

Teacher Name - Melinda Lyons

Grade - Second Grade at The Lyme School

Name of Unit - Waterbugs

This year I focused on how water shapes the community of Lyme. Our class incorporated this theme in social studies by comparing where people settled 100 years ago with sources of water in the town. Children also found their own homes on maps and found the sources of water close to them. In science, we examined all of the sources of water that we pass on the way to our forest space, and looked for signs of erosion.

In our remote learning classroom, Jenna Guarino (a content learning specialist through UVLEL) helped me do an engaging unit on waterbugs. Students found a body of water near their home to use as their fieldwork space. Students then classified their water as either a slow or fast moving body of water. To prepare for their observations of different waterbugs that live near their homes, students completed many activities including watching videos of Jenna at her stream and answering questions on a worksheet about her presentation, working in a waterbugs coloring book, and reading various colorful resources that highlighted the anatomy of waterbugs that they could look for in their water source.

NGSS Performance Expectations

2-LS4-1. - Make observations of plants and animals to compare the diversity of life in different habitats.

Sample Activities: Miss Jenna spoke with students about how the behavior of waterbugs depends on the speed of the water they live in.

Connections to Nature of Science: Scientists look for patterns and order when making observations about the world.

Sample Activity: Students were able to compare various waterbugs and understand that their anatomy was related to fast or slow moving water through their Student Coloring Book.

Science and Engineering Practices:

Developing and Using Models - Develop a simple model based on evidence to represent a proposed object or tool.

Sample Activity: As part of their fieldwork, students were asked to draw two different waterbugs that they found during their fieldwork expedition.

Disciplinary Core Ideas:

LS4.D: Biodiversity and Humans

There are many different kinds of living things in any area, and they exist in different places on land and in water.

Sample Activity: Students observed a poster titled: Waterbugs and Where You Might Find Them to understand that unique waterbugs can be found in different layers of the water's surface.

Cross Cutting Concepts:

Structure and Function

The shape and stability of structures of natural and designed objects are related to their functions.

Sample Activity: Students watch a video called A Baby Dragonfly's Mouth Will Give You Nightmares. This video explains the amazing structure of a baby dragonfly's mouth, and how this structure helps them to eat.

Essential Questions:

Where are the 3 places in water that you can find waterbugs?

When is a stream location considered to be a good study site?

When is a pond location considered to be a good study site?

What supplies do you need to conduct waterbug field work?

What anatomy do you expect to see in waterbugs found in slow moving water?

What anatomy do you expect to see in waterbugs found in fast moving water?

Where are you most likely to find waterbugs in slow moving water?

Where are you most likely to find waterbugs in fast moving water?

How does a waterbug move in slow moving water?

How does a waterbug move in fast moving water?

Vocabulary Words

Macroinvertebrates, Aquatic Insects, detritus, habitat, basin, fieldwork

Assessment Opportunities

Formative - Worksheet questions based on videos and reading materials that were assigned throughout the unit

Summative - Students create short videos to share their fieldwork experience, along with a final fieldwork worksheet that asks them to name and draw two waterbugs that they found, along with describing the type of water that these waterbugs were found in.

Educational Materials

[A Baby Dragonfly's Mouth Will Give you Nightmares](#)

(Other materials are attached to email)

Please visit Flipgrid to hear some of the videos that students submitted to discuss their final fieldwork. I will also email some examples of final fieldwork worksheets.