CHICAGO BOTANIC GARDEN

JOSEPH REGENSTEIN, JR. SCHOOL

Water Quality Pre-Trip Activities

To prepare your students for the investigations they will do on site, we recommend doing these activities prior to your visit.

Water Health

Purpose: To discover what students know about water quality

Materials:
- Clear glass of water

Steps:
1. Share with the students that to prepare for the field trip, they will discuss what they already know about water health.
2. Place the glass of water in front of the students.
3. Discuss what they know about water quality and water health. Possible questions:
   -Does the water look clean to them? Why or why not?
   -What are some ways to test the water?
   -What does water quality mean to you?
   -How can we judge the quality of water?
   -Think of a local water body (creek, pond, lake, etc), what do you think about the water quality there?

Abiotic & Biotic Factors

Purpose: To have students explore different ways to measure water quality

Materials:
- Access to the internet or books/reference resources

Steps:
1. Share with the students that when they visit the Chicago Botanic Garden they will be conducting water quality tests. One set of tests involves abiotic factors and the other involves biotic factors. Remind the students of the definition of those terms.
2. Assign pairs of students one of the following terms. Have the students research the term and how it relates to water quality.
   Turbidity, Nitrates, pH, Macroinvertebrates, Caddis fly Larva, Mayfly, Larva, Damselfly Larva, Scud, Leech
3. Have the students present their findings to each other.

Literature Connections

Water (Opposing View Points) by J. Langwith

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Water Quality Post-Trip Activities

These activities will build upon the learning experiences from the field trip, we recommend doing these activities after your visit.

Water Health At Home

Purpose: To have students measure water quality at a place close to school or home

Materials:

- Access to a water site
- Water collecting equipment (net, boots, etc)
- Macroinvertebrate information: www.epa.gov/bioiweb1/html/invertebrate.html

Steps:

1. Following all school policies, have the students test a water site near school, or their home.
2. As the students did on their field trip, they can collect macroinvertebrates and identify them. If needed, students can use their journal as a resource to determine the water health of the site.
3. Have the students present their findings to each other. Discuss their findings. Which site had better water health? What are some reasons?

Water Health Review

Purpose: To assess what students know about water quality

Materials:

- Clear glass of water

Steps:

1. Place the glass of water in front of the students.
2. Review with the students what they previously thought about water health. Discuss what they now know about water quality and water health. Possible questions:
   -How can we judge the quality of water?
   -What are some ways to test the water?
   -What does water quality mean to you?
   -Think of a local water body (creek, pond, lake, etc), what do you think about the water quality there?
   -Does a clear glass of water mean it is healthy?

Literature Connections

Water (Opposing View Points) by J. Langwith

