

## **Paleontology Research Team Program Information**

Participants will delve into the deep history of Oregon, searching for ancient fossils beneath the surface, buried in rock. We will be learning about state-of-the-art paleontological techniques from professional paleontologists while participating in the Paleontology Research Team. Take a trip to Hancock Field Station in the heart of the John Day Fossil Beds National Monument on a hunt for fossils and evidence of prehistoric life. Continue on around the expanse of Eastern Oregon on a 2-week expedition in search of new fossil discoveries! Working with the researchers, be prepared for real digging and working with scientists in the field. Other highlights will include swimming in the cool waters of the John Day River and enjoying fun and entertaining campfires at night.

Participants will gain an understanding of the regional geology as well as fossil animals, plants and soils of Oregon. Students will be involved in field excavation, laboratory preparation and analysis, preparing fossils for study, and the basics of field geology including stratigraphy and mapping. The team will work in concert with professional paleontologists while also enjoying all the best central Oregon has to offer including rivers, canyons, and cliffs. Participants will work as a team to develop exhibits that will be used at Hancock Field Station for teaching materials after the program ends.

### **Course Syllabus**

#### **OBJECTIVES: Academic and outdoors training goals**

- ◆ To gain an understanding of field paleontology and Oregon geology
- ◆ To realize the importance of careful scientific study of fossil locals and field techniques
- ◆ To gain an understanding of the process that field paleontologists use today
- ◆ To determine changes in paleo-climates using information from fossilized leaves and mammals

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

- ◆ Assist the Bureau of Land Management and National Park Service in on-going vertebrate paleontology research projects in several different locations
- ◆ Explore and investigate several geologic formations and fossil locales
- ◆ Identify minerals, gain familiarity of crystal structure, and in-field identification techniques
- ◆ Collect and identify leaf fossils
- ◆ Learn about the functional morphology of present day omnivores, carnivores, herbivores and compare to those in the fossil record
- ◆ Investigate fluvial geomorphology including river dynamics, erosion, and depositional environments

#### **SCIENTIFIC CONCEPTS: Scientific Principles to be introduced**

- ◆ Oregon's geologic history -- concepts of stratigraphy, formations, rock forming processes
- ◆ Plant adaptations throughout time and their implications for past climate changes
- ◆ Introduction to anatomy, present day functional anatomy and how that will aid us in understanding extinct animals
- ◆ Proper use of field notes, aerial photography, data collection, specimen handling, cyclic prospecting, data analysis, and scientific procedure

**SAMPLE DAILY SCHEDULE\***  
**Paleontology Research Team**

6:30 a.m.	Optional Morning Walk
7:00 a.m.	General camp wake-up
7:30 a.m.	Breakfast
9:00 a.m.	Field activities (Lunch included)
2:00 p.m.	Rest hour
3:15 p.m.	Snack
3:30 p.m.	Interest groups
5:00 p.m.	Recreation and free time
6:00 p.m.	Dinner
7:15 p.m.	Evening activity
8:30 p.m.	Campfire
9:15 p.m.	Return to cabins, prepare for bed
9:30 p.m.	Lights out

\*ALL SCHEDULES ARE SUBJECT TO CHANGE

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. Campers have an excellent support system at camp including their fellow campers, the counselors, the instructional staff, and the lead staff. We will ensure that any necessary communication between parents/guardians and campers can take place through the main phone at each site. Instructional staff carry cell phones during transportation and on off-site programs for emergency purposes only. An important part of the camp experience is for each camper 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 camper, and we appreciate the time taken in discussing this important issue with your camper 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 campers 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 camper or a staff member after the camp session is over is the responsibility of the camper's parent or guardian to oversee.

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

### Equipment List

Please note that this trip includes a camp-out, students should bring a warm sleeping bag and sleeping pad of their own, and a two or more person tent if they have one.

- SLEEPING GEAR:         sleeping bag  
                              sleeping pad  
                              tent  
                              pillow with pillowcase (optional)  
                              sheet (optional)  
                              pajamas
- FIELD EQUIPMENT:     2 water bottles (1 quart/liter each)  
                              flashlight or headlamp  
                              bound notebook, pencils, and pens  
                              daypack with straps  
                              two or more person tent  
                              mess kit (plate, bowl, cup, fork, and spoon)  
                              **sack lunch for the first day**
- CLOTHING:             boots (sturdy, comfortable, well-fitting and broken in)  
                              boot socks (3 pair minimum, 1 slick pair for blister protection)  
                              3 pairs long pants (1 jeans and 2 lightweight, light-colored)  
                              1 or 2 pairs of shorts  
                              3 shirts, 1 long-sleeved, 2 short-sleeved  
                              adequate underwear  
                              warm layers: hat, gloves, scarf, long-underwear etc.  
                              jacket  
                              rain gear (jacket w/hood & pants, or poncho)  
                              bandannas or handkerchiefs  
                              broad-brimmed or billed hat for sun protection  
                              swimsuit  
                              tennis shoes or sport sandals for camp
- PERSONAL GEAR:      sunglasses  
                              toiletries: soap and container, toothbrush/toothpaste, comb/brush  
                              wash cloth and towel  
                              sunscreen (SPF 15 or SPF 30)  
                              lip balm with sunscreen  
                              personal hygiene items  
                              insect repellent

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 cabins for food).

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