

CEE CLASSIC AND NYSSLS PROGRAMS

A, BEE, C'S OF THE HONEY BEE

Location: School

Presentation Style: Assembly/Class Visits

Instructional Resources: PP Presentation, animal artifacts

Only female honey bee's 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 all of the equipment beekeepers use as they learn how we get honey from the hive to the jar.

AMAZING JOURNEY OF WATER

Location: School/Madden

Presentation Style: Assembly/Class Visits

Instructional Resources: PP Presentation, a highly interactive "water molecule" simulation involving dice rolling and a representation of water moving around the world

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 SYSTEM MYSTERY: CASE OF THE LOST PREDATOR NYSSLS GRADE 2

Location: School/Madden

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, animal artifacts, live animal ambassador

What went wrong in Yellowstone? This program investigates the historical case of the trophic cascading within the Yellowstone ecological community. Using an interactive game, and short Power Point students will examine the food web of this community over a 40-year period to gather evidence to support the claim that there is something missing from this ecosystem that has caused the community's decline. The second part of the program will examine what happened when the missing predator was reintroduced and how scientists are tracking and observing patterns that can be applied to other declining ecosystems. The program will use pelts and animal artifacts.

BAT & MOTH

Location: School

Presentation Style: Assembly followed by Individual Class Visits

Instructional Resources: PP presentation, 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.

BAT AND MOTH: AN EVOLUTIONARY ARMS RACE SCI 21 ALIVE

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, animal artifacts

Bats and moths are an example of an evolutionary struggle between competing organisms that over time develop adaptations and counter-adaptations against each other in order to survive. This program will examine the adaptations that bats have developed and the counter strategies the moth has evolved to detect and evade the moth's strategies. Examples of other species' evolutionary struggles will be presented to illustrate co-evolution and adaptation.

A – Z LIST OF PROGRAMS

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BIOGRAPHY OF A TOMATO: A LESSON IN SYSTEMS THINKING

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP Presentation

This program presents two systems fables: the narrative of a typical North American tomato and one of a locally grown New York tomato. Both fables are told using a PowerPoint and follow the tomato from the development of the seed and its parts, planting and growth, needs, extraction from nature and different routes each will take to end up on our tables. Students will then use the information from the fables to compare the energy, resources and ecosystem interactions that went into the development and growth of each tomato. Student will be asked to assess both positive and negative outputs to help them better understand the implications of how and where we get our food. **Assembly Model Not Available - 1-2 classes/1 hour**

BIOMIMICRY DESIGN CHALLENGE

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, biomimicry products, design challenge cards

This program is a follow up to the Introduction to Biomimicry program which is prerequisite. After a brief review of biomimicry, students are introduced to the two approaches to biomimicry design using actual design examples: biology to challenge and challenge to biology. We explore the difference between bio-inspired and biomimicry by examining the earth operating principles vs the human operating principles. From that we will extrapolate a set of sustainable guide lines that student will use in the evaluation part of their design process. Finally, students are given a design challenge around water. To support their work, they will be given a set of organism cards, and a walk through of AskNature.org. This challenge is taken over by the teacher as a follow up to this program. One suggestion is to have a bio-inspired design challenge within the school.

BIOMIMICRY INTRODUCTION: THE SCIENCE OF TODAY AND JOBS OF TOMORROW

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: short PP Presentation, biomimicry products, biomimicry matching cards

What is the connection between a \$100 bill and a beetle or a moth eye and a cell phone screen? These are examples of a rapidly growing discipline called Biomimicry which studies nature's best ideas and then imitates these designs and processes to solve human challenges. This program will use PowerPoint and actual bio-inspired products to help students better understand nature as a source of ideas and the concept of bio-inspired design. Student will participate in an exercise that asks them to match organisms with bio-inspired products. This will be followed by a discussion of why the organism was used. **This program can be done as a 1-hour assembly for a full grade level or done as in-class program for individual classes throughout the day.**

BIRDS, BATS, BUTTERFLIES AND BLOOMS: WHAT'S THE CONNECTION? NYSSLS GRADE 2

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, animal artifacts, instructional game

Birds, bats, butterflies and blooms, what do they have in common? To solve this mystery, we will explore how plants and pollinators get their needs met through the process of pollination. Students will use mixed media, animal artifacts as well as an interactive game to find evidence to support the claim that animals help pollinate plants.

BIRDS & RAPTORS

Location: School/Madden

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, 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 have the opportunity to observe these adaptations on a live ambassador bird of prey.

BIRDS & WILDLIFE SURVIVAL BEHAVIORS NYSSLS GRADE 1

Location: School/Madden

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, animal artifacts, live animal ambassador

Looking at birds and other wildlife, students will examine the patterns in survival behaviors. By examining animal artifacts and media and playing a survival game, students will explore various survival techniques including vocalizations and camouflage. Students will also engage in observation of a live animal ambassador, learn what survival behaviors help the animal, and how those techniques are used by adults to protect their young.

BUTTERFLIES

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, 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 head 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.

CEMETERY STUDY: USING HISTORICAL DATA TO BRING COLONIAL HISTORY ALIVE

Location: Madden

Presentation Style: Individual classes

Instructional Resources: data sheets, grave rubbing materials

Using the information provided by the cemetery stones in the historical Knapp Family Cemetery on the Madden property, students will collect data to form a picture of what life was like for the early settlers in the area. On the short hike to the cemetery, students will learn of some the intriguing history of Putnam's earliest family and their unique way of life. After gathering and recording their data, students will be engaged in a discussion about the family tree, nutrition, food preservation, lifestyle, human physiology, disease, illnesses and daily responsibilities of this historic family. The program concludes with a demonstration on how to make a headstone rubbing so that each student will be able to make and take home their very own headstone rubbing.

CHALLENGE COURSE/TEAM BUILDING/DIGNITY ACT SUPPORT (Special fee may apply depending on group size)

Location: Madden or Yorktown

Presentation Style: students will be put into groups of 12-14

Instructional Resources: all outdoors using initiative game material and challenge course

The challenge course is an extremely effective method of creating bonds and developing a positive, supportive and safe classroom environment. Students will be divided into groups of 11-13 and asked to work together to solve a series of physical and mental challenges. In the process of solving the challenges, they will utilize such skills as team building, effective communication, problem solving, acceptance of others, risk taking, physical and emotional support and working with people of different styles. Equally important, the participants will have fun together. Often, the student who doesn't do well in the classroom, excels on the challenge course and some children who do well in the classroom can struggle in this setting. Consequently, students see their peers and teachers see their students in a very different light, changing the classroom environment and creating a bond to last the entire year. The first part of the program will be spent doing team building activities to prepare the group for the challenge course. The remainder of the day is spent on the challenge course. **FOR THOSE THAT CAN'T COME TO OUR CHALLENGE COURSE, WE CAN BRING THE PROGRAM TO YOU! SEE THE TEAM BUILDING ACTIVITIES PROGRAM LISTING.**

CLASSROOM POND STUDY

Location: School **Presentation Style:** Assembly/Class Visits **Instructional Resources:** PP Presentation, live animals from a pond, preserved animals and specimens, ID Charts

This program is designed for groups that are unable to travel to Madden. 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 Madden's 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:** PP Presentation, 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.**

COLONIAL LIVING SKILLS – AT MADDEN OR AT YOUR SCHOOL

Location: School/Madden **Presentation Style:** Individual Class Visits **Instructional Resources:** all materials provided. At school programs need space that can get messy.

Bring your students to Madden from November to March so they can spend a day in the life of a colonial child! This completely hands-on experience will help children of today learn the skills and tasks required of an 8-10 year-old in Colonial America. Students will be broken up into three groups and rotate through three, one-hour activities: **colonial pretzel making and butter churning, candle making, and toy making or tin smiting.** (Parents/Teachers lead the simple pretzel making/butter churning activity.) In November and December, weather permitting, groups that brings apples can help press apples to make apple cider and enjoy it along with their pretzels and butter! In late February and March, students can participate in a maple sugaring demonstration. All students leave Madden with their own toy and candle. Please indicate which activity, toy making or tin smiting, you would like to do, and if you would like to make cider or participate in the maple sugaring demonstration. This program is also available as an in-school program. In-school activity choices include: Jacob's Ladder, tin smiting, whirly gigs, quill pen and ink, and colonial games. **Please bring 3 parent chaperones per 25 students.**

COMPASS SKILL BUILDING GAME

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/Madden **Presentation Style:** Assembly/Class Visits **Instructional Resources:** PP Presentation, 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.

CONSERVATION BIOLOGY: INTRODUCTION TO THE CONCEPTS OF CONSERVATION AND ENVIRONMENTAL STEWARDSHIP

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP Presentation, live animal ambassadors, Animal Artifacts

This program introduces students to the crucial role conservation plays in biodiversity and healthy ecosystems. To help students understand the role of conservation, we will examine the history of conservation biology, the Endangered Species Act and real-life examples of conservation efforts at work. Live animal ambassadors, such as our birds of prey and other animals, will be used to illustrate animal rehabilitation and environmental stewardship.

COOPERATIVE KINDNESS (TEAMBUILDING FOR GRADES 3 & 4)

Location: School/Madden

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.**

CORAL REEFS

Location: School

Presentation Style: Individual class visits

Instructional Resources: PP presentation, animal artifacts

Coral Reefs are one of the most diverse ecosystems on the planet and are often compared to the tropical rainforests! This program is taught by Dorna Schroeter, CEE Program Coordinator, who has spent the past 30 years diving, exploring, and studying the coral reefs of the Florida Keys. Through a multimedia presentation, the group will descend to a coral reef to examine its abundance and beauty. Students will explore where reefs are located and why, who lives there, the health of today's reefs, humankind's impact on this incredible ecosystem, the coral polyp and how it functions, its role, adaptations, and interactions among the reef creatures. Incorporated throughout the program will be stories from Dorna's 500 dives that will engage, excite, and motivate students! **Assembly Model Not Available - 1-2 classes/1 hour**

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

A – Z LIST OF PROGRAMS

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MORE THAN six programs can be done in one day. **Program Cost:** \$175/member \$190/non-member/program or \$600/member \$650/non-member for a full day (no more than 6 programs) This program is eligible for state aid through the environmental CO-SER.

ENERGY TRANSFER IN PREDATOR/PREY RELATIONSHIPS (formally Food Webs) SCI 21 ALIVE

Location: School/Madden

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, animal artifacts, live animal ambassador

Energy flows in predator-prey relationships will be studied using the food pyramid and trophic levels, following a discussion about food webs. This program will explore energy transfer, bioaccumulation and biomagnification, indirect interactions among species, and how trophic cascading can affect the health of an ecosystem. This program will include a live animal ambassador.

EXAMINING INVASIVE & NATIVE COMPETITION SCI 21 ALIVE

Location: School/Madden

Presentation Style: Individual class presentation

Instructor 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.

EXPLORING THE WEATHER WITH MY SENSES NYSSLS GRADE K

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: Hands-on senses stations, weather data sheets, live animal ambassador

This program introduces students to the various kinds of weather we have in the Hudson valley. Through engaging and a hands-on presentation, students will learn what makes weather and how meteorologists measure and record weather conditions. The class will make its way outside and use real meteorology tools to gather weather data, then analyze the data and look for local weather patterns.

FEARSOME PREDATOR: CARRYING CAPACITY OF AN ECOSYSTEM (AVAILABLE AS AN EVENING PROGRAM)

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, 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.

This assembly program is available as an in-school program at your school as well as an evening program at a residential/overnight facility.

FLAVORS OF THE FOREST: INGREDIENTS FOR A DIVERSE HABITAT NYSSLS GRADE 2

Location: School/Madden

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, animal artifacts, live animal ambassador

In this program students will begin by exploring the Madden Forest to learn what makes a forest, a forest. They will make observations and gather evidence to support the claim that each part of the ecosystem supports the whole forest system. In the second half of the program, students will explore a wetland to compare the similarities and differences between the plants and animals in the two ecosystems. Students will be asked to describe the patterns that occur between the plants and animals each ecosystem. This program would be best paired with Pond Pie: Ingredients for a Diverse Habitat.

FOOD WEBS: WHO EATS WHOM?

Location: School/Madden 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.

FOREST ECOLOGY

Location: School/Madden 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 either at Madden property or 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.

FOREST MEASUREMENTS/PLOT STUDY SCI 21 ALIVE

Location: School/Madden Presentation Style: Individual Class Visits Instructional Resources: short PP Presentation, Forestry equipment, Tree/plant specimens

Trees come in all shapes and sizes and are an excellent tool for a mathematical exercise! Students will measure trees to become familiar with the tree structure as they learn the importance of measuring techniques and standard units of measurement. Activities will vary based on the grade level. Tools and skills include: Biltmore stick, ruler, diameter tape, and pacing.

FOREST SYSTEMS NYSSLS GRADE K

Location: Madden Presentation Style: Individual Class Visits Instructional Resources: pictures of plants and animals, soil compaction experiment

Beginning with an introduction to the forest habitat, students will establish the pattern of what all living things need to survive. They will make observations of living organisms during an interpretive walk, discover what causes positive and negative impacts to the forest, and learn how to reduce their impact on the forest while in the classroom.

GEOLOGY: ROCKIN' THE VALLEY/EARTH SCIENCE: ROCKS & MINERALS SCI 21 ALIVE

Location: School Presentation Style: Assembly/Individual Class Visits Instructional Resources: PP Presentation, 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!

GROWING UP IN A POND: SIMILARITIES AND DIFFERENCES (SPRING ONLY) NYSSLS GRADE 1

Location: School Presentation Style: Individual Class Visits Instructional Resources: PP presentation, insect mounts, live animal ambassadors

Using artifacts, live animals (availability based on weather conditions), and media, students will explore the lifecycles of some plants and animals that live in a pond. They will make observations of structures and patterns to determine the similarities and differences between adults and juveniles. As an in-class assessment, students will be given numerous pictures and artifacts of juvenile animal and asked to identify the juvenile stage of one pond animal and explain their choices. If held at Madden, the program will begin with specimen collection at the pond.

HIBERNATION/WINTER ADAPTATIONS/BLUBBER GLOVE

Location: School/Madden **Presentation Style:** Assembly/Class Visits **Instructional Resources:** PP presentation, animal artifacts, blubber experiment, live animal ambassadors

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.

HOW BEAVERS BUILT THE HUDSON VALLEY SCI 21 ALIVE

Location: School **Program Style:** Assembly followed by individual class visits **Instructor Resources:** PP Presentation, 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.

HOW NATURE ENGINEERS FOR WINTER SURVIVAL NYSSLS GRADE 1

Location: School **Presentation Style:** Individual Class Visits **Instructional Resources:** PP presentation, plant and animal artifacts, live animal ambassador

Students will be introduced to how animals use their external body parts to survive in the winter. Through the exploration of animal artifacts, students will use structure and function as evidence to determine which animals go dormant, migrate, and stay active. The program will conclude with an introduction to Biomimicry and several bio-inspired designs devices that mimic external animal structures which help humans survive and meet their needs. A post program design activity will be provided. The activity asks students to pick a human problem and choose one external body part that helps plants and animals survive winter to inspire a design solution to their chosen problem.

HUDSON RIVER SCI 21 ALIVE

Location: School **Program Style:** Assembly followed by Individual Class Visits **Instructor Resources:** PP Presentation, 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.

IF THE WORLD WERE A VILLAGE: MULTIPLE PERSPECTIVES (for groups of 100-150 students)

Location: School **Program Style:** Assembly **Instructor Resources:** PP Presentation, materials related to sustainability

On a planet of over seven billion people, who lives here, what is life like for residents of our planet and how do our lifestyles affect the health of Planet Earth? Students will be broken down into regions that reflect the world's population. Using illuminating images and revealing data from the books, *If the World Were a Village* and *Material World*, students will be asked to represent their region as we examine food, sanitation, clothing, water, transportation, energy use. Then, through a revealing demonstration we will compare the impact of different life styles and choices on our planetary resources and pollution levels. We will introduce the concept of "Needs versus Wants" to help students examine their assumptions and expectations about their lifestyles, understand how different their lives are from their peers in other countries, and help them see themselves as global citizens. **Instructor needs a large open space with no furniture, a screen and projector set up, as well as a microphone.**

I'M ONLY ONE PERSON, WHAT CAN I DO? – Large Group Assembly

Location: School

Program Style: Assembly

Instructor Resources: PP Presentation, materials related to sustainability

This assembly program is a fast-paced, interactive look at the pressing issues of consumerism, solid waste and energy use. Students will learn about the attitudes that got us into this mess and the natural laws which guide how our planet operates. Then using the issue of trash we will examine behaviors based on the old attitudes and how to change those behaviors so they align with the natural laws. The second part of the presentation examines how we use energy. Students will participate in an energy quiz and then look at new energy saving behaviors. Examples of new more sustainable products are used throughout the presentation.

INSECTS: INCREDIBLE CREATURES

Location: School/Madden

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, 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.

INSECTS: NATURE'S ARCHITECTS NYSSLS GRADE K

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, insect mounts, live animal ambassador

Students will learn the basic parts of an insect and then make the claim that “Insects can change their environment”. While investigating three insects, students will observe the pattern that animals change the environment to meet their needs and use those insects as evidence to support or refute their claim. The program concludes with a hands-on activity and a live animal ambassador that will be used as more evidence to support the claim made at the beginning of the program.

INTRODUCTION TO SUSTAINABILITY

Location: School

Program Style: Individual Class Visits

Instructor Resources: PP Presentation 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**

KEEP IN TOUCH

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: Animal artifacts, live animal ambassador

In this sensory program, students will explore four of our five senses (we save taste for lunch time) through various interactive activities. These can include touching a mystery object in a box or bag and describing the object using descriptive words; smelling various smell jars to identify the item in the jar; using insect viewers and rainbow glasses to view the classroom; and listening to the sounds of common animals made by their classmates, then trying to identify the animal makes that sound. Then, using pictures, live animals, and pelts, they will learn how some common animals use their senses.

MAP MAKING ADVENTURE

Location: School/Madden **Presentation Style:** Individual Class Visits **Instructional Resources:** Mapping boards and supplies, various map examples, optional PP presentation

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 Madden or on your school grounds.

MAPPING YOUR SCHOOL'S ECOLOGICAL RESOURCES SCI 21 ALIVE

Location: School **Presentation Style:** Individual Class Visits **Instructor 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/Madden **Presentation Style:** Class Visits **Instructional Resources:** PP presentation, 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.

MODELING PLANT AND ANIMAL SYSTEMS: THE BEAR AND THE BEECHNUT NYSSLS GRADE K

Location: School **Presentation Style:** Individual Class Visits **Instructional Resources:** Animal artifacts, beech nuts, animal artifacts and laminated pictures, live animal ambassador

Using animal and plant artifacts from different habitats, students will draw models of plants and animals getting what they need from the places they live and the system of which they are a part. A live animal ambassador will be brought to the class for students to explore and to demonstrate what part an animal plays in the habitat it lives. This program contains a formative assessment of the models that students will create and provides a follow up assessment teachers can use.

MONSTER STORMS SCI 21 ALIVE (SPECIAL FEE)

This program can take place at Madden or your school. In this unique and engaging program, students will rotate between three activities:

- **WEATHER PROGRAM** with meteorologist and radio personality, Jim Witt
- **CLASS:** Animals as Meteorologists OR Climate Change. Both feature live animals.
- **HANDS-ON, INTERACTIVE ACTIVITY** focused on either: animal adaptations, sustainability or watersheds.

Program Length: 3 hours per block of 50 students

If taking place at your school:

- Number of Rooms Needed: 3
- Technology Needed: smart boards and Skype available on the computer in the room where Jim Witt is presenting

FMI: <http://www.pnwboces.org/pdf/Environmental/MonsterStormsFlyer-Registration.aspx>

NATIVE AMERICAN

Location: School/Madden **Presentation Style:** Individual Class Visits **Instructional Resources:** PP presentation, 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. On trips to the Madden Outdoor Education Center, students will also visit a replica of a Native American wigwam.

NATIVE AMERICAN ARTIFACTS & TOOLS

Location: School/Madden **Presentation Style:** Individual Class Visits **Instructor Resources:** PP Presentation, Native American Artifacts, Animal Artifacts, Live Animal Ambassador

This program introduces students to the indigenous people of the Hudson Valley and their fascinating culture. Students will learn about pre-European lifestyles and philosophies through the use of ancient artifacts (some over 2000 years old), clothes, tools and furs. Students will do a matching activity using the ancient tools and artifacts with modern tools.

NATURE ACTIVITIES TO RECONNECT WITH OUR NATURAL WORLD

Location: School/Madden **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/Madden **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 a number of 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

Location: School/Madden **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.

NATURE'S ENGINEERS: INSECTS NYSSLS GRADE 1

Location: School **Presentation Style:** Individual Class Visits **Instructional Resources:** PP presentation, insect mounts, live animal ambassador

Students will be introduced to how insects use their external body parts to survive. Through the exploration of unique artifacts, students will use structure and function as evidence to determine which animals are insects and which are not. The program concludes with an introduction to biomimicry and a design activity using a particular insect and its unique way of capturing water to inspire design solutions that they could use to collect water.

NOCTURNAL WORLD OF NEW YORK

Location: School

Presentation Style: Assembly/Class Visits

Instructional Resources: PP presentation, 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.

NO-TRASH LUNCH

Location: School/Madden

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, 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.

OIL SPILLS: WHERE DID THE OIL GO? SCI 21 ALIVE

Location: School

Program Style: Individual Class Visits

Instructor Resources: PP Presentation, hands-on experiment

Approximately 206 million gallons of oil spilled into the Gulf of Mexico over a period of 86 days in the Spring and Summer of 2010. Today there is no oil to be seen. Where did it go? What was the effect of the spill on local ecosystems and human health? This program will examine these questions as well as how nature is helping to clean up some of the oil through the molecular and microbial food web. We will also look at how human efforts to clean up the oil have affected local environments, where hidden oil is still being found today and some of the long term economic and environmental goals. **This program can be done as a 1-hour assembly for a full grade level or done as an in-class program for individual classes throughout the day.**

ORIENTEERING SCI 21 ALIVE

Location: Madden

Presentation Style: Individual Class Visits

Instructor Resources: Compasses interactive compass and pacing activity, orienteering trails

During this full day program at Madden, students will learn the parts of a compass and how to use it. Next to reinforce their navigation skills, they will play the compass circle game and then learn how to measure distances through the use of pacing. After lunch, students will be taught to use their newly acquired skills to orienteer and will be sent out on the orienteering trails that crisscross through the woods of Madden.

OWL PELLET STUDY (MATERIAL FEE) SCI 21 ALIVE

Location: School

Presentation Style: Assembly followed by Individual Class Visits

Instructor Resources: PP Presentation, 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 \$2.00 per student.**

POLLINATOR PARTNERSHIPS

Location: School/Madden **Presentation Style:** Individual Class Visits **Instructional Resources:** PP presentation, 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.

POND ECOLOGY (SPRING ONLY)

Location: Madden/Local Pond near School **Presentation Style:** Individual Class Visits **Instructional Resources:** models and live organisms from the pond

Students will determine the differences between a pond and a lake, before going outside to visit the Madden pond! There, they will use 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, learn about metamorphosis, interdependence, food chains, some of the organism's fascinating adaptation as well as the conditions necessary for a healthy pond. If you can't come to Madden, we can bring the pond to you!! See our *Classroom Pond Study* program.

POND PIE: INGREDIENTS FOR A DIVERSE HABITAT NYSSLS GRADE 2

Location: School/Madden **Presentation Style:** Individual Class Visits **Instructional Resources:** live pond specimens, live animal ambassador, pictures and ID keys

Students will explore the Madden Pond and learn what makes a pond a pond. They will begin by together creating a recipe for Pond Pie. Then they will spend time at the pond collecting organisms. After a short collection period, they will compare the similarities and differences of the organisms and describe the patterns that occur. They will conclude by making observations to provide evidence to support the claim that each part of the ecosystem supports the whole pond system. This program would be best paired with Flavors of the Forest: Ingredients for a Diverse Habitat.

RECYCLING: WHAT HAPPENS TO MY RECYCLABLES?

Location: School **Presentation Style:** Assembly or Individual Class Visits **Instructional Resources:** PP Presentation, 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.

SECRET LIFE OF THE AMERICAN HAMBURGER & OTHER FAVORITE TEENAGE FOODS

Location: School **Presentation Style:** Assembly or Individual Class Visits **Instructional Resources:** PP Presentation

The average American eats more than 68 pounds of beef a year. That's well over a pound a week. The problem is that there is a lot more to every hamburger than just the meat. This is not a vegetarian vs. meat eater program, it is a systems analysis that enables students to examine the full cycle of common foods eaten by Americans from the field/pasture to the plate. Students will create systems maps which will inventory and calculate the resources used by a number of common food items along with healthy, locally produced alternatives. Using the analysis of each system, students will be asked to create an argument, using evidence, on the sustainability of each. ***This program can be done as a 1-hour assembly for a full grade level or done as in-class program for individual classes throughout the day.***

SEED DISPERSAL AND POLLINATION: JOURNEY OF A SEED NYSSLS GRADE 2

Location: School/Madden Presentation Style: Individual Class Visits Instructional Resources: Pictures, seeds and an interactive game

What does a seed need to grow? How do they get from one place to another? How does the seed's structure and function help it to survive? During an activity with actual seeds, students will create models to communicate the way that different seeds are dispersed to provide evidence about how hard it is for seed to grow.

SEED STUDY

Location: School/Madden Presentation Style: Individual Class Visits Instructional Resources: PP presentation, 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: PP presentation, 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.

SNOWSHOEING ADVENTURE (WINTER MONTHS/SNOW ONLY)

Location: School/Madden Presentation Style: Individual Classes Instructional Resources: Introduction, snowshoes, live animal ambassador

Before going outside to try out our snowshoes, students will learn about the history and physics of snowshoes. Animals that are adapted to the winter months and what makes them so good at moving from place to place in the snowy months will be examined. Students will also learn about animals that utilize snowshoeing technology. Then it's outside for a snowshoe adventure!

SOIL - THE BASIS OF LIFE

Location: School Presentation Style: Individual Class Visits Instructional Resources: PP Presentation, 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.

SUPERMARKET BOTANY (SEE WHERE DOES YOUR FOOD COME FROM?)

TEAM BUILDING ACTIVITIES

Location: School Presentation Style: Individual Class Visits Instructional Resources: Team Building initiatives and portable challenges

Can't come to our challenge course? This alternative team building experience takes place at your school! We will bring our portable challenges and include initiatives that focus on team building, effective communication, problem solving, acceptance of others, risk taking, physical and emotional support, and working with people of different styles. **This program can be used to support Dignity Act Initiatives.**

THE EXTRAORDINARY JOURNEY OF ORDINARY STUFF

Location: School/Madden

Presentation Style: Individual class visits

Instructional Resources: PP presentation, life cycle analysis boards

What do sneakers, a cell phone and a pencil have in common? This program will examine everyday items such as these as well as sneakers and t-shirts using a cradle to grave assessment and an interactive mapping activity to help students better understand the extraordinary amount of natural resources and energy used to manufacture and transport these items around the globe. Students will leave with a new perspective as they discover how these everyday items are far more complex than imagined, along with the realization that "away" is not a reality on our crowded planet.

TREE LIFE CYCLE

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, 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 SCI 21 ALIVE

Location: school

Presentation Style: Assembly followed by Individual Class Visits

Instructional Resources: PP presentation, 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 in 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 of common misconceptions about them.

UNDERSTANDING THE COMMONS

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP Presentation, 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.

WATER: THE MOST DESTRUCTIVE FORCE ON EARTH!

Location: School **Presentation Style:** Individual classes

Instructional Resources: PP presentation, hands on student activity

This erosion and natural sciences program explores how water has shaped our environment, and how it continues to this very day. Constantly in motion, water is pushing and pulling the Earth around us, forming new structures, lakes, rivers and other geologic formations over thousands of years. It changes the boundaries of countries, and the patterns of all animal life. This program explores how we measure those changes, and perhaps make predictions for them as well as the effects that they have on human life and the directions that we choose to take ourselves. Who knew that a stream could be so fascinating?

WE ALL LIVE IN A WATERSHED SCI 21 ALIVE

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP Presentation, 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.

WEATHER SCI 21 ALIVE

Location: School

Presentation Style: Assembly/Individual Class Visits

Instructional Resources: PP presentation, 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.

WHAT’S YOUR FOOTPRINT?

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP Presentation, interactive student activity, materials related to sustainability

This program uses the Ecological Footprint to help students assess how their lifestyle impacts our planet. The Ecological Footprint is a measure of the amount of nature it takes to sustain a given population over the course of a year. Through the use of a PowerPoint presentation and a simulation, students will examine two very different lifestyles that creates two very different ecological footprints. First a typical American, and then an American with different habits, to demonstrate the impact of behavioral change, one that includes mitigated behavior. Using what they learned, students will be asked to identify mitigating behaviors that are personally attainable. **Assembly Model Not Available - 1-2 classes/1 hour**

WHERE DOES MY GARBAGE GO?

Location: School

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, 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.

A – Z LIST OF PROGRAMS

**PNW BOCES CENTER FOR ENVIRONMENTAL EDUCATION PROGRAM
TO BOOK A PROGRAM: <http://portal.pnwboces.org/cee/>**



WHERE DOES YOUR FOOD COME FROM? (FORMALLY SUPERMARKET BOTANY)

Location: School/Madden

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, 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 IS WATER FOUND? THE AMAZING JOURNEY OF WATER NYSSLS GRADE 2

2-ESS2-3 OBTAIN INFO ESS2.C PATTERNS

Location: School/Madden

Presentation Style: Individual Class Visits

Instructional Resources: PP presentation, interactive game and songs

Where does water come from? Where does water go? Students will explore water in its solid and liquid form, and discover how water moves between glaciers, rivers, and oceans. They will then play an interactive game and observe patterns of where water can be found and how it changes form from solid to liquid to ice.

WILDLIFE

Location: School

Presentation Style: Assembly/Class Visits

Instructional Resources: PP presentation, 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 camouflage, 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.