

Health of the Bronx River

7th Grade

The Bronxville School

Spring

Bronxville seventh graders were questioned about why is it that no one wants to drink the water from the Bronx River or play in it. Students began observations and data collections around factors that can help determine the health of the Bronx River. Over several weeks students have collected data to help them answer their original question and learn about the Bronx River ecosystem and biodiversity.

Driving Question

How can we as scientists, decide if the Bronx River watershed is a healthy place?

Dispositions



Assessment of Dispositions

(Engaged Citizenship) Students made final presentations to parents, students, members of the Bronxville Bronx River Advisory Board and local politicians.

(Innovation) Students devised ideas and political action on how to help improve the health of the Bronx River.

(Critical Thinking) Students brainstormed aspects of a healthy river and determined how to alter studies from week to week.

(Leadership) Students worked in groups, each with an assigned role in helping to record data, collect data, compile data, document experience through pictures and videos, and ensuring all group members contribute to the weekly summary.

Products & Formative Assessments

Each week students kept track of their data and observations on a collaborative class power point presentation.

*Mrs. Zopp's
Classes*

Period 1
Period 2
Period 5
Period 7

*Mrs. Green's
Classes*

Period 2
Period 8



Before our first trip to the Bronx River, students brainstormed what they knew about the Bronx River. In every case, students expressed a strong opinion about not wanting to drink the water. This led to a discussion about why they wouldn't want to drink the water and developed ideas on how we could study their concern about the river's water quality.

Once a week, students went to the river and specific locations to collect data over a 4 week period, beginning mid-April. Students observed seasonal changes and the effects of weather over the 4 week period. Students traveled to the river in groups of 4 to conduct studies on an aspect of river health that they identified as their focus for the 4 weeks. Each group learned about their topic's specific role in the health of a river and evaluated their results over the 4 week period.

In the last week, students participated in a Bronx River Week in their academic classes. In their Math classes, they got to graph and analyze their data. In their history classes, they heard Eloise Morgan (a local historian) speak about the history of the Bronx River, which was followed up with history and geography lessons in their Social Studies classes, and a discussion on possible political action that could be taken to improve the health of the river. In their English classes, they debated the health of the river and wrote conclusions about their studies. Their graphs and conclusions were then constructed on presentation board for May 16. Students in skills and resource room added to their vocabulary board and writing about their experience.

Mrs. Jennifer Zopps and Mrs. Karen Green

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Week 1

Introduction to Ecology
Lessons about abiotic and biotic factors
Lessons about the role of organisms in the environment
First observations down at the Bronx River

Week 2

Planning and researching tests
Collecting formal data
Lessons about Biodiversity



Week 3

Presenting initial findings to classes and the Bronx River Advisory Board (period 2 only)
Continue collecting data at the Bronx River
Lessons about Ecosystems

Week 4

Final Bronx River data collection
Graphing and Analyzing Data collected (in Math Classes)
Broaden understanding of the River's development and history, and gather understanding of possible political action to improve the health (in History Classes)
Debate the health of the River and write conclusions (in English Classes)



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