

St. Johns County School District's
MARINE SCIENCE PROGRAM
MIDDLE SCHOOL PROGRAM
(students entering the 6th grade in August)

Students are assigned to small classes of approximately 14 students by grade level. Each class rotates to another instructor every two days. To accommodate the large number of students applying to the program and still keep class sizes small, we will have three sixth grade groups. Students may not move groups. Each group will do similar activities but on different days with different instructors. Due to weather or class size activities may change.

FIRST ROTATION:

**STAND UP PADDLEBOARDING (SUP), NUTRITION AND EXERCISE
FISHING AND KAYAKING SKILLS AND SAFETY**

Students will begin the day with a lecture on the life-long benefits of nutrition and exercise. The emphasis will be on developing strength and athletic skills through recreational water activities. Following an educational presentation on the skills and safe use of SUP's, the class will travel to the Summer Haven area where they will practice stand up paddle boarding on the program's set of SUP's. While half the class is on the water with one instructor, the other students with a second instructor will explore the natural but rapidly changing environment of the Summer Haven River. Students will then rotate activities.

Students will participate in a discussion on the local fish food web of Pellicer Creek. Students will learn the importance of this estuarine tidal marsh as it relates to fresh and salt water animal and plant life. With more than 100 bird species during migration seasons there is a lot to learn about the beautiful Faver Dykes state park. Student will practice catch and release fishing, seine netting and cast netting to record their species identification of fish and marine life. Students will then learn kayaking safety and beginning skills as they journey along the creek.

SECOND ROTATION:

**CPR SKILLS, SALT MARSH ECOLOGY, SALT MARSH ECOLOGY II, CANOEING
SKILLS AND SAFETY**

Students will practice CPR techniques and first aid skills with a licensed instructor. They will display CPR proficiency through practice on mannequins and a written test. Students will also become familiar with and practice using AED's. Students will also participate in a discussion and slide presentation of hazardous marine animals (prevention and treatment). They will then take a field trip to the YMCA pool for a water safety lesson with YMCA swimming instructors. If the YMCA pool is unavailable students will travel to Anastasia State Park for water safety instruction on longshore and rip currents.

Students will participate in a discussion of the economic, recreational, and aesthetic importance of our local salt marsh ecosystems. The instructor will discuss canoeing skills and safety procedures. Students will then travel to the windsurfing station area at Anastasia State Park where they will practice safe canoeing techniques. Following this practice session, students will take a canoe trip up Salt Run where they will observe and discuss the recreational potential of salt marsh areas.

THIRD ROTATION:

FRESH WATER ECOLOGY I, SNORKELING SKILLS AND SAFETY KAYAKING SKILLS AND SAFETY

Students will explore the rich history of the oldest port city in America, St. Augustine has to offer. Departing from the Conch House Marina, students will gain a greater understanding of how Matanzas Inlet, Salt Run, and the smaller estuaries of the Intracoastal helped develop the oldest city in the nation - St. Augustine. Focus of interest will be the ecological changes that have impacted our coastal environment, since its founding in 1565.

Students will participate in lecture and activities on the energy flow in St. Johns River. Compare and contrast local marine life to that of the fresh water environment of the river. The instructor will then discuss kayaking skills and safety procedures. Students will then travel to Riverdale Park for a kayak trip up the St. Johns River. Students will use cast nets, seine nets, and Ponar grab samplers to collect specimens for identification. All specimens are released after identification.

After a lecture on the formation of freshwater springs and their unique animal and plant life, the instructor will discuss snorkeling skills and safety procedures. Students will then travel to Alexander Springs Park where they will actively participate in snorkeling, view freshwater plants and animals in their natural habitats, and discuss the underground springs and aquifer system of Florida.

FOURTH ROTATION:

COASTAL UPLAND HABITATS, BICYCLE TRAIL RIDE, SHELL AND FOSSIL IDENTIFICATION

Students will discuss the various types of coastal upland habitats with an emphasis on characteristic plants and animals. Following a lesson on bicycle safety, students will travel to Princess Place Preserve where they will ride trails through the park's various upland habitats on the program's single speed beach cruiser type bikes. Students will also practice cast netting and seine netting techniques at Pellicer Creek in the park. (Students must be capable bike riders for this activity.) If it has been a while since your child has rode a bike please practice before the program.

The lecture will include the Pliocene history of underwater Florida and the formation of fossils. They will then travel to the rocky, coquina beach of Washington Oaks State Park to walk the beach, collect shell fragments, and look for fossilized sharks' teeth. Upon their return to school, students will work with whole shells to identify and classify the broken remains. They will then sift and hunt for sharks' teeth, shell fragments, and other marine fossils in gravel sediments from Hogtown Creek in Gainesville and compare the pre-historic and current artifacts. They will be able to keep fossil fragments they find from the Pliocene era sediments.

ALL CLASSES:

Students will develop skills for using various marine ecology instruments and tools such as: hydrometer, secchi disk, Kemmerer water sampling bottle, water quality test kits, dissolved oxygen test kits, Ponar grab sampler, marine worm suction, cast and seine nets