

WORTHINGTON FIELD STUDIES, INC.
FIELD ECOLOGY 1 @PACIFIC NORTHWEST, SUMMER 2006

COURSE OBJECTIVES

GENERAL:

Each student will maintain a trip journal that will reflect daily interpretations of experiences. Entries will include, but not limited to, the following:

- personal reactions to the changing physical and biological environments
- participation in group events
- specific science questions related to each site
- general science questions pertaining to comparisons between and among various sites

2. Each student will participate in the development of a cross-country profile from Worthington, Ohio to Olympic National Park in Washington. The cross-country profile will consist of plotting data such as elevation, vegetation, wildlife (including road kill), and water features.
3. Each student will evaluate the purposes of national parks, national monuments, national historic parks, national forests, and other federally-administered land area. This will be achieved through independent research pertaining to a particular park, the development of an informational pamphlet, and personal experience on the trip.
4. Each student will describe the concepts, rationales and procedures for minimum impact group camping and backpacking.
5. Each student will describe the effects of mountain and rainforest climates on human physiology from personal experiences, and they will learn how to minimize these effects.
6. Each student will develop his/her own environmental ethic, based upon ecologically sound and prudent uses and management of ecosystems and natural resources. Each student will describe their personal beliefs in regards to environmental ethics and describe how/why these ethics may or may not have changed as a result of this trip.

SITE:

Rocky Mountain National Park, Colorado

- Students will be able to compare and contrast the mountain features/hikes with those of Cascade Canyon.
- Students will be able to describe the diversity of ecosystems in Rocky Mountain National Park.
- Students will be able to define the function of the continental divide.

Craters of the Moon National Monument and Preserve, Idaho

- Students will observe unique features related to large, vast lava flows.
- Students will compare and contrast the land features at Craters of the Moon National Monument to those of Mt. St. Helens National Volcanic Monument.

Mt. St. Helens National Volcanic Monument, Washington

- Students will witness the effects of a recent, massive volcanic eruption.
- Students will compare and contrast the re-growth of the Mt. St. Helens region with that of the Yellowstone National Park.
- Students will describe the progression of disruptions that Mt. St. Helens caused prior to, during, and after its eruption of 1980.

Mt. Rainier National Park, Washington

- Students will observe the various biomes associated with the mountainous region of Mt. Rainier.
- Students will identify glacial features as well as volcanic features.
- Students will study the ancient volcanic size and appearance of Mt. Rainier.

Olympic National Park, Washington

- Students will describe the unique combination of ecosystems in the park.
- Students will learn and observe first-hand the tides, tidal pools, wave erosion, and various landscape features of the Pacific coastline.
- Students will discuss the plate tectonic movement that contributed to the formation of the Olympic Peninsula.

North Cascades National Park, Washington

- Students will draw connections between the features of the Cascade Mountains in the park and those of Mt. Rainier.
- Students will observe the rain-shadow effect/zone and relate how this plays a role in the ecosystems of the area.
- Students will learn why the Cascade Volcanoes may be hazardous and relate the types of volcanoes with those of Olympic, Rainier, Mt. St. Helens, and Craters of the Moon.

Banff National Park, Alberta, Canada

- Students will observe various glacial features of the area while comparing and contrasting those to features in parks previously visited.
- Students will reflect on cultural similarities and differences between the United States and Canada.
- Students will learn about ecosystem management in Canada and relate this to procedures common in the United States.

Glacier National Park, Montana

- Students will observe landform features created by glaciers.
- Students will compare and contrast the Rocky Mountain region of Glacier National Park with that of Grand Teton National Park and Rocky Mountain National Park.
- Students will explore unique characteristics of Northern latitude and high altitude biomes.

Yellowstone National Park, Wyoming

- Students will learn more about the presence of hot springs and the resulting land formations they create.
- Students will observe the regrowth of various biomes after the Yellowstone fire of 1988.
- Students will study the geological significance of plate tectonics and the correlation of the location of geysers.

Badlands National Park, South Dakota

- Students will identify conservation acts and preservations deployed by President Theodore Roosevelt.
- Students will develop connections between the daily lives of Native Americans as compared to that of American Pioneers.
- Students will observe the stratigraphy of land formations to learn more of geological history and the diverse fossil collection the park has to offer.