The programs below may be available upon request and are not offered through our online reservation system. Availability depends on group total, time of year, and availability of space within our Center for Environmental and Scientific Education. If interested, please call Michele Daly at 201-460-4623.

Special Request Programs

SUSTAINABLE DESIGN

Grades: 4-6

This program addresses the concepts of sustainable materials and water conservation, and why they're important in our communities. Students will also investigate alternative energy and renewable resources by touring our LEED certified science building. The students will then be challenged to demonstrate their knowledge by selecting materials and constructing a 3-D model of their own "green" home. **NGSS & NJSLA-S: 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3, 5-ESS3-1**

ECO-ENGINEERS

Grades: 7-8

This program on sustainable building challenges middle school students to contend with some of the complex questions that confront and confound real-world professionals. Which building materials are best for the environment? Can we afford these materials based on our budget? Utilizing computer-based resources and our LEED certified science building as a model of sustainability, students will answer these questions and more while designing a model home, the culminating project for the program. **NGSS & NJSLA-S: MS-ESS3-3, MS-ETS1-2, MS-ETS1-40**

FISH MURDER MYSTERY

Grades: 9-12

In this challenging program, students are charged with solving an environmental scenario. We will introduce various water quality parameters and go outside to collect and test water samples from the park. Back in the lab, students will combine water testing, current events, and map resources to gather and present evidence to support a hypothesis for what caused a massive fish kill. **NGSS & NJSLA-S: HS-LS2-1, HS-LS2-2, HS-LS2-6**

Important Please Read

Trips are scheduled on a first-come-first-served basis. Registration will open on-line Friday, September 8th for field trips Sept. 11th through June 21st

Fees:

Option 1: Standard fee is $18 per student.
Option 2: Climate change programs are $20 per student
Option 3: Special Request programs are $30 per student.
Option 4: Participating in two different programs on the same day is $32 per student.

Online Registration:
If you are interested in Option 1 for our standard fee, register online at:
http://www.rst2.org/mec

You will NOT receive an email confirmation at the end of the registration process. Please, for your records, print a copy of the final confirmation screen before proceeding to register for another date.

Register by Phone:
If you are interested in Option 2, 3, or 4, please call Michele Daly at 201-460-4623 or email her with your information at mdaly@ramapo.edu

Payment Policy:
A 50% deposit must be received 3 weeks prior to your visit in the form of cash, money order, or a check payable to the **RAMAPO COLLEGE FOUNDATION**. Checks NOT made payable to the RAMAPO COLLEGE FOUNDATION will be returned for correction. If a purchase order is required to initiate payment, please forward a copy, with all relevant trip information, to our attention for signature. If your deposit is not received, we reserve the right to cancel your trip and offer the date to a school on our waiting list.

Cancellation Policy:
Cancellations must be made no later than 2 weeks prior to your trip date. Notification can be faxed to 201-842-0630 or e-mailed to **school@ramapo.edu**. If a cancellation is received after this time, a refund will not be issued and a credit will be applied to your next reservation. A $100 rescheduling fee may be required for requests made the morning of a trip.

Frequently Asked Questions

How does a typical day run?
Our programs are interdisciplinary and we make every attempt to integrate an outdoor component with all lessons. We are able to run 6 classes per day (150+ students); therefore, it is important to be running on schedule as it could affect other schools here on the same day as your class.

A tentative schedule is as follows:

9:15 am — Arrival & check-in with bus information form & balance of payment due
9:30 am until 11:30 am — 2 hours of program activities
11: 30 am until 12:00 pm — Lunch break
12:00 pm until 2:00 pm — 2 hours of program activities
* Please note times may vary slightly depending on grade level

What do we do for lunch?
All programs have a 30-minute lunch break built in at a specific time. This is so our staff can transition the classroom or outdoor stations for your afternoon learning experiences. Eliminating this break is not possible. Although we have an area to hold your lunches until the break, there is no refrigerator and no food to purchase. Please ensure your students bring a brown bag lunch and an area will be provided where classes can eat and utilize restrooms.

Is there a gift shop?
No. There is no reason for your students to bring money.

Are programs rain or shine?
Yes. All classes are held inside our science building and any outside activities also have an inside substitution. You should always be prepared to be outside and are encouraged to "dress for mess".

Can you accommodate students with disabilities?
All school programs are available for students with special learning needs through our Marsh Access program. Our science building and restrooms are physically accessible, and the incorporation of appropriate program modifications help all learners participate in the activities to the best of their ability. Please indicate "MarshAccess" when registering and our director of disability education will contact you to discuss your needs.

What is the required class size & number of classes available per day?
A minimum payment of $225 is required if your group is less than 15 students and the maximum number of students per class is 27. We can accommodate 6 classes per day for our standard school programs and up to 5 classes per day for our special request programs.

What is the policy on chaperones?
There is no charge for teachers and chaperones. We ask that there be at least 1 adult for every 8 students in grades 1-8; kindergarten classes must have 1 chaperone for every 5 students. For security purposes, all chaperones must be approved by your school.

Can we adjust the program times?
With prior notification, times may be adjusted to accommodate your transportation needs.

What happens if we need to reschedule?
This all depends on availability. Please contact us as soon as possible and we will do our best to help find an alternate date for your field trip.

Do you offer any other type of programs?
Yes. We offer a variety of additional program that can be found on our website. These include traveling programs aboard our Mobile Food Lab, family science nights, scout programs, enrichment programs for gifted & talented, convocations, and customized programs upon request.

What is your web address?
The most up-to-date information is found at **http://www.rst2.org/mec**

How can I speak to someone directly?
Between the hours of 8am and 3pm, please call 201-460-8300. If you are unable to reach a staff member a staff member prior to 8am or after 3pm, please call/text 201-390-5583.

To register, visit our website at: http://www.rst2.org/mec

For more information, please call 201-460-8300

MEADOWLANDS ENVIRONMENT CENTER

SCHOOL PROGRAMS 2023-2024

REGISTRATION OPENS FRIDAY, SEPT. 8

AN NJSEA FACILITY
Operated by
RAMAPO COLLEGE OF NJ

Three DeKorte Park Plaza
Lyndhurst, NJ 07071

Phone: 201-460-8300 *Fax: 201-842-0630*

Program Selections

All programs run from 9:30am until 2pm and include a 30-minute lunch break.

NATURE'S COURSE
Grades: K-1
Follow the course of an uneaten apple from its beginnings as a fragrant flower to its end as part of the soil beneath the tree it came from. Students will learn the story of Adam, an energetic first grader anxious to help with chores on his family's orchard. Along the way they will discover how nature's waste is recycled and interact with live decomposers including composting redworms. **NGSS & NJSLA-S: KESS2-2, KESS3-3**

STORY OF THE SUN
Grades: K-1
Follow Emile the Egret on his journey from his evening roost just outside the "big city", to his daytime feeding grounds in the salt marshes of the Meadowlands. By hearing Emile's story students will learn about the Sun's apparent motion across the sky and understand the important role this illusion plays in the life cycles of animals. This program includes a take-home craft. **NGSS & NJSLA-S: KPS3-1, KPS3-2, 1ESS1-1**

MARSH MUCKERS
Grades: K-1
Visit the salt marsh and meet the animals that make this amazing habitat their home. Students will learn about the unique water here and interact with live specimens, collecting and sorting them based on the observations they make. They will also be introduced to a salt marsh food chain, a concept that will be reinforced with a take home craft. This program includes a guided field hike, weather permitting. **NGSS & NJSLA-S: KLS1-1, KESS3-1, KESSS3-3, K-2ETS1-2**

SHELL STORIES & SCALE TALES
Grades: K-1
Animals display an amazing array of adaptations, and the wildlife inhabitants of the Meadowlands salt marsh habitat are no exception. Interactive storytelling and cooperative learning stations fully engage students in this exciting topic. This program includes a take-home craft. **NGSS & NJSLA-S: K-LS1-1, KESS-2-2, KETS-1, 1LS1-1**

INCREDIBLE INSECTS
Grades: K-3
Come learn about the most numerous group of animals in the world and see for yourself the astonishing diversity of insects that live in the Meadowlands. Classification, life cycles, physical characteristics, and the role insects play in their local habitats will all be investigated. Observations of live insects will be included in the lesson, many collected by the students, weather-permitting. This program includes a take-home craft.
NGSS & NJSLA-S: 1LS1-1, 2ETS-1, 2LS4-1, 3LS1-1, 3LS2-1, 3LS4-2, 3LS4-3

PAWS & CLAWS, BEAKS & FEET
Grades: 2-3
Which birds have feet designed for swimming? Whose beak is best for eating insects? In what ways is a shell useful to a turtle? Students will discover the answers to these and many other questions. Through cooperative learning and hands-on investigation, students will learn how animals' adaptations enable them to survive in the salt marsh. This program includes a guided field hike to look for plant and animal adaptations, weather permitting.
NGSS & NJSLA-S: 2LS2-1, 2ETS-1, 2LS4-1, 3LS4-2, 3LS4-3

WIND & WATER: Building For The Elements
Grades 2-3


In this elementary STEM program, young engineers will be exposed to the forces of nature resulting from weather. Hands-on models will be used to demonstrate how wind and water can impact human structures and change the land. Students will then investigate ways to resist weather effects. Using natural materials and testing criteria, can students build a wind-resistant tower AND float their boats? A fun, open-ended exploration!
NGSS: 2-ESS2-1; K-2-ETS1-1

STARRY FACES IN FARAWAY PLACES
Grades: 2-3
This program will have your students reaching for the stars! Through kinesthetic activities, students will experience the depth and dynamic nature of the solar system with an emphasis on the Sun and familiar constellations. Included in the program will be an investigation of the Earth's movement and how this movement affects what we observe in the sky. **NGSS & NJSLA-S: 3ESS2-1**

MARSH EXPLORERS
Grades: 2-3
This program is only offered April through November.
Get immersed in the salt marsh habitat. Following an introduction to this unique wetland community, students will act as field biologists, collecting and identifying live specimens, trying to piece together a local food chain. **NGSS & NJSLA-S: 2LS4-1, 2LS2-1, K-2ETS1-2, 3LS2-1, 3LS4-2, 3LS4-32, 3LS2-1, 3LS4-2, 3LS4-3**

WATER WATCHERS
Grades: 2-3
If water is one of Earth's most abundant resources why do we need to conserve it? This program answers this question. Students will learn good water use habits and participate in kinesthetic activities that help to convey several at-home techniques for conserving water. **NGSS & NJSLA-S: 2ESS2-3**

IN TOO DEEP
Grades: 3-5


Beyond simply recognizing the reality of climate change, *In Too Deep* helps students identify ways this reality might affect them, their families, and the communities they live in. After using historic weather data to identify several climate types, students will investigate how potential changes in future weather resulting from climate change will impact locations differently based on local topography. **NGSS & NJSLA-S: 3-ESS2-1, 3-ESS2-2, 3-ESS3-1**

DOWN & DIRTY WITH DECOMPOSERS
Grades: 4-6
This program introduces students to the many benefits of composting and the role of decomposition in the environment. By observing the inhabitants of our compost bin using microscopes, students will "unearth" the mystery of how worms convert kitchen scraps and yard trimmings into nutrient-rich soil. Weather permitting, other invertebrate decomposers will be collected by students in the field and classified in the classroom based on physical characteristics. **NGSS & NJSLA-S: 5LS2-1, 5ESS3-1**

THE MEADOWLANDS IS FOR THE BIRDS!
Grades: 4-6
Why do so many birds migrate through New Jersey and the Meadowlands? Students will examine the geography of the Garden State and participate in a simulation to understand this phenomenon. We will also use map skills and math to understand the science of one bird's migration. Be prepared to take a hike to find our feathered friends and the resources they depend on. **NGSS & NJSLA-S: MS-LS2-1**

SOLAR ENERGY: Living With the Sun
Grades: 4-6
This program illuminates the various ways our nearest star affects life on Earth. Students will learn about the apparent motion of the Sun over a day and through the seasons. They will then apply that knowledge to design and build a 3-D house model that uses solar energy. Other activities will have students exploring our place in space and, weather permitting, viewing our star with safe solar viewing equipment. **NGSS & NJSLA-S: 5ESS1-2, 3-5ETS1-1,2 & 3**

ASTOUNDING ADAPTATIONS
Grades: 4-6
What helps animals and plants survive in the wild? Students will be able to answer this question after investigating movement, protection, and feeding simulations that include live animal interaction, tool manipulation and cooperative work. This program includes a guided field hike, weather permitting. **NGSS & NJSLA-S: 4LS1-1**

PEEK AT THE PAST
Grades: 4-6
Come discover how the early settlers lived in the Meadowlands. Students will become junior archaeologists as they uncover artifacts in our mock archeological dig pits then analyze the form and function of these objects. This interpretive journey will allow students to identify natural resources from the past and present. Activities are adjusted seasonally and based on weather conditions. **NGSS & NJSLA-S: 4ESS1-1**

ESTUARY EXPLORERS
Grades: 4-8
This program is only offered April through November.
Come discover the salt marsh! Field experiences will have students testing water samples, collecting live specimens, and examining plant life. Students will also practice microscope skills in observing live plankton. Food chains, adaptations and wetland values will be discussed. **NGSS & NJSLA-S: 4LS1-1, 4LS1-2; 5PS3-1, 5-LS1-1, 5-LS2-1**

CLIMATE CHANGE CONUNDRUM
Grades 6-8


After reviewing the evidence of climate change distilled from the National Climate Assessment, students will consider their own contribution to global warming by conducting a brief carbon footprint survey. This, along with a simple climate-modeling tool, will transition to a debate-style discussion of potential solutions to climate change with concerns of various interest groups being considered. **NGSS & NJSLA-S: MS-ESS3-5, MD-ESS3.D**

BIODIVERSITY BASICS
Grades: 7-8
Humans depend heavily on the Earth's biodiversity. Join us as we discover what biodiversity is, its importance for humans and what we can do to preserve it. Students will conduct a bird survey in DeKorte Park and participate in a game-based simulation of threats to biodiversity and the consequences an ecosystem experiences when this biodiversity is compromised. **NGSS & NJSLA-S: MS-LS2-1 & 2**

STUDYING STARS NEAR & FAR
Grades: 7-8
This program will introduce students to our closest star (the SUN!) and the energy it emits. Activities related to the electromagnetic spectrum, spectroscopy and telescope optics will demonstrate how we currently study the Sun and other stars. Students will visit our observatory and its research-grade telescope. Weather permitting, we will also safely view the Sun. **NGSS & NJSLA-S: MS-PS4-2**

POWER TRIP: Exploring Renewable Energy
Grades: 9-12
Take a real-world look at sustainability in the human environment using our science building as a working model of green design principles. Hands-on activities will have students gathering data to analyze the factors that affect photovoltaic performance. Students will also experiment with wind turbine models in a challenge to engineer the best blades. **NGSS & NJSLA-S: HS-PS3-3**

BIODIVERSITY: Balancing Act
Grades: 9-12
Students with a basic understanding of biodiversity will enjoy this program where they will learn how to conduct a biodiversity survey here in DeKorte Park in order to estimate the "health" of our ecosystem. We will also demonstrate through a hands-on activity how disruptions from human communities can affect ecosystems. Concepts such as food chains, food webs, trophic levels, and resilience will be discussed. **NGSS & NJSLA-S: HS-LS2-A**

URBAN ESTUARY ECOLOGY
Grades: 9-12
This program is only offered April through November.
Explore the interactions of the local tidal community. Through field collections, water chemistry, and other observations, students will be exposed to our urban estuary and examine how humans have impacted the Meadowlands. Indoor observations will focus on how scientists study an aquatic food web. **NGSS & NJSLA-S: HS-LS2-2, HS-LS4-6**

HEAVY METALS: Up Berry's Creek Without a Paddle
Grades: 9-12
This program will introduce some of the toxic metals of concern in the Meadowlands. Students will conduct a bioassay lab, getting a first-hand look at the impacts of these substances on living organisms, as well as how scientists attempt to quantify toxicity. Self-guided activity stations also address local history and remediation strategies for contaminated sites. **NGSS & NJSLA-S: MS-PS1-4**

ESTIMATING LOCAL CARBON CAPTURE
Grades: 9-12


Students will appreciate the potential role of trees in atmospheric CO_2 capture and perform an outdoor field survey of trees. With three pieces of information, students will calculate estimated carbon capture in local specimens. Conditions permitting, we may also hike additional park trails or discuss other carbon capture strategies. OPTIONAL: To expedite field data collection, we can provide background info in advance and recommend smartphone apps for download prior to the session. **NGSS & NJSLA-S: HS-ESS3-4 ; HS-ETS1-1 ; HS-ETS1-3**