Cascade Science School
At Camp Namanu

TEACHER/GROUP LEADER
CURRICULUM AND SITE INFO PACKET

Oregon Museum of Science and Industry
1945 SE Water Ave
Portland, OR 97214
PMSS@omsi.edu
Cell Phone: 971.269.9929
# TABLE OF CONTENTS

## INTRODUCTION

- Introduction

## PROGRAM INFORMATION

- Site Information and Options
- Curriculum Options
  - Oregon Common Curriculum Goals in Science
  - Field Studies
  - Interest Groups
  - Evening Programs
  - Campfire
- Pre-Program Activities
- Post-Program Activities and Resource List

## SITE INFORMATION & LOGISTICS

- Policy Review
- Notes on Assigning Chaperones/Counselors
- Facility Description, Mail, Telephone, Weather
- Health & Safety

## PRE-PROGRAM CHECKLIST

- Checklist

## DIRECTIONS TO THE SITE

- Directions
INTRODUCTION

WELCOME! We are excited that you will be participating in an OMSI Outdoor Science School Program. The purpose of this packet is to provide you with all of the information required to make your experience with us as rewarding and successful as possible. It addresses the most common questions, details, and issues involved in planning a program. Please read this packet carefully and refer to it throughout your planning process.

WHERE YOU ARE NOW

If you have received this program packet, you have made a reservation, signed a contract, and returned it to the OMSI Program Registration Office with a deposit. Your reservation has been secured for specific dates and a set number of participants. If you wish to change your dates or the number of participants, please contact the OMSI Program Sales and Registration Office at 503.797.4661 or at register@omsi.edu.

WHAT HAPPENS NEXT

Now comes the fun part: it is time to plan your program! You will review a sample schedule, choose curriculum topics and activities, and prepare your students for their upcoming educational adventure. Planning a program involves managing a number of details and logistics. A checklist located on the second-to-last page of this packet outlines the main tasks to accomplish before coming to OMSI Outdoor Science School.

WHO TO CONTACT FOR HELP

If you have any questions about the checklist or any other issues, please contact the Site Manager for Cascade Science School, Erin Roden. She can interpret the checklist according to your specific needs, emphasize specific tasks, and walk you through the more difficult logistics. You may also reach her on her cell at 971.269.9929. Contact information is located at the bottom of each page of this packet for easy reference. You may also call the OMSI Outdoor Education office in Portland at 503.797.4575.

OMSI SCIENCE CAMPS STAFF CREDENTIALS

Steve Tritz, Director of Outdoor Science Education, has been with OMSI since 2006. He holds a degree in Environmental Science from the University of Guelph. Steve has been working in education for eight years teaching recreation and environmental education in Minnesota, South Dakota, and Oregon. He is a certified Lifeguard Instructor and Wilderness First Responder. Steve is an avid bird watcher and can often be found behind his binoculars in the forest, gazing at the tide pools, or on the river.

Erin Roden, Site Manager (Cell: 971.269.9929)
Erin is a Northwest native, raised in the Portland area. She graduated with a degree in Physics-Astronomy from Whitman College in Walla Walla, Washington. She has worked and volunteered for many youth education projects and camps. Erin began teaching for OMSI at Hancock Field Station in 2005 and worked as a Program Coordinator there from 2009-2011. Erin has biked across all of America and loves the forests of the Western Cascades best of all. She likes to be in among the ferns, between the moss and the maples.
OMSI is fortunate to be able to house its Cascade Science School programs at Camp Namanu. Camp Namanu is located in the foothills of the Cascade Mountains just three miles east of Sandy, and an hour drive from Portland. Opportunities for outdoor science education abound in the diverse habitats and history surrounding Cascade Science School. From dense temperate rainforest to rocky river banks, ponds and streams, wildlife in and around camp is easily observed and studied. The area has a long cultural history, from the previous millennia where Chinook peoples enjoyed the plentiful salmon runs at the confluence of the Sandy and Bull Run Rivers, to the homesteading era of the 1890s.

Early in the previous century, this area, along with much of the Western Cascades, was clear cut by loggers, and in the century since, the forest has exploded back with life in an impressive array. In 1923, when a plan to build a dam here on the Sandy fell through, the property was sold to Camp Fire to house their summer camps. Most of the original buildings were constructed between then and 1945. The Camp Namanu property grew slowly in increments from the original 160 acre homestead to more than 500 acres spanning both sides of the river. This has isolated the main camp property from the development of the modern world in all directions.

OMSI’s Cascade Science School programming takes in the impressive resources of this site and uses it as a real living laboratory in which to study aquatic ecology, forest ecology and management, wilderness skills, and wildlife. This area is perfect for learning about the influence of the impressive cedars and firs, as well as the seemingly insignificant beetles and salamanders. The dense forested property is crisscrossed by a series of winding trails which makes the educational opportunities endless!

As Camp Namanu founding father “Uncle Toby” Harper said in 1932 at the dedication of the main lodge in his name, “I am going to tell you a secret - For locality, accessibility, privacy, topography, beauty, variety, in the excellence of its physical setup, and in its future possibilities, Camp Namanu stands away up at the head of the list of Class A camps.”

SITE OPTIONS

RESIDENTIAL PROGRAMS

Residential programs are typically three to five days in length. Instruction focuses on interdisciplinary ecology and geology studies with cultural history highlights. The entire program occurs within a day’s walk of the facility. For longer programs, field trips off site can be incorporated into the schedule, especially if groups can provide their own transportation.

Depending on your program schedule it may or may not be possible to schedule off-site activities or field trips during your program. Because most groups are dropped off on the first day and picked up again on the last day, with no available transportation during the program, most field trips or off-site activities are scheduled when transportation is present. If buses (or whichever transportation the school uses to travel to the site) are able to stay on site for the entire program, schedule flexibility increases dramatically.

Please note access to some State Parks, National Monuments, and Forest Service destinations/activities may limit group size and may require additional fees above and beyond OMSI’s program fees. Examples include mileage to transport OMSI staff and vehicles to a destination, entrance fees to parks and monuments, and parking passes (for both OMSI vehicles and private vehicles driven by chaperones/teachers). If you are interested in planning an off-site activity, please discuss these extra fees with the Site Manager before your arrival.

SHARING THE SITE

You will most likely be scheduled to share the facility with another group. This can be a great opportunity for students from different parts of the state or country to meet, form friendships, or become pen pals. Groups share the dining hall, restrooms, and recreation areas, but not cabins or instructional groups. Sharing evening programs and/or campfire programs might be an option, and is highly recommended.
CURRICULUM OPTIONS

The following curriculum options will help you round out your program schedule with activities to complement your current science curriculum. Depending on the length of your stay, you will choose one or more field studies, two or more interest groups, and an appropriate number of evening programs. Our instructors are continually developing new activities; feel free to contact the Site Manager to learn about any programs not listed here.

OREGON COMMON CURRICULUM GOALS

The bulk of the day is spent in the field involved with the natural world through hands-on activities and hikes. Our intent is to use the natural world as a vehicle to study concepts. Our curriculum is concept-based and aligned with the Oregon Common Curriculum Goals (OCCG) in Science. If there is a specific concept you wish to cover with your classroom, please let us know in advance. The OCCG concepts which apply best to our studies are as follows:

- Adaptation influences survival.
- Individual organisms and populations in an ecosystem interact.
- Changes in populations are related to resources.
- Questions or hypotheses can be examined through scientific investigation.

FIELD STUDIES

Field studies are the bulk of the programming you will do each full day you are on site (five hours per day). They begin after breakfast and continue into mid-afternoon. Any of the following disciplines can become the focus of a field study. Our typical interdisciplinary study focuses on ecology and geology.

Aquatic Ecology

- Critter Catch: Collect and release lake creatures in the pond or river. Observe them as they move about in a collection chamber. Draw and label their unique body parts in a journal. Observe and research how the creatures live, what they eat, what eats them, and examine their adaptations.

- Water Quality Testing (dissolved oxygen, temperature, and pH): Use kits to test water quality in two different systems. Test the water for pH and dissolved oxygen (DO). Discuss the effect of varying DO, temperature, and pH levels on aquatic organisms and how human activities affect these levels.

- Plankton Lab Investigation: Collect samples and observe them under the microscope and the video microscope. Identify organisms and draw their unique body parts in a journal. Discuss the food chain and energy flow.

- Water Cycle: Simulate the water cycle. Learn how water is available on Earth.

Forest Ecology

- Photosynthesis: Role play the process of photosynthesis with students. Review the products of photosynthesis.

- Nutrient Cycle: Examine a rotten log. Discuss and look for producers, consumers, and decomposers. Discuss the concept of nutrients cycling through an ecosystem and how it is unlike energy that flows through a system.

- Soil: Look at the requirements for healthy soil. Discuss soil formation processes.

- Plant Identification: Identify a few of the more common plants in this area. Talk about basic classification of organisms. Discuss the uses of plants. Compare leaf, tree, and root structures.

Geology

This can include (but is not limited to) rock cycle, plate tectonics, geologic time, geologic change, erosion/deposition, rocks and minerals, geologic history of Oregon, volcanoes. We will look at the structure of the earth and its layers. Investigating the geologic processes that continue to shape the Cascades and all of the Northwest, students will learn about the dynamic nature of geology. **Off-site explorations on Mt. Hood are possible in the fall only.**

Student-Driven Research Projects

Students, working in small groups, create their own research question and use their own ingenuity to answer that question. They go step by step through the entire scientific method, from initial observations through presenting their results in poster form. It is highly recommended to combine this field study with a Project Presentations evening program where they can present their research to their classmates and teachers.
INTEREST GROUPS

Interest groups are short 1.5 hour classes focusing on one topic. They are typically scheduled in the afternoon after students return from the field. Several interest groups are usually offered at one time. Students should be assigned to or choose their own interest groups prior to their arrival at camp, and group sizes must remain at 15 students. Options include:

Amphibians
Amphibians are a remarkable class of animals. We will investigate their habitat and behaviors, as well as their special unique adaptations and vulnerability to pollutants and changes in their environment.

Birding
Learn about the amazing adaptations of birds. Compare the anatomy and physiology of birds. Use binoculars to go in search of common types of birds found in the Cascade foothills.

Early Oregon Studies
Focus on the cultural history of early Western Oregon region peoples. Learn how to make your own rope, study primitive fire-making tools, use flint and steel, use an atlatl, and learn how to identify and prepare wild edibles.

Mammal Studies
Students learn to identity different parts of mammalian skeletal structure and discover the wide range of adaptations in these amazing animals.

Orienteering
Learn how to use a compass to help find your way in the woods! After basic instructions, students use their skills to explore the camp.

Owl Pellet Dissections
Learn fascinating things about the habits and adaptations of owls. What do they hunt? How do we identify the different parts of the prey animals found in their pellets?

Survival
Discuss basic survival strategies, accident prevention, and standard necessary equipment. Small groups of students practice their skills by building a shelter.

Team Challenge
After giving students a set of rules and tools, have them work together to accomplish common goals in an outdoor game setting. This fun, energetic class allows your students the chance to practice teamwork, cooperation, and creativity!
**EVENING PROGRAMS**

Evening Programs (1-1.5 hrs) usually take place between dinner and campfire. Since the entire group participates in an evening program, chaperones/counselors must be present (1 per every 10 students) to assist OMSI staff. Please select one Evening Program for each night of your stay.

**Bat Slideshow**
This colorful slide show illustrates the amazing adaptations and ecological importance of these often misunderstood animals. This activity is supplemented with lively demonstrations and discussion.

**Eco-Jeopardy!**
Students participate in a fast-paced game show style review of information they have learned. Activities are hosted by a zany cast of characters somewhat resembling the OMSI staff.

**Environmental Forum**
Students are placed in teams, each with a particular point of view regarding a certain environmental issue. Students must work together to design a land-use plan for their land while protecting their interests. After each team presents their plan to the entire group, they may have a chance to discuss ideas with other teams. This is a non-advocacy activity with no one right answer. The Environmental Forum can deal with a variety of topics from land use to salmon habitat protection and restoration.

**Night Hike** (available, weather permitting, March-April and September-November)
Discover the night! Test your senses of hearing, smell, and touch through outdoor sensory activities while learning about adaptations of nocturnal organisms. Stargazing may also be an option.

**Predator/Prey** (available as an arrival/departure day activity, or April-June as an Evening Program)
In this camp-wide tag game, students learn how trophic levels support a healthy ecosystem as they act out different parts of a food chain. Concepts of dynamic equilibrium and bioaccumulation are emphasized.

**Raptors**
This colorful presentation introduces students to the fascinating world of birds of prey. The program includes the examination of wing, talon, and skull specimens, and a slideshow.

**Science Fair**
Students participate in a round-robin of amazing science activities. Students visit different science fair stations to participate in hands-on demonstrations and learn about such topics as air pressure, states of matter, taste buds, and acid-base reactions.

**Volcanoes**
Students will learn about how different types of volcanoes are formed while creating their own model volcano. They will learn about a’a and pahoehoe lava flows, lahars and the other amazing phenomena involved in volcanic eruptions. At the end of the class, each student makes an ice cream sundae representing one type of volcano they have learned about. This is in place of a regular dessert during dinner.
CAMPFIRE

Most groups close each day with a campfire program. Campfires can run 30-45 minutes in length. Activities include, but are not limited to, simple call and response songs, student skits, and stories. If you know musicians, invite them along. The OMSI staff will run one campfire, usually the first, and your group will run any additional campfires.

Get kids excited about campfires before and during the outdoor science school experience. It always helps if teachers and chaperones are enthusiastic as well. (Extreme silliness often wins over even the "coolest" of your student body.) Keep things simple with stories, songs, and skits.

Stories can be fun if someone feels comfortable telling one. They can be read directly from books, or memorized and acted out in the spirit of true storytelling by students or adults. Topics are up to you, but relating them to their outdoor experience is always helpful. Check your local or school library for good books on Northwest folklore, campfire stories, and native legends.

Skits prepared prior to arrival or during your stay are a great way to get everyone involved in the campfire. For example, give students a theme (e.g. an ecological concept) and have them act it out. These skits do not have to be scientifically correct; let the kids come up with their own legends.

- How did the beaver get its flat tail?
- Why does a coyote howl?
- How did the bobcat get its short tail?
- How did the porcupine get quills?
- How did the owl learn to fly silently?
- Why does a raccoon wear a mask?

Assign one of the following topics to each group. Ask the kids to come up with a story about:

- What a tree "sees," "hears," or "feels" during a day
- The water cycle (the story of a drop of water)
- The adventures of a bobcat from birth to adulthood
- What an eagle "sees," "hears," or "feels" during a hunt
- The story of a leaf that got fossilized
- The rock cycle
- What happens in the typical day of a fish?
- What is it like to be a pocket gopher?

During free time give cabin groups a piece of paper with a saying on it. For example, "When cheese sandwiches ruled the earth, the world was like..." Another idea for a skit is to give cabin groups a small paper bag with random objects in it and have them create a skit using those objects.

We have song books available for you to use during your campfire, but anyone with experience probably remembers some favorites. The students might also have some they would like to share. Also consult Rise up Singing (Annie Patterson and Peter Blood, 1992) and group song books your school music teacher might be able to suggest.

Another option is to read or recite The Lorax by Dr. Seuss. Have the kids act out the parts: truffula trees, brown bar-ba-loots, swomee swans, etc.
PRE-PROGRAM ACTIVITIES

Pre-program activities are designed to help prepare students for the OMSI Outdoor Science School program and encourage anticipation for camp. They are designed to introduce you and your students to what you will see, experience, and learn in the field. You may choose some activities and not others, depending on the age of your students, their background, and available resources and time.

1. Have each student pick an animal or plant found in the region and write a report about it. This activity familiarizes students with the local plants and animals and gives students something special to look for when they arrive. We suggest any of the following:

   **Animals:**
   - Bald Eagle
   - Bobcat
   - Flicker
   - Marmot
   - Red-tailed Hawk
   - Beaver
   - Chickadee
   - Great Blue Heron
   - Opossum
   - River Otter
   - Big Brown Bat
   - Cormorant
   - Great Horned Owl
   - Osprey
   - Salmon
   - Black-tailed Deer
   - Coyote
   - Kingfisher
   - Salmon

   **Plants:**
   - Bracken Fern
   - Lichen
   - Red Alder
   - Sword Fern
   - Cascara
   - Mosses
   - Red Huckleberry
   - Western Red Cedar
   - Douglas Fir
   - Maple
   - Salal
   - Western Yarrow
   - Hemlock
   - Oregon Grape
   - Snowberry
   - Western Yarrow

2. Spend a session talking about the parts of a plant and their functions. Discuss the functions of stems, roots, and leaves. Discuss the needs of plants, such as nutrients, sun and water. Review the basics of photosynthesis. Have students make sketches or identify a few of the leaves around your school. This will help them become familiar with local ecology and will serve as a good yardstick for what they will find at camp.

3. Valuable information can be recorded through sketching in the field. Have the students practice sketching some familiar objects to the scale of a hand, a person, a building, and the landscape. The sketches should impart information, but do not need to be artistic. Label the sketches, add a scale, give a compass orientation, and supply notes on color, texture, composition, etc.

4. Have the students practice keeping a journal for a week which records activities, places visited, information learned, weather conditions, personal feelings, and sketches. Each entry should indicate the time and day it was written.

5. Have the students spend 15 minutes writing reflectively on an assigned topic or one of their choosing. Afterwards, have them work in small groups to share their writing and explain how writing impacted what they thought. ("It clarified my thoughts," "It allowed me to better articulate what I thought," or "It forced me to really think about the topic for the first time.") The teacher can move between groups, prompting and facilitating the discussion.

6. Review the basic structures of the Earth and the concept of plate tectonics with your students. The exact mechanics are not as important as the idea that the Earth changes: mountains form and wear down, oceans open and close, etc. Films should also be available to cover these topics. Familiarize the students with geologic time and the concept that different life forms lived at different periods. A geologic timeline can help illustrate this concept.

7. Have the students make a personalized cover for their Field Book. If students are familiar with their notebooks before arriving they will have a better idea of what to expect during their visit.

8. Have the students make personalized nametags for themselves and their chaperones. Our staff is skilled at learning names quickly, but name tags always help. This activity helps build anticipation for camp. Laminated construction paper, wood “cookies,” and plastic-covered note cards work equally well. Include cabin assignment, field study, and interest group information, so students always have a handy reference for what they will be doing during the program, and where they should be at a given time.

9. Involve students in planning campfire activities. You may want to have cabin groups practice skits in advance to perform at campfire programs.
POST-PROGRAM ACTIVITIES

Post-program activities help reinforce concepts learned during camp. Ideally, you will be able to refer back to your OMSI Outdoor Science School experiences throughout the year.

1. “Create an Animal.” During the program, we will work with the concept of adaptation in both plants and animals. Have students recall different adaptations they saw and ask if they can remember why the plant or animal had a particular adaptation. Stretch the concept further. What would the particular species have to do if the climate became hotter and drier? Divide the students into groups of three or four; give them a large sheet of butcher paper and some pens, and assign each group a type of animal (or plant), as well as an environment (such as a water animal in the Arctic or a plant in the high alpine country of Mt. Hood). They’ll first need to list the factors to which species need to adapt: potential food sources, potential predators, sources of shelter, etc. Then they can create any species they want. Encourage creativity, but they must consider all the basic needs: food, water, warmth/cooling, shelter, and protection. Have each group present their animal to the rest of the class.

2. Review the Field Notebook with your class. Fill in the parts that may not have been extensively covered.

3. If you have an upcoming open house or parents’ night, have a display table of items from the program that the students brought home from camp. Things to be included are pictures, field books, etc.

4. Have the kids draw a large mural depicting their experiences. Include poetry, drawings, stories, letters, etc. encompassing what the students did, saw, learned, and enjoyed at camp.

5. Consider entering the students’ writing or art for inclusion in the school (or community) paper or literary magazine.

6. Have the students publish a newspaper covering events and classes in which they participated during the program. Students might even plan ahead to “interview” instructors, parents, teachers, and other students during the program. Have students include drawings and/or photographs.

7. Review key terms, concepts, and vocabulary that the students learned at camp. Examples include:

   - Carnivore
   - Herbivore
   - Omnivore
   - Producer
   - Consumer
   - Decomposer
   - Habitat
   - Community
   - Niche
   - Food Chain
   - Nutrient Cycle
   - Photosynthesis
   - Invertebrate
   - Adaptation
   - Ecosystem
   - Erosion
   - Deposition
   - Rain Shadow
   - Trees are Terrific

RESOURCES


The introduction to this book provides a short, easy-to-understand summary of the geologic history of Oregon. It would be of assistance in any post-trip project. Depending on your route to camp it will also aid you in sharing what you will see en route.


This book is an excellent introduction to geology, the theory of plate tectonics, and geologic time. The book simply and concisely describes plate tectonics and geologic time, as well as activities you can do with your class. It is an invaluable, inexpensive resource. The Ranger Rick series can be ordered from the National Wildlife Federation.


This is a good resource to start a pre-session on plants. It is full of basic information and fun plant-related activities to do with your students. It is an invaluable, inexpensive resource. The Ranger Rick series can be ordered from the National Wildlife Federation.


This book can be used in conjunction with several of the pre-trip projects. It contains fun facts about animals, plants, and natural features your students may see and/or learn about while attending OMSI Outdoor Science School.

PMSS@omsi.edu
SITE INFORMATION & LOGISTICS

POLICY REVIEW

After planning the program schedule, it is time to plan the logistics of the program. This section is meant to help you coordinate all of the details of your program. You will also receive the Policy Packet which lists important policies and procedures everyone must know before arriving on site, to insure program quality and safety for all. Here are some key highlights:

1. Please select a “health officer” (teacher/qualified parent) who is responsible for all medical forms and insurance information for each student and adult. The Health Officer is responsible for collecting all medication and ensuring that each camper receives medication as prescribed. Health officers must have current, nationally recognized CPR and First Aid certification. An OMSI staff member with first responder first aid and CPR training will always be on duty and available to assist in an emergency.

2. OMSI’s role is primarily instructional. Student supervision is primarily the responsibility of the school/group. Students must be monitored by school/group representatives at all times, including instructional activities, recreation, meals, and bed/cabin time. The school/group is responsible for student actions, and the consequences of those actions, during the program.

3. There must be one school/group representative designated as the lead who will make all final decisions and plans for the group. Though many teachers might be involved, one must be designated as “in charge.” This person must remain on site at all times, be visible and available, and participate in all aspects of the program.

4. The school’s lead person must set clear academic and behavioral goals prior to the program to insure that the students and chaperones are prepared to benefit as fully as possible from the program. S/he should meet at least once with all participants to clarify any questions or concerns about those goals and any other aspects of the program. Participants who jeopardize their own or others’ safety or well-being by breaking any policies listed in the policy packet will be asked to leave, with the school/group having responsibility for transportation.

5. Because their primary responsibility is student supervision, adult chaperones should not leave the site at any time during the program, regardless of whether they brought their own transportation or whether they are “off duty.” If a trip into town is unavoidable, it must be approved by both the OMSI Camp Manager and the school’s lead person. No alcohol may be consumed by anyone (including adult chaperones), on or off site, during programs for minors.

NOTES ON ASSIGNING CHAPERONES/COUNSELORS

Teachers, leaders, chaperones, and counselors are responsible for student supervision at all times. It is the group’s responsibility to make certain that each cabin of students has one chaperone/counselor and at least one classroom teacher, parent chaperone, or high school counselor to accompany each group in the field. Talk to the site manager about what cabin arrangement you can expect, and how many teaching groups you will have. It will be the group leader’s responsibility to screen, choose, train, and monitors these chaperones/counselors. Inform chaperones in advance of the strenuous activity (3-4 miles of hiking) they will experience during a day in the field, and that they will be “on duty” 24 hours per day during their stay.

A ratio of 1 adult to 7 or 8 students is ideal at Cascade Science School. Sometimes it is difficult to get volunteers; please talk to the manager about what minimum number will be adequate if you are struggling to find chaperones. Sometimes far more chaperones want to come to Outdoor School; again, ask the manager if it is possible to bring a few more adults. Even if there is room in cabins for more adults, keep in mind that a large number of chaperones can sometimes become a distraction for the students. Arranging a schedule in advance for times in which chaperones will be “on” and times when they are “off” can be very helpful.

If there are any students with special physical, medical, or learning needs please let the Program Manager know as soon as possible, so that we may be best prepared to aid in their success. Student aides may attend the program free of charge.
FACILITY

Student Cabins
Most of the facilities sleep 12 to 14 people per room in bunk beds. All buildings are heated and most have shared bathrooms attached.

Dining Hall
The dining hall has a modern kitchen and a large seating area for up to 250 people, and serves nutritious family-style meals. Students assist with setting the tables before meals and clean-up after meals. OMSI prides itself on having home cooked, nutritious meals. Vegetarian, vegan, and gluten-free options are available upon request if pre-arranged. Please alert the manager to the individual dietary needs of your students and chaperones as soon as possible.

Teacher Lodging
There is limited room available for teachers to stay separate from their students. If you desire, or your school district requires for you to have separate housing from the students, ask about this as soon as possible.

Restrooms
There are several restrooms and showers facilities throughout the property. Most are very rustic flush toilets with hand-washing stations.

Health Center / OMSI Office
There is a fully stocked health center on site. There is no on-site nurse, but all OMSI staff are certified in first aid and CPR certified. Students who may feel ill or need quiet space away from other students are asked to rest in the teacher's care. Please remember if a student is extremely ill, the best place for him/her is home, and the school and/or parents are responsible for transportation.

Laboratory Equipment
We are well-stocked with laboratory equipment, which includes microscopes, water test kits, binoculars, field guides, and other scientific equipment for the students' use.

Recreation
Options include an outdoor basketball hoop, volleyball net, and playing fields for softball or soccer. All of these activities require adult supervision by teachers or chaperones.

Mail
We recommend parents send mail to the camp the week before the program. This will ensure that mail arrives while the program is in progress. A return address will ensure a return if the mail arrives late.

Student's Name, Group Name
OMSI Cascade Science School
10300 SE Camp Namanu Rd
Sandy, OR 97055

Telephone: Students are not allowed to bring cell phones to camp. Adults are asked to restrict usage to off-times away from students. To reduce disruption and to maintain an immerse learning environment, parents are discouraged from phoning students at camp and students are restricted from calling home unless there is an emergency, or it is pre-arranged with the teacher.

A NOTE ABOUT WEATHER
The Western Cascades are an amazing and beautiful place to study natural history. It is also known for its diverse weather. Temperatures typically vary between 50-77 degrees F., with occasional nighttime lows in the low 40s. You may be fortunate to have a week of clear skies and warm weather, or you may experience a variety of weather conditions. When planning a trip it is wise to plan for all kinds of weather, including rain, cold, and wind. It is for this reason we strongly suggest all participants in our programs come prepared with waterproof rain gear and warm clothes. So, please tell your students to follow the equipment and Standard Field Gear instructions in the Outdoor School Policy Packet very carefully. In cases where extreme weather requires evacuation, schools/groups will be refunded the unused portion of fees. No other weather related refunds will be issued.
HEALTH AND SAFETY

Parents release their students to the schools during OMSI programs. As a result, teachers/group leaders and chaperones/counselors are responsible for all medical issues. OMSI Instructors have Wilderness First-Responder first aid, American Red Cross CPR and Life Guard training and certification. They carry first aid kits in the field, and are available for advice. However, they are not authorized to perform or assist in procedures beyond first aid training. This section describes in detail how to handle different situations.

One teacher/adult must be designated as the “health officer” who is responsible for collecting and reviewing the Health and Medical forms, clarifying any medical issues and concerns, making a list of issues and concerns for OMSI, discussing them with the Camp Manager, and dispensing medications. This person is also responsible for making decisions regarding emergency medical services and transporting participants to medical facilities, if necessary. If medical care is given to a student, the health officer is responsible for contacting the parents for permission, and for updating the parents regularly for the duration of the program.

The health officer makes a list of which students are taking which medications at which times. S/he keeps all medications in his/her possession (ideally in a locked box) and assumes the responsibility of dispensing the medications to the students when needed. In the event that medications are needed when a student is off site or in the field, the health officer designates a chaperone to dispense the medications to the correct students at the proper times. If an over-the-counter (OTC) medication is deemed necessary (i.e. a student has a headache, upset stomach, diarrhea, etc.), the health officer is responsible for dispensing the medication and informing the parents of the situation. OMSI might have limited quantities of common OTC medications, but we strongly suggest you bring a supply.

If a minor injury or illness occurs on site, the health officer is responsible for treating and monitoring the situation. Examples include cuts and scrapes, blisters, slivers, headaches, vomiting, and other common first aid situations. OMSI staff will advise and provide materials. If a student cannot participate in an activity, the health officer, or a chaperone/counselor chosen by the health officer, is responsible for monitoring and caring for the student during the activity.

If a minor injury or illness occurs off site or in the field, OMSI staff will preliminarily treat and stabilize the situation. Upon returning to the site, the health officer will be given full responsibility to further treat or monitor the patient’s condition.

If an emergency occurs on site, the health officer is responsible for making decisions regarding emergency medical services (i.e. whether to call an ambulance or Air Life or to transport the student to the hospital). If the group does not have a member who is adequately trained to stabilize an injured participant, OMSI staff will stabilize the patient while the health officer determines the emergency medical service plan. OMSI staff will advise and provide materials.

If an emergency occurs off site or in the field, OMSI staff will preliminarily treat and stabilize the situation. They will determine if the patient can be moved or returned to the site. They will relay this and all other pertinent information to the health officer, who will determine the emergency medical service plan.

If a student’s parent/guardian is on site (as a chaperone/counselor), s/he will assume primary responsibility for the health and safety of the student in lieu of the health officer.

If a student must be transported to a medical facility and an ambulance or Air Life is not used, it is the health officer’s responsibility to transport the student. For this reason, we strongly suggest that a separate vehicle is brought to camp if buses or other transportation is not scheduled to remain on site for the duration of the program. If a separate vehicle is not available and OMSI vehicles must be used, the group will be charged for use of the vehicles at $0.75 per mile.

Children with diabetes or other serious conditions needing medication or special care should have a parent or personal assistant accompany them who is knowledgeable of the dynamics of the condition and carries/dispenses necessary medication. It is the health officer’s responsibility to arrange for caregivers to accompany students in these situations and to regularly check in with the participants to see that things are going well. Caregivers are required to be present at all activities in which the students are participating; if a student cannot participate in certain activities, the caregiver is responsible for supervising the student. The Camp Manager can suggest alternate activities or projects related to the camp program for the caregiver to perform with the student.

If you have any questions or concerns about these or any other health, safety, and emergency procedures, or if you need advice about specific situations, contact the Camp Manager at least two weeks before the program.
PRE-PROGRAM CHECKLIST

_____ (ASAP) Read over your confirmation contract and make sure all of the information is correct. If any information is in question, please contact the OMSI Program Registration at 503.797.4661 or register@omsi.edu.

_____ (ASAP) Arrange for chaperones for all student cabins.

_____ (ASAP) Make sure you are familiar with the information in both this packet and the Outdoor School Policy Packet. If you have any questions about the curriculum or policies, please contact the Site Manager at PMSS@omsi.edu.

_____ (ASAP) Make your transportation arrangements.

_____ (1 MONTH PRIOR) Inform the Site Manager of final group numbers. Please see your confirmation contract for the policies regarding requests for cancellations/additions after this deadline.

_____ (3 WEEKS PRIOR) Make copies of pages 1-8 of the Policy Packet to send home with each participant.

_____ (3 WEEKS PRIOR) Have a meeting with all chaperones/counselors to discuss program, and review entire policy packet with them.

_____ (2 WEEKS PRIOR) Choose a “health officer” to be responsible for all medical concerns at camp.

_____ (2 WEEKS PRIOR) Let us know if there are any students with specific dietary restrictions/preferences.

_____ (2 WEEKS PRIOR) Finalize programming and schedule with Program Manager.

_____ (1 WEEK PRIOR) Make copies of the Field Notebook.

_____ (1 WEEK PRIOR) Make sure medical forms for each student, chaperone, teacher, and counselor have been completely filled out and returned.

_____ (1 WEEK PRIOR) Divide students into instructional and/or field groups (about 12-15 students).

_____ (1 WEEK PRIOR) Assign cabins for boys and girls, including chaperones and teachers.

_____ (ARRIVAL DAY) Please make sure that students provide a lunch for the first day of the program.
Directions to Cascade Science School
At Camp Namanu
10300 SE Camp Namanu Rd
Sandy OR, 97055

From Portland
From I-84 eastbound, take Exit 16 Wood Village.
Go South on 238th Dr.
That road will change names from 238th, to Hogan Dr, to 242nd Dr.
Turn left on Powell Blvd/Hwy 26.
In half a mile, follow Hwy 26 slightly right onto Burnside/Mt. Hood Hwy.
Follow Hwy 26 to Sandy.
In downtown Sandy, Hwy 26 splits into westbound and eastbound streets.
Turn Left on Ten Eyck Road at the light where westbound and eastbound streets rejoin.
After 1.5 miles turn sharply left to stay on Ten Eyck Road.
Turn Right on Bull Run Road.
Cross the river and go one more mile, then turn Left at the sign for Camp Namanu.

From Bend
Head North on US 97
In Madras, take Hwy 26 West over Mt. Hood.
Continue West on Hwy 26 until you get to Sandy.
Turn Right on Ten Eyck Road.
After 1.5 miles turn sharply left to stay on Ten Eyck Road.
Turn Right on Bull Run Road.
Cross the river and go one more mile, then turn Left at the sign for Camp Namanu.

From Hood River
From I-84 westbound, take Exit 18 and cross under the freeway.
At the stop sign, stay straight/left on Crown Point/Historic Highway.
In the town of Springdale, veer Right.
Turn Right at the Y onto Hurburt Road.
At the blinking red light, turn Right onto Gordon Creek Road.
After 3 miles, turn right to stay on Gordon Creek Road.
In the town of Aims, Gordon Creek becomes Bull Run Road.
At the intersection with Warriner Rd, turn Right to stay on Bull Run Rd.
In another 2 miles turn Right at the sign for Camp Namanu.

Please, drive no more than 15 mph on our entrance road! It is more than a mile long, and a single lane road. There are turnouts; the road can be destroyed if people try to pass in any other spot but the appropriate turnouts.