NATURE'S CLASSROOM
NEW ENGLAND

2021-2022 Curriculum Overview at Groton

Field Group:

During the Field Group activity, students will go on short hikes and will be able to explore our forests, streams, swamps and beaches. They will learn about the natural world, and make connections with nature throughout the experience. Field Group is also a time for team-building games, using the low ropes course. Challenges include swinging on ropes, balancing, escaping mazes, and crossing “alligator infested water”. Everything at Nature’s Classroom is a “challenge by choice”, and all challenges involve a lesson in ropes course safety. Groups may also use this time to practice wilderness survival skills, learning about local flora and fauna, and learning more about one another. The skills developed during Field Group will help students grow as leaders and collaborators.

90 Minute Classes (Class Choice):

Raging Rivers: Students use the power of observation to look at the erosion of rivers and use teamwork to find and build solutions. On a model river table, the students work to prevent erosion and explore how different materials are affected by the flow of the water. Students will develop an understanding of the power of the forces that affect the earth’s landscape and how engineers use this information when making design decisions.

BioBlitz: Hidden in the bushes, grasses, and trees of the forest are numerous plant, insect, bird, and mammal species as well as other forms of life. Through hands-on guided exploration, students explore this frontier of biodiversity. They learn how to make scientific observations, safely find various forms of life, and categorize them based on observable differences and similarities.

Dissections: This is an opportunity for students to explore the internal and external parts of an animal. Students, with the guidance and supervision of a staff member, will learn the skills

needed to successfully dissect an animal. Students will discuss how the different parts help the animal function and make comparisons to the anatomy of the human body.

Animal Tracking: What species of mammals and birds live in and around our site? What evidence can we find that they live here even if we don't see them? During this lesson, students will explore characteristic animal behaviors and collect, analyze, and interpret data in the field to explore how resource availability impacts animal populations.

Foraging: A great class to explore the senses. What plants can we eat? What plants are dangerous to humans? Students will learn to use field guides as tools for identifying wildlife. Some wild edible/medicinal plants that they might encounter include: wintergreen (leaves and berries), indian cucumber, wood sorrel, blueberries, black birch, sassafras, chamomile, common plantain, partridge berries, and hemlock(young green). There might even be an opportunity to make wild teas at the end of this class!

Forestry: What does a forester do? Students will become New England foresters during this class. They will learn how to discover tree age, create forest plots, test soil, and identify the trees of the northeast.

Wood Furniture: It's time to use your lashing skills. Using sticks and logs found in the woods and 5-10 ft long pieces of rope, students will have the opportunity to create wood furniture. The goal of the class should be to create a structure that can hold human weight. Students will learn lashing techniques from their instructor, and then split into groups of 3 or 4. At the end, the class can take a tour of all the structures (chairs, benches, hammocks, tables).

Field Journaling: Field journaling is a great time for students to get closer to plants, animal signs, and rocks and minerals. The class will start with exploring published field guides/ journals. Different drawing and writing exercises include, a "zoomed in" and the "zoomed out" drawing of a plant and its environment, a detailed drawing of a leaf and then it's identification, and a landscape drawing. This class is a perfect time for quiet time and reflection.

Orienteering: This activity will take students through the steps of using a map and compass to complete navigational tasks and games. Students will come away with an understanding of how to use maps and a compass separately and in tandem.

Wood Carving: Safety first with this class! Students will get to learn carving skills and safety. By the end of the class they will have a butter spreader or spoon that they can take home with them.

Wilderness Survival: What would you do if you found yourself in a survival situation? In this class students will learn how to make matchless fires and build debris shelters. All with natural materials, they'll see that it isn't as easy as it lo

Outdoor Cooking: Put your Pioneer apron on for outdoor cooking! Students will build a cooking fire, and use basic (Pioneer age) cooking tools to make an early American staple food called Johnny Cakes (cornmeal pancakes), and other delicious treats.

Aquatic Ecology: Can the lake/pond/river sustain life? In this lesson students will work together to determine the water quality of the local body of water, and see if it's healthy enough for organisms to live and thrive. They will search for macroinvertebrates in the water and safely catch and observe them. Students will be searching for evidence of life and testing the pH and Dissolved Oxygen levels.

DaVinci Bridge: You won't need nails or glue to keep this bridge together. Leonardo DaVinci invented a wooden bridge that was held together by gravity and friction. Students will build a large walkable bridge in this physics and engineering class.

Endangered Egg Babies: What is an endangered species and what is causing them to be endangered? In this class, we will discuss human impact on the environment through a series of games that represent all of the obstacles these species are facing. The students will have the important task of protecting their own endangered egg baby!

Camouflage: Students will learn about different types of animal camouflage through nature exploration and fun games!

Nature Art: Calling all nature artists! Let's get to know nature in a different kind of way. Students will learn about famous nature artists like Andy Goldsworthy, and then create their own art pieces using only natural materials.

Beaver Fever: The students will learn about one of the most hardworking animals in the forest:the beaver! We'll discuss beaver adaptations that make them true survivors, their habitat, predators, how they're similar to humans in many ways and even visit beaver lodges on property. The students will have a chance to take part in The Beaver Challenge, where they will see if they can hack it as a beaver collecting wood for their lodge. There's a lot that people who don't know about these crafty creatures!

Build a Civilization: What would the world be like if it were run by Nature's Classroom students? In this class, students will work in teams of two or three to run things the way *they* want. The NC staff will act more as a game manager, ready with all the mechanics and goals needed to keep things running smoothly, but the direction our mini-civilizations head is totally

up to the kids! Using only what's in the woods as resources, they'll have to find answers to big questions: How will they feed their population? Will they have enough water? What is the ultimate goal that a civilization is trying to achieve anyway? What happens when all the metal ore everyone is looking for (pinecones) is entirely inside one civilization's borders? Let's find out...

Back to Basics: What is cutting edge today will soon seem quaint and old-fashioned. In B2B we're going to rewind technology back to how it was before the industrial age. Students will have the opportunity to try a mix of primitive, pioneer and ancient technologies. In the end, they'll be left with a greater appreciation for the convenience of modern life as well as a deeper understanding of humanity's drive for perpetual progress that got us here. Where we're heading next is the big question they'll be left to answer on their own...

All Day Hike (9am - 4pm):

Our all day hike focuses on hiking, exploration, team building, and wilderness survival. This experience is a great time for a field group to bond. It's an opportunity to complete a longer and more challenging hike/ adventure, and a great time to explore some longer trails. They might even experience some elevation change!

Large Group Activities:

Predator vs Prey:
A large group activity, where students move through an ecosystem by doing a large group simulation involving a tag game. They will learn about population dynamics, the relationships between predators and prey, the effects on a food web when one organism is removed, and the impact humans have on an ecosystem.

Deer Survival:
A great activity for smaller schools. How do deer survive against predators, pollution, weather, etc. This simulation involves a tag game where students will learn about deer populations, the effects on an ecosystem, and the impact humans have on an ecosystem.

Evening Programs:

Night Experience: Students will have an opportunity to explore the outdoors after dark and discover that the natural world at night is something to be treasured, not feared. Through a series of experiments and activities, students will explore the sensory adaptations that allow them to adjust to the darkness.

Science Fair: Students will learn how to use the process of scientific inquiry to determine the outcomes of an experiment and make scientific observations. Different scientific principles will be covered throughout the lesson including air pressure, surface area, states of matter, electricity, and convection.

Skit Night: Join us for a light-hearted evening filled with awesome skits and songs performed by instructors, teachers, chaperones, and students.

Other Activities:

4C Challenge (Great for Departure Day!)
This departure day activity has students use the teamwork and collaboration skills they have gained while at Nature's Classroom, to complete tasks given to them by the outdoor instructors. In their field groups, students will rotate from one station to another and work through various 5-10 minute team building activities.

Free Time:

Free time is supervised by visiting teachers and chaperones. Instructors will directly hand students off to a visiting teacher before lunch and dinner. Teachers should make time for students to go back to their cabin and get prepared for the next activity (change clothes/ shoes, add things to day pack etc.). If they are ready for the next activity they can use sports fields, rec hall, and sports equipment.