



DEERING ESTATE

Marine Conservation Homeschool 2021-2022

October “Sea the World”

Date: October 6, 2021

Activity: Intro to Deering and Marine Biology

Description: Students will tour the various marine ecosystems of the estate so they can see the various ecosystems they will learn about this year. Along the way, students will collect water samples that they will take back to the classroom to analyze. *Students should wear comfortable CLOSED TOE shoes, bring a reusable water bottle, bug spray, sunscreen, a hat, and lunch or snacks.*

Date: October 13, 2021

Activity: Data Collection and Surveying Techniques

Description: Students will discover what lives in the sea by conducting a seagrass survey. In this class, students will explore various surveying and data collection techniques and get involved with a global citizen science project! *Students will get wet during this activity! Please bring a change of clothes, towel, sunscreen, water shoes (NO CROCS, they come off in the water), a reusable water bottle, and lunch or snacks.*

Date: October 20, 2021

Activity: Bioluminescence and Sounds of the Sea

Description: Students will journey to the depths of *Lalotai*. They will learn about adaptations animals have developed that enable them to live near the seafloor. Students will explore topics such as bioluminescence, pressure and temperature changes, and how these changes affect how sound travels.

Date: October 27, 2021

Activity: Coastal Erosion and Mangrove Hike

Description: Our coast line is under attack! In this class, students build a model seaside city and develop ways to protect it. Through this experiment students will learn about climate change and coastal erosion. Students will also hike through a mangrove forest to see firsthand how these trees help protect us.

To receive emails for class updates and supplemental material:
Please email Lizzie at Elizabeth.Mckierna@miamidade.gov



DEERING ESTATE

Marine Conservation Homeschool 2021-2022

December “Engineering the Oceans”

Date: December 1, 2021

Activity: Hydropower, is it possible?

Description: Tides, waves, and currents can be used to produce electricity. With oceans covering more than 70% of Earth, there has to be a way to use this renewable energy! In this class, students will explore hydropower as they attempt to generate enough electricity to power an LED lightbulb.

Date: December 8, 2021

Activity: Aquaponics, a new way to farm?

Description: While hydroponics can be detrimental to the environment, aquaponics might be the way of the future. In this class, students will mimic the natural order in a sustainable way. Using upcycled materials, they build an aquaponics system and grow plants they can use. *Students are asked to bring in two empty 2L soda bottles to the previous class.*

Date: December 15, 2021

Activity: Hurricane Proof House, Can you Build it?

Description: It’s no secret that more people are moving to the coast than ever before and hurricanes are intensifying. In this class, students will be challenged to build a house that can withstand a category 5 hurricane.

Date: December 22, 2021

Activity: Field Trip

Description: Students will put everything they’ve learned about environmental engineering together as they visit the FIU Wall Of Wind!

To receive emails for class updates and supplemental material:
Please email Lizzie at Elizabeth.Mckierna@miamidade.gov



DEERING ESTATE

Marine Conservation Homeschool 2021-2022

February “Restoring the Oceans”

Date: February 2, 2022

Activity: Ocean Acidification and Edible Corals

Description: It’s getting hot in here, and not just on land, the oceans are suffering too. As the ocean warms up, the water becomes more acidic. In this class, students will learn what it means for the global climate crisis and ocean animals. Students will also put together an edible coral reef. *The edible coral reef will be constructed with sweets, please send students with a reusable water bottle, and lunch or salty snacks to avoid a sugar rush.*

Date: February 9, 2022

Activity: Marine Protected Areas and Oil Spill Project

Description: It’s on us to protect the oceans from human disasters. Many organizations have started with Marine Protected Areas. In this class, students will develop a tool to clean up a mock oil spill and debate the creation of a new Marine Protected Area. Students will be given their stakeholder roles in the previous class.

Date: February 16, 2022

Activity: Fisheries and Fishing

Description: Overfishing is one of the biggest threats the oceans face. In this class, students will participate in a fishing simulation and later apply their skill on the water! *Students should bring a rod, if they have one. All fish caught will be released in an effort to teach the students good fishing practice. Students may get wet during the second activity and should bring a change of clothes, towel, reusable water bottle, sun screen, hat, and lunch or snacks.*

Date: February 23, 2022

Activity: Bill Baggs State Park

Description: Students will put together all their knowledge from the month/year and visit a state funded MPA. Students will tour the grounds and possibly snorkel the seagrass beds to understand the importance of protected areas.

To receive emails for class updates and supplemental material:

Please email Lizzie at Elizabeth.Mckierna@miamidade.gov



DEERING ESTATE

Marine Conservation Homeschool 2021-2022

April “In your Backyard”

Date: April 6, 2022

Activity: Estuaries

Description: Students will hike through the creek to observe how running water changes the landscape.

Date: April 13, 2022

Activity: Mangroves

Description: Mangroves are essential to protecting the shoreline. Students will hike through the mangroves, collecting trash along the way. After the cleanup they will learn about the life of trash they collected. The data collected will also be submitted to a citizen science project. *This is a DIRTY and WET activity. Please make sure to bring: a towel, change of clothes and shoes, water shoes, a full reusable water bottle, sunscreen and bug spray, and lunch or snacks.*

Date: April 20, 2022

Activity: Seagrass Beds

Description: Seagrass beds are some of the most productive places on Earth! On a field trip to Historic Virginia Key, students will comb through the seagrass beds to discover what animals live there!

Date: April 27, 2022

Activity: Coral Reefs

Description: Coral reefs are some of the most diverse ecosystems on the planet! On a field trip to Crandon park, students will have the chance to see first hand just how diverse they can be!

To receive emails for class updates and supplemental material:
Please email Lizzie at Elizabeth.Mckierna@miamidade.gov