

## **Flora Plant Basics: Vegetation Investigation**

Objective: To help students better understand the function of various plant parts by studying the seeds, tree cookies, leaves, and trunk/stem structure. Activities include: examining and identifying means of survival for plants; building a tree through acting out the roles of the various parts; and a hike to look at plants and how they survive. Students will come away with a greater understanding of God's amazing design of His creation. Older students will also look at transpiration and the transfer of energy.

## **Edible Plants: Living on the Wild Side**

Objective: For students to discover how the Lord provides for the needs of His children through His creation and most importantly, through His Son. 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.

## **Winter Tree Identification**

Objective: Students will learn some survival techniques that plants use in the winter as well as properties of snow and how it is helpful to the plants. Activities will include tree identification and snow experiments.

\*Available December – mid-March

## **Wildflower Identification**

Objective: As students learn to use a dichotomous key to identify spring wildflowers, they will also learn to identify and explain the functions of various plant parts. A study of pollination—how it happens and its importance for the flower's survival – is also included. Students will discover a few uses of spring wildflowers, whether edible or medicinal in quality. Activities include a game, wildflower identification hike, and exploring the usefulness of wildflowers.

\*Available April – June.

## **Animals and their Habitats: Asking the Animals**

Objective: Students will understand how God has designed each creature to 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 around Westview

\*Recommended for 4th -8th grade.

### **Insects: Investigating Insects**

Objective: Students will learn the basics of what defines an insect and how their bodies function. They will also investigate why insects are important in God's creation – what their niche is. Activities include insect collection and identification (catch & release).

\*Recommended for 4th -8 th grade.

### **Consumers: 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 and owl pellet dissection.

### **Invertebrate Dissection**

Objective: Students will discover the anatomy and basic body systems of a two invertebrates. This class will include dissection of a real preserved earthworm and grasshopper for your students (partnered in groups of two) to share. Our staff will walk them through the dissection covering nervous, digestive, excretory, and respiratory and circulatory systems.

### **Tracking**

Objective: Students will discover the amazing world God has created and 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.

### **Ecology: Exploring Creation Connections**

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

### **Forest Ecology**

Objective: For students to identify the different types of forests, the layers of a forest, the stages of succession, and the common trees around Westview. Activities include a quadrant study and a hike observing various layers within the forest and different stages of the forest areas.

## **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 Westview affect the quality of the bay.

## **Creek Studies: Wading into Water**

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 Westview's creeks to learn how to determine the cleanliness of the water based on the organisms that live there.

## **Advanced Creek Study**

Objective: Students will learn how to conduct a biotic study (as in "Wading Into Water") and also an abiotic study on the creeks around Westview. They will test several factors including pH, nitrates, and dissolved oxygen levels. Using both biotic and abiotic results, students will determine the water quality of the stream.

\*Recommended for 6th- 8th grade.

## **Archery**

Objective: Students will be introduced to archery as a sport and science while understanding the Biblical principles of speaking truth, and understanding the spiritual and earthly consequences of our actions.

## **Canoeing Basics**

Objective: Students will learn the basics of canoeing, including common strokes, steering, and canoe safety. We will practice our canoeing skills and study an aspect of God's Creation.

## **Orienteering: Finding the Way**

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.

## **Survival Basics**

Objective: In this sampler course of outdoor survival skills, students will learn the basics of wilderness survival. 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.

## **Low Ropes Course**

Objective: For students to participate in a series of group and 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 as well as challenge students in their faith. Debriefing is an important part of the low ropes course, helping students to process the experience and apply what they are learning to their lives.