

## **VOLCANOES & CAVES FIELD STUD PROGRAM INFORMATION**

During this adventure we head south to Crater Lake and the beautiful and bizarre Lava Beds National Monument! We will explore spectacular Crater Lake National Park and investigate its volcanic history, and the turbulent events of Cascade Mountain geology. We'll handle igneous rocks and walk over geologically recent lava flows. Continuing south we'll take an in-depth look at the bowels of the earth, deep in lava caves within Lava Beds National Monument, and take in a bit of human history where the Modoc Indians hid from the American cavalry in their last effort to keep their lands. Through the geology of Oregon and Northern California you'll gain a greater knowledge of the area's geography, natural past, and develop an understanding of the complexities involved in the shaping and structure of the Northwest.

This program will take campers into a variety of geologic areas. Campers will hike through forests and sagebrush deserts, and clamber through rough terrain and lava caves. By carefully observing the differences in each of these regions you'll get a better understanding of how volcanoes work and what they leave behind. Nights will be spent in campgrounds close to our geologic destinations.

### **COURSE SYLLABUS**

This course includes a minimum of 28 hours of lecture/seminar discussions, and a minimum of 28 hours of field investigation/laboratory time. Students successfully completing the course will receive a certificate of credit that may be given to their school or service organization for possible credit.

#### **Objectives:**

- Learn science by doing science
- Learn community living skills, including cooperation, respect and trust.
- Increase ability to observe the natural world
- Using the Cascades as a guide, understand the general concepts of volcanic and geologic processes.

#### **Activities: Hands on learning in the field**

- Investigate Crater Lake National Park and nearby Lava Beds National Monument
- Explore lava tubes, cinder cones and other traces of volcanic activity
- Swim in lakes that were formed from volcanic calderas

#### **Concepts: Principles to be introduced**

- Wildlife – Adaptations, survival challenges, predator/prey relationships.
- Plants – Adaptations, survival challenges, nutrient cycles
- Geology—Tectonic plates, rock and mineral identification, volcanic processes
- Camping Skills – Opportunity for students to learn and practice minimal impacts camping skills, meal procedures, campground etiquette and rules, and respect.

## **SAMPLE DAILY SCHEDULE\***

7:00 a.m.	General camp wake-up
8:00 a.m.	Breakfast
9:00 a.m.	Activity Block 1
11:30 a.m.	Lunch
12:30 p.m.	Rest & relaxation
1:30 p.m.	Activity Block 2
3:30 p.m.	Activity Block 3
5:00 p.m.	Recreation and free time
6:00 p.m.	Dinner
7:15 p.m.	Evening activities
8:30 p.m.	Return to tents, prepare for bed

\* Programs that are partly or entirely field-based will follow a unique schedule each day, depending on the activities planned. Drive times between field sites and campgrounds will include stops for short hikes and games, meals, and bathroom breaks.

## **TECHNOLOGY AND COMMUNICATION**

Cell phones are not allowed on any OMSI Science Camp program. Cell phones are too easily lost or damaged. Students have an excellent support system at camp including their fellow students, the counselors, the instructional staff, and the lead staff. We will ensure that any necessary communication between parents/guardians and students can take place through the main phone at each site. Instructional staff carries cell phones during transportation and on off-site programs for emergency purposes only. An important part of the camp experience is for each student to gain independence, develop greater resilience, and enjoy the unique opportunities offered by OMSI Science Camps without technological distractions. We are grateful for the trust parents and guardians put in our staff to care for each student, and we appreciate the time taken in discussing this important issue with your student before his or her program begins.

Digital cameras are allowed, but remember that, at camp, things can easily be lost or damaged. We recommend single use cameras or film cameras. Please keep in mind cell phones with cameras will not be allowed.

For the safety of your child and OMSI Science Camps staff, we strongly discourage our staff from having contact with your child after camp since we cannot supervise it. Making new friends is one of many positive outcomes of OMSI Science Camps programs, and students who want to stay in touch with each other may exchange phone numbers, addresses, or e-mails. Please understand that any communication between your child and another student or a staff member after the camp session is over is the responsibility of the student's parent or guardian to oversee.

If your child would like to contact a staff member, then email a letter to: [pmsc@omsi.edu](mailto:pmsc@omsi.edu).

## VOLCANOES & CAVES FIELD STUDY EQUIPMENT LIST

### Sleeping Gear:

- \_\_\_\_\_ sleeping bag
- \_\_\_\_\_ insulated sleeping pad
- \_\_\_\_\_ small **tent** to be shared (2-4 person) (if already owned)
- \_\_\_\_\_ pajamas
- \_\_\_\_\_ pillow with pillowcase (optional)

### Field Equipment:

- \_\_\_\_\_ 2 water bottles (1 quart/liter each)
- \_\_\_\_\_ eating utensils (plate, bowl, cup, silverware)
- \_\_\_\_\_ flashlight or headlamp
- \_\_\_\_\_ daypack
- \_\_\_\_\_ **sack lunch for the first day**

### Clothing:

- \_\_\_\_\_ sturdy, well-fitting and broken in shoes. (hiking boots preferred)
- \_\_\_\_\_ shoes that can get wet (e.g. sandals, or old shoes)
- \_\_\_\_\_ 3 pairs long pants
- \_\_\_\_\_ 1 or 2 pairs of shorts
- \_\_\_\_\_ 3 shirts, 1 long-sleeved, 2 short-sleeved (for layering)
- \_\_\_\_\_ sweater or sweatshirt (it will get cold at night)
- \_\_\_\_\_ adequate underwear & socks
- \_\_\_\_\_ swimsuit & towel
- \_\_\_\_\_ hat and gloves
- \_\_\_\_\_ **rain gear (jacket w/hood & pants, or poncho)**

### Personal Gear:

- \_\_\_\_\_ toiletries: soap and container, toothbrush/toothpaste, comb/brush
- \_\_\_\_\_ wash cloth and a bathing towel
- \_\_\_\_\_ sunscreen
- \_\_\_\_\_ lip balm with sun screen
- \_\_\_\_\_ personal hygiene items

### Optional:

- \_\_\_\_\_ camera
- \_\_\_\_\_ binoculars
- \_\_\_\_\_ compass
- \_\_\_\_\_ lightweight books (field guide, natural history, legends, etc.)

ALL CLOTHES AND EQUIPMENT SHOULD BE MARKED WITH THE PARTICIPANT'S FULL NAME. OMSI IS NOT RESPONSIBLE FOR LOST ITEMS.

PLEASE DO NOT BRING SNACKS OR CANDY  
(rodents enjoy searching tents for food).

NO ELECTRICAL EQUIPMENT SHOULD BE BROUGHT (CELL PHONES, MP3 PLAYERS, RADIOS, BLOW DRYERS, COMPUTER GAMES, ETC.)