

Diving into the Underwater World Course Overview

Day 1	Day 2	Day 3	Day 4	Day 5
<p>Welcome Welcome the students to the course and learn about the exciting week to come!</p> <p><u>Wetlands, their functions and the unique organisms that rely on them</u> Today we will hike through forests to explore different wetland systems and learn about the unique plants and animals that rely on these unique ecosystems. We'll discover what functions wetlands serve in the landscape and the threats to these environments. We will have a team challenge to design, model and measure the benefits of wetlands, such as water filtration systems, sediment catchments, phytoremediation, carbon sequestration and more.</p>	<p><u>Understanding stream systems</u> Students will learn the unique characteristics of flowing water systems, become familiar with the organisms that rely on these habitats, and analyze watershed impacts on water quality and quantity. The day will be spent learning about stream hydrology, macroinvertebrates, fish, and stream processes. We will take time to assess at least two stream systems to understand differences between them and assess potential human derived impacts.</p>	<p><u>Lake Ecosystems and the physical constraints</u> A day on, in, and around a lake will expose students to the complexities of lake environments and how organisms have adapted to survive. Canoeing around to the lake inlets and outlets will enable students to learn about a water budget and the impacts tributaries can have on lake water quality. We will map food web dynamics. We will sample aquatic vegetation and discuss impacts of invasive species. There will be time to swim, snorkel and explore while we challenge ourselves to better understand our impact to these lake basins.</p>	<p><u>Dams: Challenges and alterations</u> A day travelling to the Connecticut River Valley or the Merrimack River allows us to tour a dam facility and explore the ecosystem above and below dams in an effort to understand dam impacts and their benefits. We will collect both water and sample the organisms as we try to model the system changes. The second portion of the day will be testing our wetland models to test what team designed the 'best' wetland.</p>	<p><u>Marine Systems: Where the land meets the ocean</u> The final day of camps is a trip to Rye, NH where we will explore the estuarine environments of river inlets to the ocean, seine for fish and invertebrates and collect water quality data. We will look for evidence of human impacts along our journey. Our time at Odiorne State Park will us explore the world of the intertidal zone. This is a wonderful opportunity to wade in the intertidal waters, sample and examine the organisms that are adapted to this incredibly varied ecosystem. Our day will conclude with mapping the connections made between the week's adventures in an effort to understand the linkages between these aquatic ecosystems.</p>

Notes:

There is some flexibility in the week's schedule as this camp and the activities we will be conducting are very weather dependent. We will explore all of these aquatic worlds but the order may change as weather permits. While camp has a lot of water activities, the participant does not have to be an excellent swimmer. There should be a level of comfort being around water and a willingness to wear a life jacket. There will be plenty of opportunities to contribute the group effort collecting data on our field trips for those.