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<th>Grade 3</th>
<th>CONTENT</th>
<th>STANDARDS/ CURRICULUM CONNECTION</th>
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**To choose this program 1) select “OTHER...” from the program drop-down and 2) write the name of the program into the comments section.**

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<th>Ecosystem Studies</th>
<th>Earth Science</th>
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**A, BEE, C’S OF THE HONEY BEE**

*Location: School*  
*Presentation Style: Assembly/Class Visits*

*Instructional Resources: Projector, animal artifacts*

Only female honey bees sting, honey bees visit at least 2 million flowers to make just one pound of honey and honey bees are responsible for over a third of the food we eat. These are just a few amazing facts this program will present that will have students looking at bees in a whole new way. In addition to facts, this program will cover pollination, anatomy, the honey bee’s role in the ecosystem and how important the honey bees are to humans. The current honey bee issues will be addressed, and students will have a chance to see the equipment beekeepers use as they learn how we get honey from the hive to the jar.

**AMAZING JOURNEY OF WATER**

*Location: School*  
*Presentation Style: Assembly/Class Visits*

*Instructional Resources: Projector, interactive game water molecule game*

Students will be introduced to watersheds and how water moves through and is stored in its various forms through the water cycle as well as the natural services water provides in an ecosystem. Building on this information, students will participate in an interactive activity where they will be viewing the water cycle from the point of view of a water molecule. They will be given different scenarios within a watershed to create their very own “Amazing Journey” as a water molecule.

**ANIMAL ADAPTATIONS**

*Location: School*  
*Presentation Style: Individual Class Visits*

*Instructional Resources: Projector, animal artifacts, live animal ambassador*

Animals have super powers, we just don’t call them super powers, but instead we call them Animal Adaptations! Animals have adapted over time, with special skills tools and abilities that allow them to best survive in their environments, skills that help animals make it through even the fiercest storms. From polar bears growing thicker fur for warmth, sheep huddling together to stay safe during inclement weather, and even camouflage to help animals hide from predators or even sneak up on their prey. This program seeks to understand what animals have, and what they can do for adaptation is the key to survival in the natural world.

**ANIMALS AS METEOROLOGISTS**

*Location: School*  
*Presentation Style: Individual Class Visits*

*Instructional Resources: Projector, animal artifacts, live animal ambassador*

We experience the weather every day, using just our senses we smell the rain, feel the wind, and touch the snow; but how do animals sense weather changes in the natural world? Using a series of specific animal adaptations, they too can sense what’s happening around them, often far better than we can. Humans often look to animals for knowledge about changing weather conditions, even animals we keep as pets. This program focuses on gathering a scientific basis to understand animal behaviors as signs of change, and what this teaches us about their abilities to survive.
**Bat & Moth**

*Location: School  Presentation Style: Assembly followed by Individual Class Visits*

*Instructional Resources: Projector, bat and moth specimens and game*

Students will play the role of bats and moths to get an idea of what it would be like to use a sense other than sight to catch prey. In addition to being a sensory game, students will learn about bats and their use of echolocation.

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**Big Changes for a Species: The Coyote (NYSSLS Grade 3)**

*Location: School  Presentation Style: Individual Class Visits*

*Instructional Resources: Projector, animal artifacts*

No two coyotes are the same! In this program, students will analyze the differences between the Eastern and Western coyotes of North America using pelts, skulls and scientific data and graphics. After making their observations, students will construct explanations as to how the two coyote species ended up becoming so very different and dominant in their own habitats.

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**Biography of a Strawberry: A Systems Fable**

*Location: School  Presentation Style: Individual Class Visits*

*Instructional Resources: Projector*

This program presents two systems fables: the story of a typical North American strawberry and one of a locally grown strawberry. Both fables are told through a PowerPoint and follow the strawberry from the development of the seed to its planting, growing, picking and shipping to our table. Then the students are asked to compare the resources that go into making each agricultural process happen and the waste that is produced in order to have a better understanding about sustainable food systems.

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**Birds & Raptors**

*Location: School  Presentation Style: Individual Class Visits*

*Instructional Resources: Projector, preserved bird specimens and parts, bird guides, live avian ambassador*

This program introduces students to the sights and sounds of birds, with a focus on their unique characteristics! Through our interactive presentation, students will explore bird adaptations such as feathers, beaks, and talons by examining our artifacts that include a variety of feathers, preserved bird specimens, and bird guides. Students will also observe these adaptations on a live ambassador bird of prey.

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**Butterflies**

*Location: School  Presentation Style: Individual Class Visits*

*Instructional Resources: Projector, butterfly specimens, coloring sheet*

Students will learn about the function of camouflage, warning coloration, and other butterflies' adaptations. After an introduction to metamorphosis, students will compare and contrast the butterfly and moth, and learn how to distinguish one from the other. Then, using their newfound knowledge, they will color a butterfly cut-out before heading outside to play butterfly hide and seek. After playing this game, they will discuss which butterflies were easiest to find and how animals use coloration for self-protection.
CLASSROOM POND STUDY
Location: School  Presentation Style: Assembly/Class Visits
Instructional Resources: Projector, live animals from a pond, preserved animals and specimens, ID Charts
Students will learn what makes a pond different from a lake and the amazing process of complete and incomplete metamorphosis. Through the use of organisms from a local pond, students will have a chance to get a close look at the creatures and learn about their role in the ecosystem, how these animals depend on one another and their habitat, their place in the food web and the conditions needed for a healthy pond.

CLIMATE CHANGE
Location: School  Presentation Style: Individual Class Visits
Instructional Resources: Projector, live animal ambassador, preserved animals and specimens
Students will be introduced to the main scientific principles of global warming/climate change the causes of this transformations to our planet. By incorporating what we already know about good "green" practices and using new information, students will problem solve ways to help slow down the impacts of global climate change. Students will also learn about animals and plants which are at risk of extinction due to climate change, while also learning about some very interesting animals which actually help to slow down the production of greenhouse gases! Examples will be shown of the many places on Earth which climate change has already had an impact. This class will incorporate live animals and artifacts to support the presentation. Can be done as an assembly.

COMPASS SKILL BUILDING
Location: School  Presentation Style: Individual Class Visits
Instructional Resources: Compasses, Orienteering trail
Learning to use a compass is a valuable and exciting experience for students! Students will learn the parts of a compass and how to use it. They will then go outside to practice their newfound skills by navigating through a compass circle game set up by the instructor. For this game they will need a flat open area.

COMPOSTING: NATURE'S RECYCLERS AND DECOMPOSERS
Location: School  Presentation Style: Assembly/Class Visits
Instructional Resources: Projector, live animal ambassadors, hands-on activities
Recycling of paper, bottles, and cans has become part of our culture. Now it is time to take the next step in recycling: school composting. Food leftovers are the single-largest component of the waste stream by weight, in the United States. Americans throw away more than 25% of the food we prepare, about 96 billion pounds of food waste each year. We spend about 1 billion dollars a year to dispose of food waste. This program will introduce students to the value of composting, the three different types of composting, and get up close and personal with some of the creatures that turn our food scraps into rich nourishing soil. This can be an informational program to teach students about composting or an introduction to creating a compost program for your school. The program can be presented to one class that would like to start a classroom compost program, or for the whole school to set up a school-wide program. For whole schools, our staff can work with your faculty to design a program tailored to your school's needs. This option is available for a special fee.
COOPERATIVE KINDNESS (TEAMBUILDING FOR GRADES 3 & 4)
Location: School/Yorktown BOCES         Presentation Style: Individual Class Visits
Instructional Resources: best done outdoors in an open indoor space
This program is designed specifically for children who are not yet developmentally ready for our regular team building programs. During the activities, our staff will take a more directive approach with the group in order to develop skills such as: cooperation, planning, inclusiveness, kindness and handling frustration in a positive manner while having fun together. This program can be used by schools to support their Dignity Act Initiatives.

CRAYFISH
Location: School         Presentation Style: Individual class presentation
Instructional Resources: Animal artifacts, natural artifacts, crayfish diagrams, and live animal ambassadors
There are over 500 different species of crayfish and about 350 of those are found in the United States! Besides being a food source, crayfish are also an indicator of the health of streams, ponds, and rivers. Students will learn about their basic anatomy and life cycle and the important role they play in the ecosystem, through a detailed presentation, artifacts, hand-on activities and exploration stations.

EARTH PORTABLE CLASSROOM (FEE)
Location: School         Presentation Style: Individual Classes but need an open space with a 23’ ceiling
Instructional Resources: Earth Globe
Available in late May to early June, this unique program brings a 20’ high x 22’ diameter hand-painted representation of our earth into your school. Your class will enter the globe through a zipper along the International Dateline in the Pacific Ocean. Once inside, students can participate in activities covering continents, oceans, mountains, rivers, cities, geographic terms and places in the news. They may also discuss environmental issues such as rainforests, coral reefs, ozone, pollution, and growing deserts. Program length is 40 minutes for 2nd grade. The globe can accommodate no more than 25 students. NO MORE THAN six programs can be done in one day. Program Cost: 1 program day + $150 (the rental fee for the globe)/member, $800/non-member for a full day (no more than 6 programs) (this program is eligible for state aid through the environmental CO-SER)

EROSION BY WATER
Location: School         Presentation Style: Individual Class Visits
Instructional Resources: Projector, hands-on water activity
Water is the most destructive force on Earth! Through a presentation and a water based hands-on water erosion activity, students will learn how shapes our planet through breaking it down, moving it around, and even building it up. Students will make the connection between water and the ever-changing face of our planet.
EXAMINING INVASIVE & NATIVE COMPETITION
Location: School  Presentation Style: Individual class presentation
Instructional Resources: PowerPoint presentation, animal and natural artifacts

The health of our planet depends on a delicate balance of species. Humans are part of this balance but unfortunately our actions sometimes tip the scale. When we move plants to different regions, either intentionally or unintentionally, we introduce the native plants to a new competition. This program will begin in the classroom with an examination of plant competition. Then we will head out to your school grounds where we will identify native and invasive species and conduct population counts. Finally, we will chart and graph the data we collected and discuss possible future ramifications, trends and remediation techniques.

FAMILY GROUPS: HERDS, FLOCKS AND SCHOOLS (NYSSLS GRADE 3)
Location: School  Presentation Style: Individual Class Visits
Instructional Resources: Projector, plant and animal artifacts, live animal ambassador

Students will participate in one or more team building activities involving their entire class as animals, working towards the common goal of gaining resources. Then, students will engage in a short assembly presentation about different species of animals that live in groups. Finally, students will be asked to explain why an animal would need to live in a group, based on evidence gained from the previous activities.

FEAROSME PREDATOR: CARRYING CAPACITY OF AN ECOSYSTEM
Location: School  Presentation Style: Individual Class Visits
Instructional Resources: Projector, animal artifacts, live animal ambassador

Lions, and tigers, and bears, oh my! Students will delve into the world of predators to learn what it takes to be on top. After examining the adaptations of successful predators, students will explore the unique relationship between predator and prey, learn about the value of keystone species, and how humans can live alongside the most fearsome of predators. Students will be given the opportunity to examine a live animal ambassador and asked to identify its distinctive adaptations and determine what part it plays in the ecosystem.

FOOD WEBS: WHO EATS WHOM?
Location: School  Presentation Style: Individual Class Visits
Instructional Resources: Animal artifacts, hands-on simulation, live animal ambassador

This interactive program introduces students to the daily flow of energy from the sun to producers and consumers. After learning how to classify animals based on their level in a food pyramid, students will participate in a hands-on simulation to help them understand how critical the balance of predators and prey is to the ecosystem by trying to create a sustainable food web system. During the presentation, students will meet a live animal ambassador and learn about its role in the ecosystem.
FORCES AND INTERACTIONS (NYSSLS GRADE 3)

Location: School  Presentation Style: Individual Class Visits
Instructional Resources: Magnet and magnetic/non-magnetic material, hands-on cleanup simulation

Magnets, a fun toy to play with and a useful tool to hold your report card on the fridge. Magnets are an important part of our lives, but how can they be used for the greater good? In this NYSSLS program, students will learn the basics of magnetism, how we observe them and use them in our lives. As we develop a more mature understanding of practical magnets, we will run a fun, hands on investigation of how magnets can be used for low impact environmental cleanup.

FOREST ECOLOGY

Location: School/Yorktown BOCES  Presentation Style: Individual Classes Outside if Possible
Instructional Resources: Introduction using Live Animal Ambassadors, Animal Artifacts with interpretive hike to follow

The focus of this program is a guided hike on a local nature trail. Using interpretive stops, games, and ‘hands-on’ activities, the students will be introduced to the temperate forest and the relationships between the habitat and its inhabitants. This program can be adapted to any grade level and many focus areas including food webs, human impact, sustainable management, problem solving, living and non-living things, and wildlife. A forest ecology program can also include a plot study, forest measurements, and tree identification.

GEOLOGY: ROCKIN’ THE VALLEY/EARTH SCIENCE: ROCKS & MINERALS

Location: School  Presentation Style: Assembly/Individual Class Visits
Instructional Resources: Projector, Geological artifacts, hands-on student experiments at stations

Is a rock really just a rock? During this program we will examine the three types of rocks: sedimentary, igneous and metamorphic to understand the differences between them. Using geological history and close examination we will determine why rocks are like puzzles, how fossils form, whether water is actually stronger than rock, where we get those amazing stones to polish our feet and delve into what truly makes a rock crumble!

HOW BEAVERS BUILT THE HUDSON VALLEY

Location: School  Presentation Style: Assembly followed by individual class visits
Instructional Resources: Projector, animal ambassador, animal artifacts, and Native American Artifacts

The ingenious beaver played an important role in the economic, cultural and ecological development of the Hudson Valley that can still be seen today. This program will use furs and skulls to introduce students to the beaver and what made its pelt so valuable. We will examine chew patterns to understand the beaver’s unique ability to alter its environment. Then through a detailed and hands-on presentation, we will examine the beaver’s place in the Hudson River’s ecology; how the beaver trade influenced the relationship between the colonists and the Native Americans; the impact of the beaver trade on local tribes, why the beaver is on the official seal of New York City; the impact of their decline on the 18th century economy as well as the environment of the Valley, and how their return has had both positive and negative impacts for residents of the Hudson Valley.
Hudson River
Location: School  Presentation Style: Assembly followed by Individual Class Visits
Instructional Resources: Projector, animal ambassador, animal artifacts, hands-on water activity

The Hudson River has played a dominant role in the history of New York State. Through discussion and an engaging presentation, this program will explore the history and ecology of the Hudson River. Special emphasis is placed on the river’s ecological problems, the condition of the river today, current events, and the future of the Hudson. Through a hands-on activity using water and pollution simulations, students will actualize their role as caretakers of the Hudson River Watershed to understand the effects of pollution on the aquatic and terrestrial life in and around the Hudson.

Insects: Incredible Creatures
Location: School  Presentation Style: Individual Class Visits
Instructional Resources: Projector, preserved insect specimens, live animal ambassador, insect guides

Did you know that there are more than a million different kinds of insects on our planet? Through a presentation and hands-on activities, students will learn the specific characteristics that entomologists use to identify insects and compare them to their relative, the spider. Every student will become an “amateur entomologist” as they learn about simple and complete metamorphosis, the difference between pests and helpful insects, and what role these insects play in our ecosystems. This program includes live animal ambassadors and specimens.

Introduction to Sustainability
Location: School  Presentation Style: Individual Class Visits
Instructional Resources: Projector and materials relating to sustainability

Sustainability is a word that has become a part of our daily lexicon. This program is designed to help students better understand what it means and how it applies to our daily lives. We will begin by learning about the mental models we as a society have been operating under for the past one hundred years and how these attitudes have formed our behaviors. Using a systems model, we will then examine a set of daily behaviors and choices we all make and track the resources used and pollutants produced using marbles. Then we will learn about the natural laws that guide our planet and go back to reexamine the behaviors and choices through these laws to determine if the resources and pollution produced has changed. After comparing the usage results, we will learn about how to create behavior change and new habits. Assembly Model Not Available - 1-2 classes/1 hour

Map Making Adventures
Location: School/Yorktown BOCES  Presentation Style: Individual Class Visits
Instructional Resources: Mapping boards and supplies, various map examples, optional Projector

Students will become junior cartographers in this marvelous mapping program! After learning about parts of a map and the many different types of maps, they will be broken up into small groups and challenged to map an area using the plane table mapping technique. This program includes options such as simple games, interactive presentations, and hands-on demonstrations. This program can be done either at Yorktown BOCES or on your school grounds.
MAPPING YOUR SCHOOL’S ECOLOGICAL RESOURCES
Location: School        Presentation Style: Individual Class Visits
Instructional Resources: Introduction, biological field study and animal artifacts
After a brief introduction about how scientists calculate animal and plant populations, we will go outside and do a field study of the animals and plants found on your school grounds. The outdoor activity will include mapping, how to calculate estimates and the natural services provided by the flora and fauna found.

MARINE ECOSYSTEMS
Location: School        Presentation Style: Individual Class Visits
Instructional Resources: Projector, specimens, models
75% of the earth’s surface is covered in water! This program introduces students to the different marine ecosystems and the life that inhabits our oceans. From the beach, down to the deep hydrothermal vent communities, using shells, plants and preserved specimens, models, colorful slides and real life stories, participants will learn about the animals and plants that live there, why the ocean is important to us, how humans are impacting the ocean and some of the ways humans are using what they are learning from ocean animals to solve human problems.

MONSTER STORMS (SPECIAL FEE)
Location: School        Presentation Style: Assembly/Individual Class Visits
Instructional Resources: Meteorologists, animal artifacts, live animal ambassador
In this unique and engaging program, will attend an assembly hosted by Jim Witt and CEE educators followed by one or more weather related programs. Choose between: a) Animals as Meteorologists b) Climate Change c) Animal adaptations d) Sustainability E) Watersheds.
Program Length: 3 hours per block of 50 students
If taking place at your school:
• Number of Rooms Needed: At least 2 (auditorium and one classroom)
• Technology Needed: smart boards and Skype available on the computer in the room where Jim Witt is presenting.

NATIVE AMERICAN STUDIES
Location: School        Presentation Style: Individual Class Visits
Instructional Resources: Projector, animal artifacts, Native American artifacts, games and toys, live animal ambassador
This program takes a close look at the indigenous tribes of the Hudson Valley and their fascinating culture. Students will learn about their pre-European lifestyles and philosophies, meet a live animal ambassador, and take part in hands-on activities such as examining fur pelts, playing native games and looking at their toys, exploring native artifacts, and playing a matching game between Native American and present-day items. In longer programs, Native American games and storytelling activities can be included if requested.
**NATURE ACTIVITIES TO RECONNECT WITH OUR NATURAL WORLD**

**Location: School**  
**Presentation Style: Individual Class Visits**  
**Instructional Resources:** game supplies

Nature Deficit Disorder? Not here! We will take your students outside to learn and connect with our natural world through a series of fun and educational nature games! This program can complement almost any area of focus from predator/prey relationships, to camouflage, trees, or animals. Just let us know what you are studying!

**NATURE SCAVENGER HUNT**

**Location: School/Yorktown BOCES**  
**Presentation Style: Individual Class Visits**  
**Instructional Resources:** scavenger hunt sheets, collection buckets, animal artifacts

Students will become detectives by using four of their five senses to search for several items in the outdoors such as a leaf, something round, water, or a live animal. Following the search, a discussion will focus on what they found and the role of those objects in our ecosystem.

**NATURE STORY TELLING: The Lorax or The Mitten**

**Location: School**  
**Presentation Style: Individual Class Visits**  
**Instructional Resources:** Animal artifacts, puppets, and storytelling books, outdoor activities relating to these stories

This program gives your students the opportunity to experience story telling in its purest form. Using animated voices, gestures, expressions and in some cases, songs, our story tellers will present a story with a nature or Native American theme that will engage and enthrall your students. This program can be tailored for specific items, shapes, smells, and numbers for primary students and may be adapted to include local history and folklore for older students. Specific story preferences can be requested.

**NOCTURNAL WORLD OF NEW YORK**

**Location: School**  
**Presentation Style: Assembly/Class Visits**  
**Instructional Resources:** Projector, listening to animal calls, animal artifacts, live animal ambassador

Using pictures of nocturnal and diurnal animals, students will be asked to create a list of differences between them and explore their special adaptations. Through the use of animal sounds, artifacts, and a live ambassador animal, students will learn about why some animals are active at night and how their specialized senses enable them to survive in the dark.

**OFF-SITE POND STUDY**

**Location: Local Pond or wetland**  
**Presentation Style: Individual Class Visits**  
**Instructional Resources:** Pond exploration materials and instruments

This program will bring students out of the classroom and into a pond ecosystem! Schools have the option to choose a local pond area where their students will learn to use CEE provided scoop nets to catch samples of the animals and insects living there. Following the collection period, the group will observe and identify their catch, using identification keys and expert Naturalists. They will learn about metamorphosis, interdependence, food chains, some of the organism’s fascinating adaptation as well as the conditions necessary for a healthy pond.
**OWL PELLET STUDY (MATERIAL FEE)**

*Location: School*  
*Presentation Style: Assembly followed by Individual Class Visits*

*Instructional Resources: Projector, Live owl ambassador, animal artifacts*

Owls are very unique birds that have fascinated humans throughout history. In this program, students will learn about their hunting and survival adaptations. They will be introduced to the sights and sounds of the owls native to New York State, and meet one of our resident ambassador owls! Following a discussion about the owl’s unique digestive system, students will have the opportunity to dissect an owl pellet to determine what that owl had for dinner to help them understand the owl’s role in the ecosystem! *Your district will be billed a material fee of $2.50 per student.*

**PEPPERED MOTH: CASE OF THE COLOR CHANGING CREATURE (NYSSLS GRADE 3)**

*Location: School*  
*Presentation Style: Individual Class Visits*

*Instructional Resources: Projector, animal artifacts, game supplies*

Why did the Peppered Moth population change color between 1800 and 1900? Students will learn some background information about Manchester, England, the Industrial Revolution, and what patterns were being observed in the Peppered Moth population, then use this evidence to construct an explanation about what was causing the color change. They will also perform an investigation to demonstrate this classic example of natural selection.

**POLLINATOR PARTNERSHIPS**

*Location: School*  
*Presentation Style: Individual Class Visits*

*Instructional Resources: Projector, animal artifacts, game supplies*

In this program, students will be introduced to the important interactions between plants and pollinators. Through our interactive presentation, students will investigate butterflies, hummingbirds, bees, and bats to learn how they are specially adapted to pollinate certain flowers and how flowers are dependent on pollinators. After exploring the various pollinator adaptations, we can either head outside to explore your school garden or woods to look for signs of pollination or play an exciting pollination tag game on your school’s field.

**RECYCLING: WHAT HAPPENS TO MY RECYCLABLES?**

*Location: School*  
*Presentation Style: Assembly or Individual Class Visits*

*Instructional Resources: Projector, materials related to sustainability*

Recycling is something that is familiar to almost everyone, but what happens to the item once it leaves the bin? This program will give your students a better understanding of the route a recycled item takes to become something new, examples of products being made with recycled content, and the additional advantages they offer in terms of sustainability. This program will also examine some examples of solid waste found in our home and workplace that can be kept out of the waste stream altogether.
SEED STUDY
Location: School         Presentation Style: Individual Class Visits
Instructional Resources: Projector, seed sorting activity, seed game
Through seed sorting and critical thinking, students will learn the differences between a seed and a non-seed in this fun, interactive program! The lesson will also include the parts of a seed and all of the different ways seeds travel. After investigating many different types of seeds, students will play a game where they discover how hard it is for seeds to sprout, and why they are so valuable to the natural world.

SKULL STUDY
Location: School         Presentation Style: Individual Class Visits
Instructional Resources: Projector, animal skulls, animal artifacts, recording sheets
What conclusions can your students draw about an animal by observing its skull? This program begins with a presentation focused on the adaptations we can learn about from a skull. Working in small groups, students will examine the skull assigned to them and make observations of eye location, teeth configuration, nasal passageways, and size. They then share their data with the class and their hypothesis of what animal it came from.

SOIL - THE BASIS OF LIFE
Location: School         Presentation Style: Individual Class Visits
Instructional Resources: Projector, hands on soil making experiment, live specimens, animal ambassadors, natural artifacts
From the food we eat, to the clothes we wear, to the air we breathe, humanity depends upon the soil beneath our feet. Although it is only a thin layer of our planet, it nurtures life, supports cities, forests and oceans and feeds all terrestrial life on Earth. Soil could arguably be called Earth’s most critical resource. Part biology, part chemistry and part CSI, students will learn the “dirt” on soil as we examine its remarkable properties, its crucial role in the carbon cycle, how it is made and its ecological importance.

SPECIES VARIATION (NYSSLS GRADE 3)
Location: School         Presentation Style: Individual Class Visits
Instructional Resources: Projector, hands on student activity, animal artifacts
Does every individual in a species look the same? Students will learn about variation of traits through an interactive presentation and viewing two similar live animals. They will also practice making claims supported by evidence and reasoning during an activity designed to help them better understand how offspring are “like but not exactly like” their parents.

TRASH FREE LUNCH
Location: School         Presentation Style: Individual Class Visits
Instructional Resources: Projector, examples of different lunch packaging and recycling material
The average elementary school produces 324 pounds of lunch trash every day. That adds up to 58,329 pounds a year! Not only is that a lot of trash to deal with, but a lot of the packaging gets used once and thrown away. What a waste of natural resources! This program helps young people understand the consequences of throw-away lunches and how to pack a no-trash lunch.
**Tree Life Cycle**

*Location: School*  
*Presentation Style: Individual Class Visits*

*Instructional Resources: Projector, leaf and twig presses, tree “cookies”*

In this program, students will learn about the two fascinating cycles of a tree, how trees communicate their needs, and how they transfer their nutrients to neighboring plants before they die. After an interactive presentation, students will explore all parts of a tree from leaves to the trunk using our many leaf, twig, and trunk specimens. Using the information from the presentation, students will have the opportunity to count the annual rings in a tree “cookie” and deduce the life history of the tree.

**Tropical Rainforests**

*Location: School*  
*Presentation Style: Assembly followed by Individual Class Visit*

*Instructional Resources: Projector, animal artifacts, rainforest artifacts, live animal ambassador*

Tropical rainforests are home to more than half of the plant and animal species on Earth and are the oldest and most diverse ecosystems on our planet today! Yet deforestation of these amazing ecosystems is occurring at a rate of over 20 million acres of forests each year. Students will learn about the locations of rainforests around the world, the layers of a rainforest, and the unique plants and animals that inhabit them. Interactive stations with colorful and rare artifacts will give students a hands-on opportunity to discover more of the animals, products, and cultures found in these rainforests. This program will include a live animal ambassador during the stations.

**Turtles, Frogs, Toads, Snakes, What’s the Difference?**

*Location: School*  
*Presentation Style: Individual Class Visits*

*Instructional Resources: Visual presentation, animal artifacts, preserved animal specimens, photographs, live animal ambassador*

Turtles, frogs, toads, snakes... what’s the difference? This program examines the characteristics and adaptations of amphibians and reptiles, and the differences among species within each class. Students will then rotate through hands-on stations including amphibian and reptile artifacts and preserved specimens. Students will also meet a living reptile, to dispel some common misconceptions about them.

**Understanding the Commons**

*Location: School*  
*Presentation Style: Individual Class Visits*

*Instructional Resources: Projector, hands on student activity, animal artifacts*

Healthy Commons such as air, biodiversity, climate regulation, our collective future, water, libraries, public health, heritage sites and top soil are what we all depend on, and for which we are all responsible. Through a series of activities, this program will introduce students to the concept of the commons, their value and importance in our lives and for our future. Together the group will establish a list of responsibilities, behaviors and actions to care for our Commons.
UNDERSTANDING WATERSHEDS
Location: School    Presentation Style: Individual Class Visits
Instructional Resources: Projector, hands-on water activity
What’s a watershed? Using hands on models, students will explore watersheds and groundwater, point and non-point source pollution, and learn how this natural resource connects us all. The class will then learn about local water sources and issues that the Lower Hudson River Watershed is facing, and how they can reduce their impact on their watershed.

WEATHER
Location: School    Presentation Style: Assembly/Individual Class Visits    Instructional Resources: Projector, meteorological tools, data collection pages
Rain, sleet, snow, humidity, muggy, what does it all mean!? This program will introduce the concepts and tools necessary to understand the weather. Students will learn about weather forecasting through the use of simple meteorology tools, how the water cycle affects our daily weather, and what different cloud types tell us about the coming weather. They will leave the program with an understanding of the importance of weather prediction and how to collect weather data. After a presentation indoors, we will head outside to use meteorology tools to collect data and analyze the data collected to make a short-term forecast.

WE ALL LIVE IN A WATERSHED
Location: School    Presentation Style: Individual Class Visits
Instructional Resources: Projector, hands-on water activity
This program will help students understand the importance of watersheds in their community and on a global scale. Hands-on activities, such as creating a watershed in a bowl, “Who Dirtied the Watershed”, and using watershed and erosion models, will help demonstrate the properties of water, the components of the hydrologic cycle, how a shed works and the impact of water pollution. The program will end with a view of the Hudson Valley watershed, how humans have impacted it and what individuals can do to have a positive impact on our watershed.

WHERE DOES MY FOOD COME FROM? (FORMALLY SUPERMARKET BOTANY)
Location: School    Presentation Style: Individual Class Visits
Instructional Resources: Projector, food samples and games
What seeds do we find in the produce section of the supermarket? Exploring food typically found in the produce section, we will determine what parts are edible and if a new plant can be grown from a seed from one of those plants. Through games and activities, students will learn all about how food arrives at the supermarket and will never look at the produce aisle the same way again!
WHERE DOES MY GARBAGE GO?
Location: School         Presentation Style: Individual Class Visits
Instructional Resources: Projector, materials related to sustainability
Lunch is over and your students are anxious to get outside for recess. They clear off their tables, and toss their uneaten food, paper napkins and cups, and plastic utensils into the nearest trash can. But where does it go from there? The average American generates approximately 6 pounds each of trash per day! There’s everything from paper, uneaten food, construction leftovers, cut grass, plastic, glass, metal, old batteries, computers, phones, and tons of other stuff. Come take a journey with your garbage to learn where it goes and along the way encounter a waste-to-energy incinerator, landfills, a recycling plant and composting.

WILDLIFE
Location: School         Presentation Style: Assembly/Class Visits
Instructional Resources: Projector, pelts, skulls, shells, claws, artifacts, models and live animals
This wildlife program is designed to give students an understanding of the classification system of animals, animal habitats, animal adaptations and consumers’ crucial role within an ecosystem. Among the topics that will be discussed are camoufage, natural services such as how fox and possums keep ticks away, and threatened and endangered species. Through demonstrations and activities using pelts, skulls, and many of our rare animal artifacts, students will gain an up close and personal understanding of wildlife and their role in the ecosystem and our lives.

WILDLIFE CSI
Location: School         Presentation Style: Individual Class Visits
Instructional Resources: Hands-on investigation for animal evidence, live animal ambassador
Coyotes, raccoons, owls, bobcats, and thousands of other wild animals are impressive creatures to see in the natural world. Unfortunately for the curious observer, some of these animals are also among the most reclusive, their presence only evident through the clues they leave behind. Students will investigate several wildlife “crime” scenes to find evidence that can include tracks, scat, food remains, feathers or fur, to draw conclusions about who was there and what happened. The program will conclude with a discussion to help students better understand predator and prey relationships and the food chain and will include a live animal ambassador.

WINTER ADAPTATIONS
Location: School         Presentation Style: Assembly/Class Visits
Instructional Resources: Projector, pelts, skulls, shells, claws, artifacts, models and live animals
There are four main methods animals use to survive the winter: go dormant, hibernate, migrate, or stay active. This program introduces students to each method, how it is done, and which animals use each method. During the interactive stations, students will examine animal pelts, preserved specimens and skulls of various animals that use each method, do an experiment to test the insulation quality of blubber and meet one of our animal ambassadors that would normally be dormant or hibernating in the wild.