

RECREATION RESOURCE LEADER GUIDE

See the student datasheet answer key that is with this guide.

Objectives

Students will:

- A. Appreciate the many recreational opportunities that forests offer.
- B. Understand some negative impacts of recreational uses on forests.
- C. Know important safety considerations for recreating in the forest.
- D. Know how to be good stewards of the forest while recreating.
- E. Consider how they can recreate in forests while maintaining ecosystem services and healthy habitats.

General Directions

The Recreation station takes the students on a hike with several stops along the way (designated by a letter on the side of the trail), each with talking points that correspond to questions in the student data sheets. Students will apply this information in their forest management plans when they get back to school, especially the parts where they consider the expense of providing recreational opportunities. Please acquaint yourself with the recreation trail by walking it before students arrive. Also, be sure review the attached student datasheet, so you can help students answer some questions in their workbook while on the trail. **NOTE: The experience is more important than students filling in all the answers to the questions. Please try to complete as much as you can, but don't stress if you feel pinched for time.**

Topics and notes for each stop are listed here (*the letters are listed next to student questions in the student data sheet, which is attached*):

- A. Caring for the Land (at staged dump site)-Vandalism, dumping, and trespassing can be serious problems on both private and public forestlands. Engage the students using a guessing game to identify specific ways vandalism, illegal dumping, and trespassing can harm landowners, soil & water, wildlife, and timber production and ways landowners can try to minimize the problem. *See the next page for Caring for the Land Guessing Game Instructions.*
- B. Hiking Safety- Help students understand that safety is an important consideration while recreating in Oregon's forests. *See questions and answers for this stop in the student data sheet.*
- C. Hiking Trails- Give students an understanding that providing recreational opportunities can be expensive and a lot of work for the landowner. Consider costs of building and maintaining trails. Also, consider how hikers can protect the forest while hiking. *See questions and answers for this stop in the student data sheet.*
- D. Public Use / CSI Campsite- There is many options for providing public use of the forest. Help the students understand the different options and the considerations for each, including cost considerations. Also, what rules would they enforce if they had public use of their very own forest? *See the next page for CSI Campsite instructions. Other answers for this stop in the student data sheet.*
- E. Forest Appreciation- Identify the plants at this station before taking students, so that you can show them both native and non-native invasive plants. Introduce them to how non-native plants sometimes diminish diversity or forest understory through competition. Highlight the many benefits of the forest and share what students can do to protect forests. *See questions and answers for this stop in the student data sheet.* Learn to identify them and work to remove them.

Caring for the Land Guessing Game (Station A)

1. Vandalism is the deliberate destruction of or damage to public or private property.
 - a. Ask students: *three items in this trash pile represent the kind of vandalism that can occur on forestlands and public use sites. Which items in the trash pile do you think show vandalism?* (Answers: the shot-up stop sign, beat-up trashcan, and the defaced bench).
 - b. Why is vandalism a problem? (Answer: there is a cost to replace or repair damaged items.)

2. Illegal dumping is the disposing of trash generated at one location at another location without permission.

Explain to student that they are going to play a game. You will read aloud a description of an item in the trash pile; they need to guess which item you are describing (instructor note: the antifreeze, oil can, and computer have had the harmful components removed).

- a. *This item is extremely poisonous; when spilled, it kills grass and other plants. Swallowing a small amount causes illness or death in animals. When discarded, it is often contaminated with heavy metals, including lead, which can contaminate soil and water, poisoning organisms and damaging habitat. It is estimated between 25 percent and 50 percent of the 400 million gallons of this item produced annually ends up disposed of improperly, polluting the environment (answer: antifreeze – the bottle with pink fluid).*
 - b. *Despite being made of mostly reusable materials, this bulky item is difficult to recycle and is often dumped. This item can't be easily compressed or crushed and its metal parts entangle equipment. It can take 50 years or more for this item to decompose (answer: mattress). Instructor note: Bedbugs and lice are primary reasons secondhand stores won't accept mattresses. In March of 2022, Oregon became the fourth state to enact a law establishing a statewide mattress recycling program.*
 - c. *This item contains environmentally-harmful chemicals and heavy metals such as lead and zinc. It sticks to everything. If it gets into waterways, it can kill fish and other organisms. One gallon of this item can ruin the taste of a million gallons of drinking water. Although it can be cleaned and reused, only 60% of this item is recycled in the US (answer: motor oil).*
 - d. *This item takes 50-80 years to decompose. Because it holds water, it makes a perfect breeding ground for mosquitos. This item is also prone to caching on fire. When burned, it breaks down into hazardous compounds including gases, heavy metals, and an oily substance that can pollute groundwater and surface water (answer: tire).*
 - e. *This item contains heavy metals including lead and arsenic as well as flame retardants to prevent burning. When dumped, toxic chemicals can leach into the soil, causing groundwater contamination. Despite making up only 2% of the trash in landfills, this item accounts for nearly 70% of the heavy metals found in landfills (answer: computer tower, which is a form of electronic waste, also known as "e-waste").*
3. Trespassing is to enter without permission onto someone else's property.
 - a. Explain to students that on private forestlands, illegal dumping and vandalism are usually linked to another problem: trespassing.
 - b. Ask students: what are other problems that are linked to trespassing? (Discussion points: illegal hunting, illegal tree cutting [firewood], soil compaction and damage to vegetation and seedlings from off-road vehicles, mountain biking, etc.)
 - c. What can landowners do to minimize trespassing, illegal dumping, and vandalism? (Possible answers: education, signs, cameras, fences, gates, barriers at vehicular access points).

CSI Campsite Activity (Station D)

The purpose of this activity is to teach students that there are costs associated with providing safe, comfortable campsites for guests that also minimize the impact human visitors have on wild residents.

Explain to students that they are going to do a group activity. Explain that what they are looking at is a poorly-planned campsite. Have them split into smaller groups and give them 2-3 minutes to walk around the campsite and identify at least 3-4 specific, observable problems with the campsite. There are visual aids with more information about the campsite's issues in the bucket located in the structure (please be sure to return the sheets to the bucket so the next instructor can use them).

- Tree hazard: Campsites located under trees are at risk of being hit by falling branches (and falling trees!) during high winds or heavy snow. Campsites should be placed where there are no overhanging branches.
- Cooler: Food attracts wildlife. Food should never be left where animals can get to it. A bear-proof food storage locker costs about \$1,500.
- Garbage can: A plastic garbage can is inadequate for disposing of trash in a forest. Guests should be prepared to pack out all their trash or the camp host needs to provide a bear-proof trash container, which costs around \$2,000.
- Fire pit: Positioned too close to burnable materials and the tent, the fire pit is a fire hazard.
- Log seat: As logs decay, they become habitat for a variety of critters. Bug-infested logs don't make good seats.

Once the students have identified what's wrong with the campsite, ask them to identify what's missing:

- A water source: In addition to drinking and washing, water is needed to properly extinguish a fire. Drilling a well costs \$25 to \$65 per foot or \$3,750 to \$15,300. If drilling a well is not a good option, consider placing campsites near streams, ponds, and lakes.
- A toilet: A standard porta-potty costs around \$800 plus regular cleaning and maintenance. Constructing a pit toilet costs between \$500 and \$5,000, while a commercial-grade composting toilet costs between \$1,500 and \$8,000 to build.