

Between the Tides (3-4)

Lesson Summary

Learning Outcomes

- The East River is a tidal strait which has an intertidal zone.
- Different animals are adapted to live in different zones (high, medium, or low) within the intertidal zone.
- We can find, classify, and identify biotic and abiotic items in the intertidal zone.

Vocabulary

Tide - the rising and falling of the surface of the ocean that occurs twice a day and is caused by the gravitational forces of the sun and moon

Tidal Strait - narrow body of water connecting to the ocean on both ends

Intertidal Zone - the area of the shore between low-tide and high-tide

Brackish Water - water that has a higher salinity content than fresh water but less than salt water

Biotic - something that is or was alive or was part of something alive (ex. feather, crab, stick)

Abiotic - not biotic (ex. rock, plastic, sand)

Natural - something produced by nature (ex. rock, sand)

Anthropogenic - something produced by humans (ex. plastic)

Quadrat - rectangular plot used for scientific sampling studies

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 their assessment of students' needs.

Introduction to the Intertidal Zone

While sitting on picnic benches, we will learn about the intertidal zone of the East River. There will be an opportunity to stand and look at the intertidal zone.

Organisms of the Intertidal Zone

Working in small groups, students will use clues to match the organisms that live in the East River intertidal zone to their correct zone (low, medium, high).

Introduction to Quadrats

As a group, we will use a demo-quadrat to classify materials students will potentially see on the beach. Students will be introduced to the Pier 4 Beach Guide and the data sheet they will use.

Quadrat Sampling

We will walk to the beach where students will be split into small groups. In small groups, students will sample different sections of the intertidal zone using the quadrats, guides, and data sheets introduced earlier.