

Plankton & Plastic (Winter)

Lesson Summary

Learning Outcomes

- Plankton are organisms that live in water and can not swim against the current.
- Some plankton are phytoplankton and others are zooplankton.
- Microplastics can be found in the water and can be categorized into primary and secondary microplastics.
- Microplastics harm plankton and larger organisms through bioaccumulation and biomagnification.
- We can capture, observe, and identify plankton and microplastics in the East River.

Vocabulary

Plankton - an aquatic organism that is carried by the currents and can not swim well enough to move against them

Phytoplankton - plant-like plankton that photosynthesize to create their own energy

Zooplankton - animal-like plankton that have to consume other organisms for energy

Microplastic - any piece of plastic less than 5mm long

Primary Microplastic - plastic intentionally manufactured to be less than 5mm long (ex. nurdles, astroturf filler, cosmetic beads).

Secondary Microplastic - microplastics that are created by the breakdown of larger items.

Bioaccumulation - the gradual accumulation of substances in an organism

Biomagnification - the buildup of concentration of a substance in a food chain

Summary of Trip Activities

Trip activities may occur in a different order and/or the class may be shortened if your group is late. The educators may also change elements based on the weather or their assessment of students' needs.

Introduction to Plankton

Seated indoors at tables, we will learn about plankton and microplastics.

Plankton Tow

Outdoors on the John Street bridge, students will observe an educator doing a plankton tow. Then, in small groups, they will do a plankton tow.

Plankton Observation and Microscopy

Seated at tables in the Education Center, in the same small groups, students will look through the plankton samples they collected with their tows. They will use microscopes, other magnifying viewers, and guides to identify and log their plankton samples on a data sheet.