



# Student Estuary Exploration Program Packet



DELAWARE CENTER FOR THE  
**INLAND BAYS**  
Research. Educate. Restore.

## About the Center

The Delaware Center for the Inland Bays (Center) was established by the Delaware General Assembly as a nonprofit organization in 1994. It is also 1 of 28 National Estuary Programs in the country. The Center's mission is to preserve, protect, and restore Delaware's Inland Bays and their watershed. More information about the Center can be found at [inlandbays.org](http://inlandbays.org).

## Education Program Overview

The Center is redefining the classroom by turning the maritime forests, beaches and salt marshes of the Inland Bays into interactive, outdoor learning resources for students. The Student Estuary Exploration (SEE) environmental education program consists of fun, informative, and hands-on learning opportunities for students of all ages. The goal is to increase student environmental literacy—defined as “an individual's understanding, skills and motivation to make responsible decisions that considers their relationships to natural systems, communities and future generations”—through nature-based learning<sup>1</sup>. Environmental education improves academic achievement, encourages environmental stewardship, deepens personal development and wellbeing, and strengthens communities<sup>2</sup>.

Established in 1999, the Center's youth education program has served over 19,000 students. Programs are offered free of charge to all schools and youth groups (e.g., clubs, community youth groups, scout troops, after school centers, etc.). The inquiry-based activities are aligned with Next Generation Science Standards and offer three-dimensional learning instruction that includes disciplinary core ideas, Science, Technology, Engineering, Art, & Math (STEAM) practices, and crosscutting concepts. A fundamental component of the lessons is the incorporation of outdoor science activities offered by the Better Environmental Education, Teaching, Learning & Expertise Sharing project ([beetlesproject.org](http://beetlesproject.org)) which is supported by current pedagogy about how people learn.

## Program Location & Format Options

SEE programs primarily take place outdoors at the James Farm Ecological Preserve located at 30048 Cedar Neck Road Ocean View, DE 19970. This 150-acre property has

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<sup>1</sup> <https://www.neefusa.org/education/benefits>

<sup>2</sup> <https://oelp.oregonstate.edu/oelp-plan/what-environmental-literacy>

seven different habitats including: maritime forest, meadow, freshwater wetlands, salt marsh, tidal flats, beach, and the Indian River Bay. More information about the Preserve and a site map is available online at:

[inlandbays.org/projects-and-issues/all/james-farm-preserve/](http://inlandbays.org/projects-and-issues/all/james-farm-preserve/).

Programs range between 2-6 hours in length. Center environmental educators deliver lessons that encourage students to explore the diverse habitats on site while recording their observations, identifying terrestrial and aquatic species, and generating solutions to reduce negative human impacts on local ecosystems. Prior to departing, students will be guided through an interactive sketchnote/mind map activity to review and share lessons learned as a group.

In addition to programming held at the Preserve, the Center offers virtual and in-school learning opportunities to accommodate diverse group needs. \*All programs may be customized to complement current classroom lessons and/or group interest.



## Booking Process

Contact the Center's Head Environmental Educator (HEE) to schedule a program. Please note that dates are offered on a first come, first serve basis. During this process, you will also work with the HEE to select the appropriate activities that meet your young learners' needs. All programs are offered free of charge, but donations are



graciously accepted to help offset costs. The group lead will also receive electronic pre and post-program surveys. Feedback provided through these brief surveys is voluntary and will assist the Center in evaluating the success of the SEE program.

**IMPORTANT:** Prior to arrival, a parent/guardian of all program participants under the age of 18 are required to sign the Center's waiver.

## Inclement Weather & Cancellations

Programs at the Preserve take place outside. In the event that inclement weather is predicted and poses a risk to the safety of staff and participants (e.g., wind advisory, heavy rain, lightning, flooding, heat advisory, tornado, snow, ice and hail, temperatures below 45 degrees, etc.), programs will be canceled a minimum of 24-hours in advance. However, the continuation of programs during light, intermittent rain conditions is per the discretion of the HEE and lead teacher.

If you need to cancel a program for any other reason, please contact the HEE as soon as possible. Cancellations must be made at least 24-48 hours in advance (latter is preferred if possible).

## Safety & Group Sizes

Safety is always a priority of the Center. Lead educators are CPR/AED & First Aid certified. At the Preserve, educators also carry a first aid kit at all times in case of an emergency. Swimming is NOT permitted at any time during programs.

The Center follows the 1:15 adult to child ratio for school-aged children (kindergarten and higher) as outlined in the State of Delaware's DELACARE Regulations for Early Care and Education and School-Age Centers. Please keep this in mind as you are making preparations including chaperones. A maximum group size of 60 students is recommended, but Center staff will do their best to make special arrangements for larger groups if needed.

The Center strives to make programs at the Preserve a positive experience for all participants. Educators will communicate rules and expectations to groups upon arrival and will rely on assistance from teachers and chaperones in regards to student discipline.



IMPORTANT: The Center follows the CDC's guidance and Governor's orders pertaining to COVID-19. The entirety of programs held at the Preserve take place outdoors.

\*Therefore, participants are not required to wear a mask, regardless of vaccination status, at this time. It is not always possible to social distance during program activities. Individuals experiencing any COVID-19 symptoms or who have been exposed to COVID-19 within the past 14 days are kindly asked to stay home.

*\*The Center's COVID-19 protocols are subject to change pending updates from the CDC and Governor. Thank you for your understanding.*

## What to Expect at the Preserve



### Parking

There is ample parking available in the Preserve's main lot. However, in the event that all spaces are taken, overflow parking is located in the field across the street from the main entrance. If you will be traveling by bus, there is a designated bus parking area in the main lot.



### Restrooms

There are two ADA-compliant restrooms on site. Wooden benches are located near the restrooms for groups to take a snack/lunch break. Please note that the Preserve is a carry-in/carry-out property, so you will be asked to take your trash with you.



## Terrain & Mobility

Participants will travel along unpaved paths including dirt trails, wooden boardwalks, grassy meadows, marshes, and sandy beaches. While the terrain is predominantly flat, there are tree roots, mud, sand and water present. At this time, the Center is not able to provide wheelchairs for participants and apologizes for any inconvenience.



## What To Wear

- Dress for the weather
- Secure, closed-toe shoes that can get wet/dirty
- Change of clothes & shoes
  - Participants may wade through shin or thigh-deep water. Shoes must stay on. Limited chest waders are available.



## What to Bring

- Refillable water bottle
- Sunscreen
- Bug repellent (mosquitoes & ticks present)
- Sunhat & sunglasses
- Raincoat (weather dependent)
- Warm hat & gloves (during cooler months)
- Snacks/lunch

## Get to Know the Center's Educators!

### Jackie Knoll, Head Environmental Educator

Jackie grew up outside of Philadelphia, Pennsylvania and received a degree in Environmental Studies from Skidmore College in upstate New York. Since graduating from college, she has worked in the environmental education field for a number of different organizations before joining the Center in September of 2021. In her free time she likes to fish, explore local parks, watch Philadelphia sports and do crossword puzzles.



### Mary Kunst, Environmental Educator

Mary joined the Center in July 2021 after retiring as a fourth grade teacher in Maryland. Mary is a proud Blue Hen and received her Bachelor of Arts degree from the University of Delaware. She received her Master's degree in Education from Marymount University in Arlington, Virginia. In her free time Mary enjoys traveling with her husband, working in her garden, hiking, walking her dog amongst the many beautiful trails in southern Delaware, and spending time with her two grown children.



Direct all inquiries to Jackie Knoll, Head Environmental Educator ([jknoll@inlandbays.org](mailto:jknoll@inlandbays.org); 302-226-8105 ext. 708).