Public School Curriculum Matrix

Class Options

Life Science

Edible Plants

Objective: Students will learn to identify edible and medicinal plants common to a northern forest and what precautions are necessary when looking for edible plants. Activities include an identification hike and sampling of edible plants.

Life Science – Fauna

Animals and Their Habitat's

Objective: For students to understand how each creature has specific attributes that help it live in its specific habitat. Students will also study animal habitats and learn how to find signs of animal habitat and activity. Activities include an observation hike and a hands-on study of some of the animals in BRR's Nature Center.

Checking Out Consumers

Objective: Students will learn to identify the various roles of organisms within a food chain or web, with a focus on the consumers. Animal behavior will also be discussed. The emphasis will be on animals and will explore some of their behaviors as students learn who eats whom. We will study food chains and webs as well as what makes animals alike and different. Activities will include games, owl pellet dissection, and a look at the animals in our Nature Center.

Tracking

Objective: Students will learn how to observe and track wildlife. They will learn what kind of evidence to look for that reveals signs of wildlife presence. The life and habits of animals will be discussed and studied. Activities will include games, tracking using various senses, and an investigative hike. This class is primarily taught outdoors.

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Invertebrate Dissection

Get fingertip deep in the incredible workings of an earthworm and grasshopper without making your classroom messy. This class is designed to take the mess of dissections out of you classroom and bring it to ours.

Earth Science

Astronomy

Objective: Students will learn to identify several common constellations and how to use a star chart. They will discover the difference between the many celestial objects and terms. Activities include solar system role playing, distance hikes, and construction of star charts (one for each student).

Rocks & Minerals

Objective: Students will learn to differentiate between rocks and minerals and will learn basic field identification techniques for minerals. They will learn about the three types of rock found on earth and how they are formed, noting the differences between them. Activities include identification of sample specimens through various tests and a fun game which takes students through the rock cycle.

Other Subject Areas

Ecology

Objective: For students to recognize the delicate balance in nature. Discussion will focus on cycles within an ecosystem, specific types of symbiosis between organisms, the different roles organisms have in nature including the living and non-living parts, and our role as care takers. This class includes many activities to reinforce basic ecological concepts.

Creek Studies

Objective: Students will discuss the steps involved in the hydrologic cycle, the unique qualities of water, and the many purposes of this amazing substance. They will learn how to conduct a biotic study to determine water quality. Activities include an exploration of the Octorara Creek to learn how to determine the cleanliness of the water based on the organisms that live there.

Watersheds

Objective: Students will learn what a watershed is and how human actions affect water quality, as well as other ways the watershed relates to us. We will be looking specifically at the Chesapeake Bay watershed and discussing how activities at Black Rock Retreat affect the quality of the bay.

Flight

Objective: Students will discover the basics of flight from seeds falling to rockets soaring. During this class we will be discussing the general concepts of flight that apply to birds, seed dispersal, flying mammals, and all kinds of manmade aircraft. Students will explore controlling flight with modeling their own aircraft.

Outdoor Living Skills

Orienteering

Objective: For students to learn how to read a topographical map, the parts of a compass, and how to use a compass. Activities include making orienteering shapes and “finding the way” on our orienteering course in the forest.

Canoeing Basics

Objective: Students will learn the basics of canoeing, including common strokes, steering, and canoe safety. We will travel off-site to a local reservoir to practice our canoeing skills and study an aspect of nature. The canoeing course takes up two class periods and is coupled with the following subject area:

***Bird Watching**:* Many waterfowl call the lake habitat their home, and other avian species use the surrounding woods and marshes. From our canoes, we will look for different bird species, including geese, mergansers, herons, and maybe even a bald eagle!

*This course is reserved for students in **6th grade or above** and a maximum group size of 28 participants. Please contact the Outdoor Education Director to check on class availability.

Wilderness Survival

Objective: Students will learn several important skills for survival in the wilderness. They will learn how to pick out an appropriate shelter location and construct a shelter using two tarps and ropes. They will learn to setup a cooking area by laying out a teepee, log cabin, and A-shaped fire using tinder, kindling, and coal producers. They will also learn how to obtain clean water in the wilderness by using a water filter. And finally they will have a chance to cook and eat the some tasty bannock.

Geocache Black Rock

Objective: Objective: GPS technology can be found everywhere: in personal vehicles, scientific research, aircraft, surveying, the trucking industry…and the list goes on! But do your students really understand how it works? Students will relate position on the earth's surface using latitude, longitude, and altitude. They will also look at the technology involved in the Global Positioning System and explain how triangulation is used to find location. Activities include navigating around BRR to find hidden geo-cache locations.

Archery

This class is an integration of history, safety, science and coordination. Plus, it's a lot of fun!

Laser Tag - New

Have an absolute blast but with a purpose. Laser tag at Black Rock Retreat is not only a fun activity but a new way to learn how to work as a team.

Teambuilding

Group Initiatives

Objective: For students to learn and to experience what teamwork is and how to better work together with their peers. This class presents various challenges and problems to the group which they must work through. Trust, communication, caring, and commitment are other character traits that are discussed. Each activity is followed up by a debrief discussion reflecting on what happened and how the activity can be related to life.

Low and High Ropes Course

A challenge ropes course consists of a series of group challenges and individual physical challenges that require a combination of teamwork skills and commitment. The ropes course experience is designed to increase confidence and self-esteem; increase mutual support and foster respect for differences within a group. Debriefing is an important part of the ropes course, helping students to process the experience and apply what they are learning to their lives. High Ropes is available for grades 6-12.