

# Camp Kirby Outdoor Education: Programming Catalog

This catalog is meant to guide you as we plan your group's Outdoor School experience. Inside, there are three different themes to choose from. Each Theme includes one or two longer activity blocks. These activity blocks are about 135 minutes long. Then you should select 2 - 4 other learning stations in addition to the longer modules. Each theme has recommended learning stations that connect to the theme's major ideas. We would recommend choosing the other learning stations from these recommended lists, but we are flexible.

The theme you choose will also affect the topics and activities done during the evening and the reflection activities. The goal of the theme is to create a more cohesive outdoor experience for the students.

## **Theme Descriptions**

### **Kirby Ecosystems**

In this theme, we focus on the observable ecosystems at Camp Kirby to explore interconnected relationships in ecosystems. Students will explore topics like the carbon cycle and food webs, while also getting a chance to interact with the wildlife at Camp Kirby. This theme has a few options. It is designed with two longer module blocks: a marine block, and a terrestrial block. This theme can either be done with just one of the modules and four additional learning stations, or with both modules and two additional learning stations.

**See [page 2](#) for more info**

### **Biodiversity**

With this theme, students will explore biodiversity. They will get a chance to explore factors affecting biodiversity in our forest and intertidal ecosystems. This theme includes one longer module, so you would also choose four additional learning stations.

**See [page 3](#) for more info**

### **Human Impacts**

Students will explore how people affect the environment in this theme we will discuss topics like pollution, the carbon cycle, and invasive species. This theme contains one longer module, so you would choose four learning stations to accompany it.

**See [page 4](#) for more info**

Additional Learning stations will be found at the end of this guide starting on **page 5** they are organized alphabetically.

Please also look at our evening activity options on **page 9** to choose your two evening activities

**Once you have selected your learning stations, fill out this [Google form](#) with your selections. If you have any questions please email the program manager at [outdooreducation@campfiresamish.org](mailto:outdooreducation@campfiresamish.org).**

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## **Kirby Ecosystems**

The main question students will explore in this theme is "How are the members of the ecosystems at Camp Kirby connected?" This theme differs slightly from the other two because it has two 135-minute-long modules. In the marine module, we explore the intertidal zone on the beach; in the terrestrial module, we explore the forest. This theme can be done either with both activity modules or just one.

### **Marine Module**

During this module, students will explore the seashore and conduct an investigation using our plankton netting equipment and microscopes. We will observe the behavior of the creatures we find on the seashore and discuss how they are connected.

### **Terrestrial Module**

During this module, Students will be playing life and death in the forest, a tag game that models predator/prey interactions. They will also participate in a nature walk and observe wildlife and evidence of wildlife in the forest. Students will also investigate and map quadrats of the forest floor. This will help them explore how the living things in the forest are connected.

If you would like to do both activity blocks in this module, you will also need to **choose two supplemental learning stations** from the below list.

If you would like to do only one of the marine or terrestrial activity blocks, then you will **choose four supplemental learning stations** from the below list.

### **Recommended Learning Stations (Full descriptions on page 5)**

Forest Food Webs	Birding 101
Owl Pellet Dissection	Beach Disturbance Investigation
Limiting Factor Field Games	Beach Sculptures
Terrariums	Arts and Crafts
Pollinator Investigation	Climbing Wall
Wildflower Walk	Archery
Tree Exploration	Outdoor Living Skills
Forest Scavenger Hunt	Art in Nature
Beach Scavenger Hunt	Team Building or Active Games

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## **Biodiversity**

In this theme, we explore biodiversity, what it is, and how it affects the environment. Students will learn about how disturbances affect ecosystems and how communities regrow by exploring an alder grove. Students will also learn about how scientists calculate the biodiversity in the area and conduct an investigation using quadrats. Parts of this activity block are done in the forest at camp, while other parts are done in either the forest or in the rocky intertidal zone on our beach, depending on factors like tides and student/teacher preference.

For this theme, **select four supplemental learning stations** from the list below

### **Recommended Learning Stations (Full descriptions on page 5)**

- Birding 101
- Tide Pool Exploration
- Woods Scavenger Hunt
- Plant Families Nature Walk
- Plankton Netting
- Limiting Factor Field Games
- Life and death in the forest
- Ivy Grubbing
- Food Webs
- Aquatic Invasive Species and Game
- Disturbance Investigation
- Pollinator Investigation
- Owl Pellets
- Tree Exploration
- Beach Sculptures
- Arts and Crafts
- Climbing Wall
- Archery
- Outdoor Living Skills
- Art in Nature
- Team Building or Active Games

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## **Human Impacts**

Students will explore how humans affect the environment around us. We will explore concepts like pollution and the carbon cycle. Students will explore how humans affect cycles, like the water, carbon, and nitrogen cycles. We will explore how we can see human impacts in the ecosystems at Camp Kirby. We will also explore leave-no-trace ethics and ways we as individuals interact with the environment.

For this module **select four supplemental learning stations** from the list below

### **Recommended Learning Stations (Full descriptions on page 5)**

Terrariums  
Ivy Grubbing  
Aquatic Invasive Species and Game  
Oil Spill Investigation  
Leave No Trace  
Ocean Acidification  
Ocean Plastics  
Water Filtration  
Water Erosion  
S'more Energy  
Birding 101  
Tide Pool Investigation  
Woods Scavenger Hunt  
Owl Pellets  
Tree Exploration  
Beach Sculptures  
Arts and Crafts  
Climbing Wall  
Archery  
Outdoor Living Skills  
Art in Nature  
Team Building or Active Games

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## **60-Minute Learning Stations**

*Below you will find descriptions of all of our learning stations, organized alphabetically by title.*

### **Aquatic Invasive Species and Game**

*Students will learn about some aquatic invasive species we have at Camp Kirby and what can be done to help prevent them from spreading. They will also play a game to model the effect of first detectors with invasive species.*

### **Archery**

*Let students test out their archery skills at the Camp Kirby archery range with a certified instructor. Archery is limited to students in 4th grade and older. Groups of more than 75 students will need to modify the schedule to accommodate this activity.*

### **Art in Nature**

*Let your creativity shine using materials from nature! Connect some of the lessons being learned about nature at Camp Kirby with an outdoor art project.*

### **Arts and Crafts**

*We have the supplies in The Studio to do some classic arts and crafts projects, such as shell candles, bead lizards, rock painting, and so much more. Let students' creativity shine!*

### **Beach Disturbance Investigation**

*Students will explore how natural disturbances like tides and strong surf affect the biodiversity of mollusks making their homes on rocks during low tide.*

### **Beach Scavenger Hunt**

*Students will be exploring the beach at Camp Kirby while completing a scavenger hunt. This activity gives them time to explore at their own pace and potentially find some beach treasures, while also learning about local ecosystems.*

### **Beach Sculptures**

*Students will have the opportunity to explore the beaches at Camp Kirby while also building sculptures out of all the treasures they find on the beach. This will give them a chance to work together to create some lovely art while also learning about and interacting with all the lovely treasures on the Kirby Beach.*

### **Birding 101**

*Students will be introduced to birding. They will have a chance to use some binoculars and learn strategies to observe and identify birds in their natural habitat.*

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## **Birding 101: Shorebirds**

*This can either be an extension of the Birding 101 activity or an independent activity. Students will learn about birding, what it is, and how to do it. They will learn how to identify some common shorebirds we can find at Camp Kirby while also learning about how to view wildlife safely.*

## **Climbing Wall**

*Give students a chance to climb our 40ft rock wall. The view from the top is worth it! The Climbing Wall is limited to campers in 5th grade and up. Groups of more than 60 students may need to modify the schedule to accommodate this activity.*

## **Egg Drop**

*Students will try to build a device to protect an egg from cracking when it is dropped from a significant height.*

## **Forest Food Webs**

*Students will learn about how energy flows through ecosystems between organisms by observing a forest ecosystem and learning about some of the organisms there. We will discuss how these organisms get the energy they need to survive and how the organisms in an ecosystem are connected. At the end of the activity, students will work together to create a life-sized food web of the ecosystem we observed.*

## **Forest Scavenger Hunt**

*Give students a chance to explore the woods at Camp Kirby with all of their senses, while also getting a chance to learn about the communities that live there.*

## **Ivy Grubbing**

*Students will learn about invasive species and the impact they have on ecosystems by seeing the effects of English ivy on native trees. They will then have the opportunity to save a tree from ivy using a method called girdling that kills the ivy on a tree and prevents recolonization.*

## **Leave No Trace**

*Students will participate in a handful of short activities that go over the seven principles of leaving no trace.*

## **Life and Death in the Forest**

*This large group field game gives students a chance to explore interactions between carnivores, omnivores, and herbivores. This is a tag-based game that gives students a chance to get active while learning.*

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## **Limiting Factor Field Games**

*Students will learn about limiting factors in ecosystems by playing tag-based games that model population trends when there are limited resources in an ecosystem.*

## **Ocean Acidification**

*Ocean acidification is a major environmental concern and in this activity, we will be exploring what it is, how it happens, and some of the effects it has on ocean wildlife. As a part of the activity, we will be exploring the pH levels of different household liquids, learning about why carbon dioxide raises ocean pH, and what effects even small changes in pH can have on organisms.*

## **Ocean Plastics**

*Students learn how plastic affects marine wildlife with some activities, then spend time helping out marine ecosystems at Camp Kirby by taking litter off the beaches.*

## **Oil Spill Investigation**

*First students will explore how wildlife is affected by oil spills using craft feathers, then we will learn about what has to be done to remove crude oil from marine ecosystems.*

## **Outdoor Living Skills**

*Learn classic survival skills like fire building, shelter crafting, and orienteering.*

## **Owl Pellet Dissection**

*Students will learn about predator-prey relationships, digestion, food webs, and energy flow in ecosystems while dissecting barn owl pellets.*

## **Plankton Activity**

*Students will get to observe and learn about plankton. We will explore the role they play in marine ecosystems. They will have the opportunity to use specialized equipment like plankton nets and microscopes during the activity.*

## **Plant Families**

*Students will go on a nature walk to learn about a few common plant families in the Pacific Northwest and how to identify the family members.*

## **Pollinator Investigation**

*Students design and carry out an investigation about native pollinators. They will try to find what kind of plant attracts the most pollinators, while also exploring how different plants attract different pollinators.*

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## **S'More Energy**

*Students will learn about potential and kinetic energy by building a fire and then making smores.*

## **Team Building or Active Games**

*Give students a chance to run and play. Instructors will lead a variety of active field games or team building and challenge games for students. These activities can also be designed to relate to what students were learning in other learning stations.*

## **Terrariums**

*Students will build an enclosed terrarium with some live plants. They will explore what plants need to grow and survive, as well as create their own mini water cycle.*

## **Tide Pool Investigation**

*Students will explore the camp's unique intertidal zone and learn about a few of the different animals that live there. They will learn about the different tide zones and the different life histories of the animals and plants that live there. They will use the intertidal environment to build observation skills as well as get a chance for some hands-on time interacting with an intertidal ecosystem.*

## **Tree Exploration**

*Students will learn about the different species of trees in the Kirby Woods and learn the characteristics that make them unique. They will get to use a field guide to help them identify the trees. At the end of the activity, they will collect some fallen leaves from some of their favorite trees and make leaf rubbings.*

## **Water Erosion**

*Students will explore the process of erosion, first by observing natural examples of erosion on the beach, then by using the sandy beach and low tide to create models to explore water erosion.*

## **Water Filtration**

*Students will build water filters with natural filter media to simulate water moving through the ground in the water cycle. Students will try and figure out the best configuration for the filter.*

## **Wildflower Walk**

*Students will learn about flowers, what they do for plants, and their anatomy by participating in a flower dissection. Then students will use their knowledge of flower anatomy to help them learn how to identify some wildflowers at Camp Kirby.*

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## Evening Activity Options

### **Campfire**

*The Camp Kirby staff leads sit-down activities around a fire. These will usually include teaching camp songs, telling stories, and doing activities. S'mores are also an option during this activity. We recommend doing this activity on the first night.*

### **Skits**

*This activity would be introduced during snack on day one so that students have time to come up with their skits before this activity on night two. Camp Kirby staff would kick the night off with a skit, and then emcee the evening. Skits can be performed in either learning groups or cabin groups. The skits will have a prompt that ties back to the module the students are doing.*

### **All Camp Games - Active**

*We can facilitate running games in the field such as "Everyone's It", "Ship to Shore", "Kitty Got a Corner", and more. This is a great way to use any leftover energy at the end of the day and gives students a chance to get active.*

### **Challenge stations**

*Camp staff will lead different stations for groups to visit. These can be mini-lessons, challenge games, active games, and various activities. Each group would have a few minutes to complete each activity.*

### **Dance party**

*Depending on the weather, we hook up a speaker and in the lodge or on the basketball court let the kids jam out to their favorite tunes!*

### **Night Hike**

*We can take campers on a night hike around Camp, where they will use their five senses to learn more about Kirby and the nocturnal nature it boasts.*