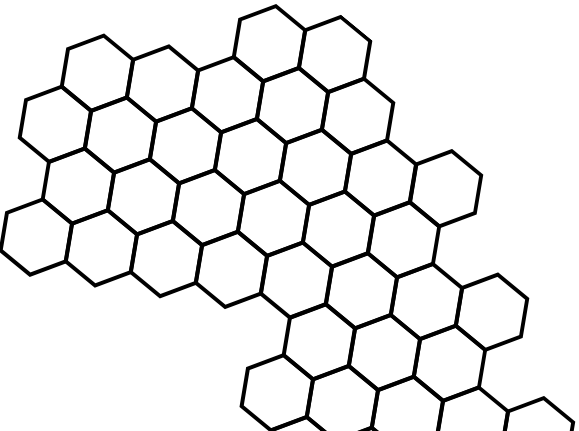
- SC09-GR.4-S.2-GLE.4 All living things share similar characteristics, but they also have differences that can be described and classified
- SC09-GR.4-S.2-GLE.4 There is interaction and interdependence between and among living and nonliving components of ecosystems
- SC09-GR.5-S.2-GLE.5 All organisms have structures and systems with separate functions.
- SC09-GR.6-S.2-GLE.6 Changes in environmental conditions can affect the survival of individual organisms, populations, and entire species

Next Generation Science Standards

- 4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.
- 4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.
- 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 4-LS1-1.A: Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction.
- 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
- 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Next Generation Science Standards (continued)

- 5-ESS3-1.C: Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments.
- MS-LS1-4. Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.
- MS-LS1.B: Plants reproduce in a variety of ways, sometimes depending on animal behavior and specialized features for reproduction.
- MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
- MS-LS2.A: Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors. In any ecosystem, organisms and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources, access to which consequently constrains their growth and reproduction. Growth of organisms and population increases are limited by access to resources.
- MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
- MS-LS2.C: 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 its populations.
- MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.
- MS-LS4.D: Changes in biodiversity can influence humans' resources, such as food, energy, and medicines, as well as ecosystem services that humans rely on—for example, water purification and recycling.



Lacey Ladybug's Garden Adventure

Ages: PreK - 2nd Grade

Follow the journey of Lacey Ladybug as she grows up and explores her garden throughout the seasons. As Lacey encounters various challenges and makes new friends along the way, she teaches young learners about the fascinating world of ladybugs, including their life cycle, habitat, and their vital role in nature. Students choose their own adventure in this virtual interactive story time!

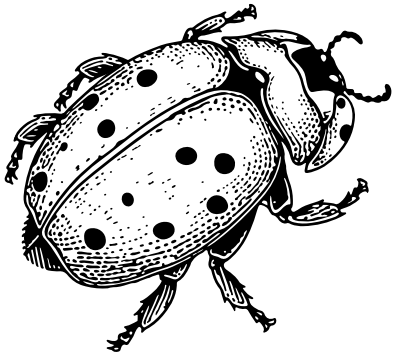
Curriculum Standards Supported

Colorado Science Standards

- SC.P.2.1 Recognize that living things have unique characteristics and basic needs that can be observed and studied.
- SC.P.2.2 Recognize that living things develop in predictable patterns.
- SC.P.3.2 The acquisition of concepts and facts related to the natural and physical world and the understanding of naturally occurring relationships.
- SC.K.2.1: To live and grow, animals obtain food they need from plants or other animals, and plants need water and light
- SC.K.3.2 Plants and animals meet their needs in their habitats and impact one another; people can prepare for severe weather
- SC.1.2.1: 1. All organisms have external parts that they use to perform daily functions.
- SC.1.2.2: Young organisms are very much, but not exactly, like their parents, and also resemble other organisms of the same kind.
- SC.2.2.2: A range of different organisms lives in different places.
- SC.2.2.1 Plants depend on water and light to grow and on animals for pollination or to move their seeds around.

Next Generation Science Standards

- 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.



Life Cycles

Ages: K - 3rd Grade

In this investigative class, student scientists are challenged to use their senses to observe and interact with three live animals on camera to solve the mystery of their connection - metamorphosis!

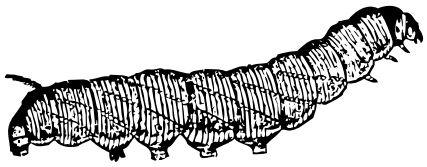
Curriculum Standards Supported

Colorado Science Standards

- SC.K.2.1-GLE.1 To live and grow, animals obtain food they need from plants or other animals, and plants need water and light.
- SC.1.2.1-GLE.1 All organisms have external parts that they use to perform daily functions.
- SC.1.2.2-GLE.2 Young organisms are very much, but not exactly, like their parents, and also resemble other organisms of the same kind.
- SC.2.2.2-GLE.2 A range of different organisms lives in different places.
- SC.3.2.1-GLE.1 Organisms have unique and diverse life cycles.

Next Generation Science Standards

- 1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.
- 3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.



Monarch Mysteries

Ages: 3rd - 6th Grade

In this virtual class, students explore the monarch butterfly's journey and identify challenges they face throughout their life cycle in an interactive migration activity. Students will also explore the mysteries still surrounding these incredible butterflies, the cultural significance of monarchs, and how to help bolster declining monarch populations through community science.

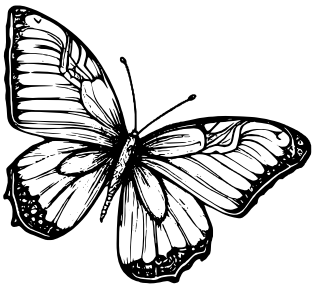
Curriculum Standards Supported

Colorado Science Standards

- SC09-GR.3-S.2-GLE.1 The duration and timing of life cycle events such as reproduction and longevity vary across organisms and species.
- SC09-GR.4-S.2-GLE.3 There is interaction and interdependence between and among living and nonliving components of ecosystems.
- SC09-GR.5-S.2-GLE.1 All organisms have structures and systems with separate functions.
- SC09-GR.6-S.2-GLE.1 Changes in environmental conditions can affect the survival of individual organisms, populations, and entire species

Next Generation Science Standards

- 3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
- 4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
- MS-LS2-4 Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
- MS-LS2-2 Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.
- MS-LS1-5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.



Pollinator Protectors

Ages: K - 12th Grade

In this virtual class, students discover common pollinators and the important roles they play in our ecosystems. Students will also identify how human actions affect these pollinators and will lead an empowering discussion on how to make sure we leave a positive impact on the world. With guidance from pollination experts, learn how anyone can become a pollinator protector through community science!

Curriculum Standards Supported

Colorado Science Standards

- SC.K.3.2 Plants and animals meet their needs in their habitats and impact one another; people can prepare for severe weather.
- SC.1.2.1 All organisms have external parts that they use to perform daily functions.
- SC.2.2.1 Plants depend on water and light to grow and on animals for pollination or to move their seeds around.
- SC.2.2.2 A range of different organisms lives in different places.
- SC.3.2.3 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.
- SC.4.2.1 Organisms have both internal and external structures that serve various functions.
- SC.4.3.4 Energy and fuels that humans use are derived from natural sources and their use affects the environment in multiple ways
- SC.MS.2.5 Organisms and populations of organisms are dependent on their environmental interactions both with other living things and with nonliving
- SC.MS.2.5 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 its populations.
- SC.MS.2.12: Biodiversity is the wide range of existing life forms that have adapted to the variety of conditions on Earth, from terrestrial to marine ecosystems.
- SC.MS.3.10: Human activities have altered the biosphere, sometimes damaging it, although changes to environments can have different impacts for different living things.
- SC.MS.3.11: Human activities affect global warming. Decisions to reduce the impact of global warming depend on understanding climate science, engineering capabilities, and social dynamics.
- SC.HS.2.4 Organisms interact with the living and nonliving components of the environment to obtain matter and energy
- SC.HS.2.6 A complex set of interactions determine how ecosystems respond to disturbances.
- SC.HS.2.7 Organisms interact in groups to benefit the species.
- SC.HS.2.9 Variation between individuals results from genetic and environmental factors
- SC.HS.2.12 The environment influences survival and reproduction of organisms over multiple generations.

Colorado Science Standards (continued)

- SC.HS.2.13 Humans have complex interactions with ecosystems and have the ability to influence biodiversity on the planet.
- SC.HS.3.11 Sustainability of human societies and the biodiversity that supports them requires responsible management of natural resources, including the development of technologies

Next Generation Science Standards

- K-ESS3-1 Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.
- K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.
- 2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.
- 2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.
- 3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment.
- 3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change
- 4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
- MS-LS1-4: Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.
- MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
- HS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

Virtual Invertebrate Encounter

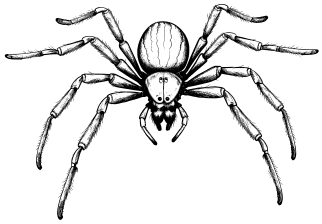
Ages: PreK - 12th Grade

Discover the captivating world of invertebrates through our virtual invertebrate encounters! First, we unveil a fascinating featured invertebrate on camera. Then we hand the reins to our budding student scientists who steer the session through their curiosity and questions, fostering an interactive and dynamic learning program. Available animals include Madagascar hissing cockroaches and Chaco Golden Knee or Curly Hair tarantulas.

Curriculum Standards Supported

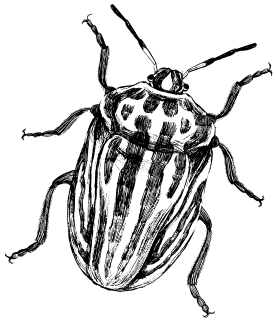
Colorado Science Standards

- LS09-GR.PreK-S.2-GLE.1 Living things have characteristics and basic needs
- LS09-GR.K-S.2-GLE.1 Organisms can be described and sorted by their physical characteristics
- LS09-GR.1-S.2-GLE.2 An organism is a living thing that has physical characteristics to help it survive
- LS09-GR.2-S.2-GLE.2 Each plant or animal has different structures or behaviors that serve different functions
- LS09-GR.3-S.2-GLE.1 The duration and timing of life cycle events such as reproduction and longevity vary across organisms and species
- LS09-GR.4-S.2-GLE.1 All living things share similar characteristics, but they also have differences that can be described and classified
- LS09-GR.4-S.2-GLE.3 There is interaction and interdependence between and among living and nonliving components of systems
- LS09-GR.5-S.2-GLE.1 All organisms have structures and systems with separate functions
- LS09-GR.6-S.2.GLE.1 Changes in environmental conditions can affect the survival of individual organisms, populations, and entire species
- LS09-GR.7-S.2-GLE.1 Individual organisms with certain traits are more likely than others to survive and have offspring in a specific environment
- LS09-GR.8-S.2-GLE.1 Human activities can deliberately or inadvertently alter ecosystems and their resiliency
- LS09-GR.8-S.2-GLE.2 Organisms reproduce and transmit genetic information (genes) to offspring, which influences individuals' traits in the next generation
- LS09-GR.HS-S.2-GLE.2 The size and persistence of populations depend on their interactions with each other and on the abiotic factors in an ecosystem



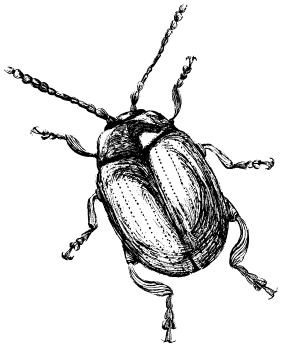
Next Generation Science Standards

- K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.
- 1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
- 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.
- 3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.
- 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
- MS-LS1-4. Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.
- MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.



Who Needs a Habitat

Ages: K - 3rd Grade



Who needs a habitat? Birds, bears, bugs, and, of course, your curious students! Explore the components of habitats - food, water, shelter, and space - while actively engaging with on-camera invertebrates and their homes. Your class will unravel the pivotal roles these incredible creatures play in ecosystems, both globally and right in your own backyard.

Colorado Science Standards (continued)

- SC.K.2.1 To live and grow, animals obtain food they need from plants or other animals, and plants need water and light.
- SC.K.3.2 Plants and animals meet their needs in their habitats and impact one another; people can prepare for severe weather.
- SC.1.2.1 All organisms have external parts that they use to perform daily functions.
- SC.2.2.2 A range of different organisms lives in different places.
- SC.3.2.2 Being part of a group helps animals obtain food, defend themselves and cope with changes.
- SC.3.2.3 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.

Next Generation Science Standards

- K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.
- K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
- 2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.
- 3-LS2-1 Construct an argument that some animals form groups that help members survive.
- 3-LS4-3 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

Custom Virtual Program

Ages: PreK - 12th Grade

Not finding what you're looking for? Reach out to our education team to create a custom virtual program that perfectly fits your needs. Please note: custom programs require a minimum of four weeks advance notice to book.