### **Making Maple Magic**

Maple sugaring is a time-honored tradition. This program takes place in late February through March, introducing early to late elementary students to tree structure and plant photosynthesis, the process for turning sap to syrup, and differences in production approaches from Native Americans to modern times.

Fee: \$7 per student Available: Late February to Late	Location: Hoover Forest Preserve	
Available: Late February to Late	Duration: 2 hours	
	Fee: \$7 per student	
viaren	Available: Late February to Late March	



Have a program in mind but don't see it listed? We can create specialty programs for your students. Contact Emily Dombrowski, Environmental Education Program Manager, for more information by calling 630-553-2292 or email edombrowski@co.kendall.il.us.

Reserve a Program by Contacting: edombrowski@co.kendall.il.us

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or 630-553-2292 Connecting Classrooms to Nature for Over 50 Years!

# 2019-2020

# **School Programs**



### Where Conservation and Education Take Flight

For Program Information or to Reserve a Program contact: edombrowski@co.kendall.il.us

or 630-553-2292





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### **Project Hoover**

This program engages middle school and high school students within an authentic habitat management project at Hoover Forest Preserve. The program includes field experiences introducing students to the rich natural, geologic, and cultural histories of Hoover Forest Preserve, while participating within a large-scale habitat restoration initiative.

LS4.D. Humans depend on the living world for the resources and other benefits provided by biodiversity. But human activity is also having adverse impacts on biodiversity through overpopulation, over exploitation, habitat destruction, pollution, introduction of invasive species, and climate change. Thus sustaining biodiversity so the ecosystem functioning and productivity are maintained is essential to supporting and enhancing life on Earth. Sustaining biodiversity also aids humanity by preserving landscapes of recreational or inspirational value.

Program Description
Location: Hoover Forest Preserve
Duration: 2- 3 hours
Fee: \$10 per student
Available: November to Mid-April



Do you have a group that is interested in volunteering? Contact Antoinette at awhite@co.kendall.il.us to set up service projects.

### Wetland Program

Wetlands are part of the foundation of our nation's water resources and are vital to the health of waterways and downstream communities. Through hands-on activities at Harris Forest Preserve students will participate in activities where they will learn that wetlands provide habitat for animals, help with flood control, and how wetland organisms provide indicators for pollution of nearby rivers and lakes. Students will learn how the health of the pond ecosystem interacts with the balance of nearby habitats while going on an interactive hike through the woods.

MS-LS 2: Collect data to analyze and interpret data. Use data and observations to develop models to increase understanding of the cycling of matter and energy flow in ecosystems. Look at abiotic and biotic factors and evaluate designs for maintaining biodiversity.

MS-LS 4: Increase understanding of the common ancestry of organisms and the diversity of organisms. Observe effects of natural selection and development of adaptations. Observe genetic variation to make sense of organisms surviving and reproducing.

HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.

HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

Program Description	
Location: Harris Forest Preserve	
Duration: 2-3 hours	
Fee: \$10 per student	
Available: Fall and Spring	

Reserve a Program by Contacting: edombrowski@co.kendall.il.us

We offer a variety of teacher training workshops. These workshops include alignment of studies of natural areas to Common Core and Next Generation Science Standards. We also hold trainings on a variety of topics ranging from amphibians to insects to native plants. The Forest Preserve staff are eager to help you integrate environmental education into your curriculum. Let us know your training needs and we can develop workshops to meet your specific needs.

**Teacher Training Workshops:** 

### **Contact:**

Emily Dombrowski at edombrowski@co.kendall.il.us with any questions on the programs!



#### Kindergarten

# **Kindergarten Programs:**

#### Animals in Winter

The demands of winter requires animals to have adaptations to survive the cold and lack of available food. Students will learn about the survival methods of native animals and how it relates to humans.

Next Generation Science Standard: K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

Program Description
Location: At school
Duration: <sup>1</sup> / <sub>2</sub> hour/class
Fee: \$3 per student
Special Requirements: None
Available: Winter

#### Teeth of Herbivores, Omnivores, and Carnivores

Discover the relationship between dental structure and the foods eaten by different animals. Students will learn about the specialization of teeth by herbivores, omnivores and carnivores that allows them to find nourishment. Tie this ecological concept into vour health units.

Next Generation Science Standard: K-ESS3-1. Use observation to describe patterns of what plants and animals (including) humans need to survive.

Program Description
Location: At school
Duration: <sup>1</sup> / <sub>2</sub> hour/class
Fee: \$3 per student
Special Requirements: None
Available: All year

#### **5th Grade**

## **5th Grade Programs (cont.)**

#### Wetland Study

Wetlands are part of the foundation of our nation's water resources and are vital to the health of waterways and downstream communities. Students will participate in activities where they will learn that wetlands provide habitat for animals, help with flood control, and how wetland organisms provide indicators for pollution of nearby rivers and lakes.

Next Generation Science Standard: 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

Next Generation Science Standard: 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Program Description
Location: At school
Duration: 1 hour/class
Fee: \$5 per student
Special Requirements: Space to set up activity and allow classes to rotate to presentation
Available: All School Year



Reserve a Program by Contacting: edombrowski@co.kendall.il.us

> or 630-553-2292

### **5th Grade Programs**

#### **Ecology and Ecosystems of Illinois**

Illinois is home to many unique ecosystems. During a visit to Harris Forest Preserve, students will rotate though four different stations as they learn about a pond, prairie, and forest habitat. Students will be able to observe firsthand how a food web is supported within each ecosystem.

Next Generation Science Standard: 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

Program Description
Location: Harris Forest Preserve
Duration: 3-4 Hours
Fee: \$7 per student
Special Requirements: Divide
class into four groups with an adult
chaperone
Available: Fall and Spring

#### Teeth of Herbivores, Omnivores, and Carnivores

Students will participate in eight hands on stations to explore the teeth of a variety of animals to learn about how different dentition adaptations allow different species to survive.

Next Generation Science Standard: 5-LS2-1. Develop a model to describe the movement of mater among plants, animals, decomposers, and the environment.

Program Description
Location: At school
Duration: 1 hour/class
Fee: \$6 per student
Special Requirements: Space to set up activities and allow classes to rotate to presentation
Available: All school year

#### Kindergarten

### **Kindergarten Programs (cont.)**

#### **Reptiles Verses Amphibians**

These two types of animals are often confused, but a hands on introduction to two animal guests will help students discover their unique features, and learn how each survives.

Next Generation Science Standard: K-LS1-1. Use observation to describe patterns of what plants and animals (including humans) need to survive.

Program Description
Location: At school
Duration: <sup>1</sup> / <sub>2</sub> hour/class
Fee: \$3 per student
Special Requirements: None
Available: All year

### Reserve a Program by Contacting: edombrowski@co.kendall.il.us or 630-553-2292



#### **1st Grade**

### **1st Grade Programs:**

#### Biomimicry

Biomimicry is when humans copy an idea from nature. Students will participate in hands on activities that highlight how inventions often have roots in nature. Outdoor experience includes a hike to discover local examples of biomimicry. Next Generation Science Standard: 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow and meet their needs.

Program Description	Program Description
Location: At school	Location: At Harris Forest Preserve
Duration: 1 hour/class	Duration: 2 <sup>1</sup> / <sub>2</sub> hours
Fee: \$6 per student	Fee: \$6 per student
Special Requirements: Large indoor space or out- door area	Special Requirements: Two classes per session (am and pm)
Available: All school year	Available: Fall and Spring

#### Teeth of Herbivores, Omnivores, and Carnivores

Discover the relationship between dental structure and the foods eaten by different animals. Students will learn about the specialization of teeth by herbivores, omnivores and carnivores that allows them to find nourishment. Tie this ecological concept into your health units.

Next Generation Science Standard: 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow and meet their needs.

Program Description	
Location: At school	
Duration: <sup>1</sup> / <sub>2</sub> hour/class	
Fee: \$3 per student	
Special Requirements: None	
Available: All year	

#### 4th Grade

### 4th Grade Programs (cont.)

#### Native Americans

The Potawatomi Indians lived in the woodland, prairie, and wetland ecosystems in Illinois's past. This culture was able to provide for all of its needs by utilizing nature. Students will participate in four stations where they visit a reconstructed Potawatomi village, try bow drill fires, take a hike to explore the local ecosystems and learn about plant and animal uses, and try historical games that taught survival skills. (Social Studies connections to the ecology of native plants and animals).

Next Generation Science Standards: 4-ESS3-1 Crosscutting Concepts: Over time, people's needs and wants change, as do their demands for new and improved technologies.

Program Description
Location: Hoover Forest Preserve
Duration: 3 Hours
Fee: \$6 per student
Special Requirements: Divide class into four groups with an adult chaperone
Available: Set dates in Fall



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### 4th Grade Programs

#### Fossils of Illinois

The flat topography of much of Illinois may suggest a boring geologic history, but the opposite is true! Illinois was once covered by an ocean and the fossil record provides clues to this underwater past. Students will learn about the creatures that once lived in their own backyard by exploring local fossils.

Next Generation Science Standard: 4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.

Program Description
Location: At school
Duration: 1 hour/class
Fee: \$6 per student
Special Requirements: Space to set up activities and allow classes to rotate to presentation
Available: All school year

#### Teeth of Herbivores, Omnivores, and Carnivores

Students will participate in eight hands on stations to explore the teeth of a variety of animals to learn about how different dentition adaptations allow different species to survive.

Next Generation Science Standard: 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Program Description
Location: At school
Duration: 1 hour/class
Fee: \$6 per student
Special Requirements: Space to set up activities and allow classes to rotate to presentation
Available: All school year

### **1st Grade Programs (cont.)** Bugfest

Insects are fascinating animals that go through the process of metamorphosis as they grow into an adult. Students will rotate though four stations where they will learn about pollinators, the habitats where insects are found, life cycles of insects, insect survival strategies.

Outdoor experience includes visits to native habitats to discover native insect examples.

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

Program Description	Program Description
Location: At school	Location: Harris Forest Preserve
Duration: 2 <sup>1</sup> / <sub>2</sub> hours	Duration: 2 <sup>1</sup> / <sub>2</sub> hours
Fee: \$7 per student	Fee: \$7 per student
Special Requirements: Outdoor natural area within walking distance of school	Special Requirements: Up to four classes per session (am and pm)
Available: Fall and Spring	Available: Fall and Spring

Reserve a Program by Contacting: edombrowski@co.kendall.il.us

> or 630-553-2292



#### **2nd Grade**

### **2nd Grade Programs**

#### Zoochory

Zoochory is when an animal assists in the planting of seeds. Students will learn about three methods used by native plants and animals to ensure that seeds are dispersed in a method that will allow them to grow. An outdoor program at Harris Forest Preserve includes a hike to discover native examples of zoochory.

Next Generation Science Standard: 2-LS2-2. Develop a simple model that mimics the function of an animal dispersing seeds or pollinating plants.

Program Description	Program Description
Location: At school	Location: Harris Forest Preserve
Duration: 1 hour/class	Duration: 2 <sup>1</sup> / <sub>2</sub> hours
Fee: \$7 per student	Fee: \$7 per student
Special Requirements: Large indoor space or outdoor area	Special Requirements: Two classes per session (am and pm)
Available: All school year	Available: Fall and Spring

#### Teeth of Herbivores, Omnivores, and Carnivores

Discover the relationship between dental structure and the foods eaten by different animals. Students will learn about the specialization of teeth by herbivores, omnivores and carnivores that allows them to find nourishment. Tie this ecological concept into your health units.

Next Generation Science Standard: 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.

Program Description
Location: At school
Duration: <sup>1</sup> / <sub>2</sub> hour/class
Fee: \$3 per student
Special Requirements: None
Available: All year

#### **3rd Grade**

### **3rd Grade Programs**

#### Animal Adaptations- Bird Beaks

Bird beaks provide clues for what a bird can and cannot eat. Students will learn about a variety of native birds and participate in an activity that challenges them to decide what each species can successfully eat in order to survive. An outdoor program at Harris Forest Preserve includes use of binoculars and observation of birds in their native habitat.

Next Generation Science Standard: 3-LS4-2 Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

Program Description	Program Description
Location: At school	Location: Harris Forest
	Preserve
Duration: 1 hour/class	Duration: 2 <sup>1</sup> / <sub>2</sub> hours
Fee: \$6 per student	Fee: \$6 per student
Special Requirements: Large	Special Requirements: Two
indoor space or outdoor area	classes per session
Available: All school year	Available: All school year

#### Teeth of Herbivores, Omnivores, and Carnivores

Students will participate in eight hands on stations to explore the teeth of a variety of animals to learn about how different dentition adaptations allow different species to survive.

Next Generation Science Standard: 3-LS4-3. Construction and argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

<b>Program Description</b>
Location: At school
Duration: 1 hour/class
Fee: \$6 per student
Special Requirements: Space to set up activities and allow classes to rotate to presentation
Available: All school year

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