



Course Outline

Saturday Enrichment Program 2015

Course Title: Winter Limnology

Course Level: Middle School (5th-7th)

Instructor: Benjamin Kraemer and Mary Possin

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Instructor Bio:

Mary Possin coordinates workshops through the Limnology Department related to the study of fresh waters. She has taught in a variety of outreach programs with youth and children. Mary will be working with several Limnology graduate students during this course. Ben Kraemer is a graduate research assistant at the Center for Limnology.

Course Description:

Discover the ice mysteries of Lake Mendota through Limnology, the study of fresh waters! Collect and analyze lake samples, use lab microscopes to check out the lake critters, and perform experiments to discover the winter lake ecology. A great chance to ice fish too, so dress appropriately for the weather!

Course Objectives:

Students Will:

- Explore Lake Mendota in the winter and all it has to offer for research and leisure
- Collect lake samples to analyze in a science lab
- Learn about lake ecology

Course Content:

Day One

We will learn about lake temperature, the properties of water, and the water cycle. After demonstrations in the lab, we will venture outdoors, drill holes in the ice, measure the ice thickness and record data on the temperature profile in the lake. Afterwards we will go inside, learn how to make a graph of simple data, and discuss how what we learned in the lab relates to what we did outdoors.

Day Two

We will learn about plankton: tiny plants and animals that live in lakes even when they are ice covered. We will go outdoors, collect plankton samples from under the ice and look at what we catch under a microscope. Afterward, we will play games that relate plankton to the concept of water quality.

Day Three

Working our way up the food chain, we will learn about fish. We will begin by going outside to set ice fishing lines beneath the ice. Meanwhile we will dissect a fish and play games until we catch a fish. Many students see this as their favorite day of the program.

Day Four

Connecting concepts from days 1-3, we will synthesize what has been learned through a food web game. The game will enable students to think over the past 3 weeks about what has been learned and draw connections between water, plankton, and fish.

Student Expectations/Responsibilities:

As guests of UW-Madison, it is important to be respectful of the campus, the faculty, staff, and each other. In order to ensure the best experience for all involved, we have the following expectations:

- Respect your instructor, facilitator, and ALL program participants
- ABSOLUTELY no teasing, hitting or inappropriate physical contact of any kind or inappropriate language
- Stay with your group at all times and participate in all activities
- Respect university students, faculty, staff and all campus facilities and equipment
- Do not handle other university student projects that may be in the classroom
- Do not run in the hallways of buildings

- Keep voices quiet in the buildings while other classes are in session
- Cell phone use is not allowed during class time unless it is an EMERGENCY

