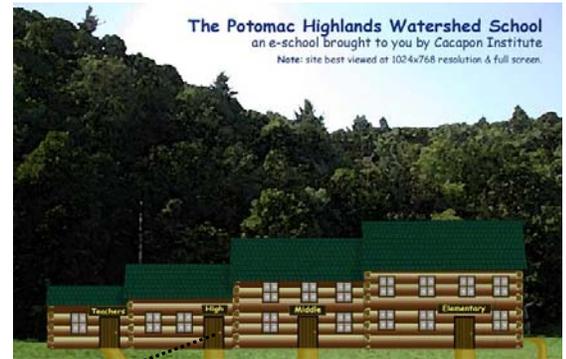


# The Potomac Highlands Watershed School

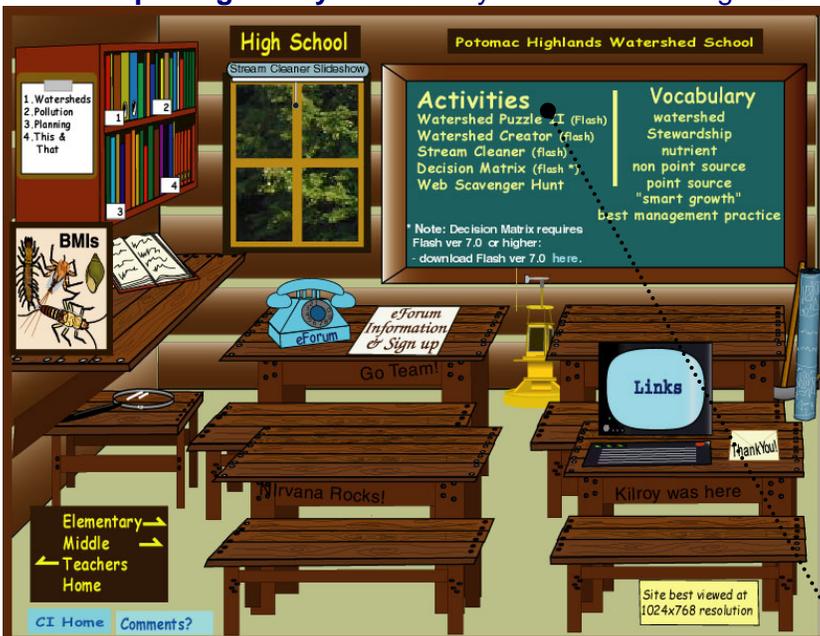
[www.cacaponinstitute.org/e\\_classroom.htm](http://www.cacaponinstitute.org/e_classroom.htm)

The Potomac Highlands Watershed School was developed to increase understanding and enhance appreciation of water resources throughout the Chesapeake Bay watershed. It was designed for use as part of the core curriculum in regional schools. The **Teacher's Room** includes detailed lesson plans keyed to required standards.



## Each classroom has ten basic elements:

1. A **blackboard** - with age-appropriate activities that include a learning phase and a testing phase, where the knowledge is either tested in a quiz or matching exercise, used to fill in a form, or put to use to solve a problem.
2. Also on the blackboard is a **list of relevant vocabulary** - with definitions just a click away.
3. A **bookcase** with sections providing useful background information on each of the activities.
4. A **computer gateway** to the many environmental organizations and agencies that serve the greater Potomac region.
5. A **window** to some of our favorite Potomac Highlands images.
6. An **open book** with a reading selection that will change periodically.
7. A **magnifying glass** that takes a closer look at some of our stream's smaller inhabitants.
8. A **BMI poster**, that leads to the benthic macroinvertebrate activity page.
9. A **Bay Buoy** that leads to a page with links to real-time data for stream flow, precipitation, and the Chesapeake Bay buoys.
10. **Blueprints and a pick** that lead to hands-on projects done by classes that use the eSchool.



## Blackboard activities:

**What is a watershed?** – The concept is explained.

**Potomac watershed puzzle** - Explores the geography of watersheds.

**Watershed creator** - The user builds a watershed by matching the parts of the watershed with their functions.

**Stream cleaner** - Players clean up a stream by using "Best Management Practices" to reduce pollution from farm fields and a town. (M, H)

**Decision matrix challenge** - In this activity, the player becomes a County Manager and makes decisions that affect the county's future.

**Web scavenger hunts** - Visit websites to find answers to questions about the Chesapeake Bay watershed.

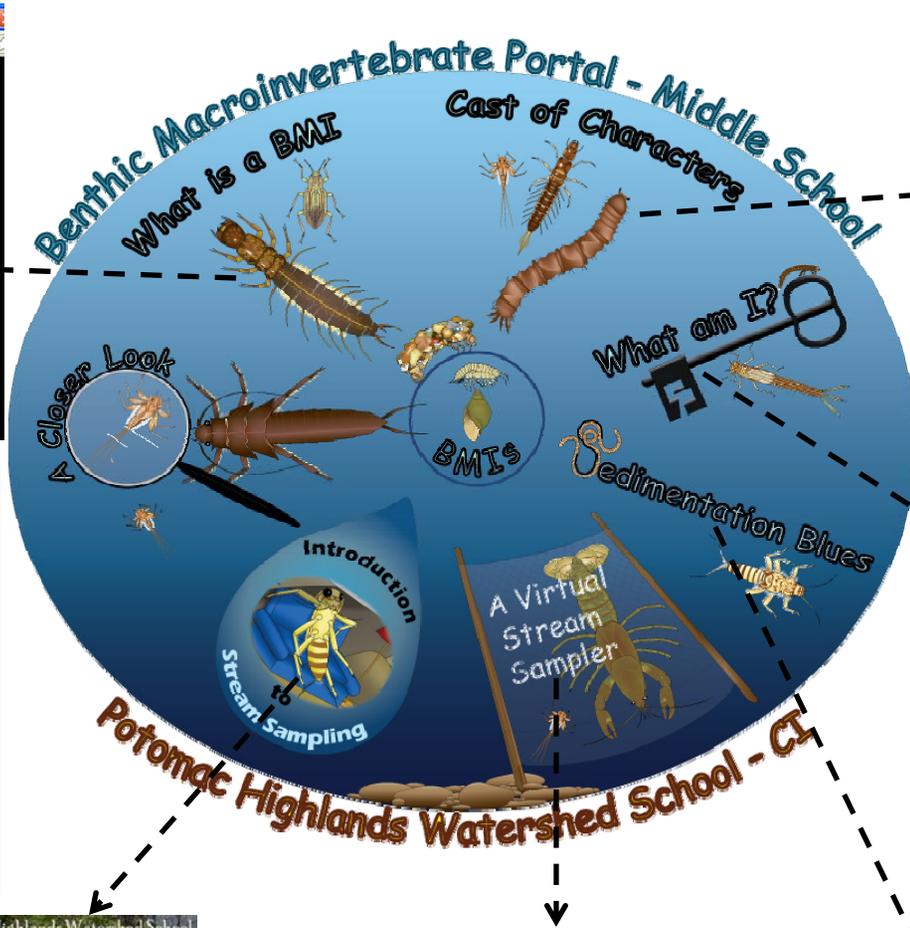


**What is a BMI**

These adults often live near the water, however, and return to it to lay their eggs.

Use the Potomac Highlands Watershed School's benthic macroinvertebrate and stream sampling activities in the classroom before your field trip to introduce key concepts and the cast of characters they might see in the stream.

That will help them focus on the lesson when they are in the field. Use the BMI material when you get back to the classroom to reinforce their learning. **It's free 365/24/7.**



**Cast of Characters**

The Potomac Highlands Watershed School's benthic macroinvertebrate activities include a good sampling of the species diversity found in healthy streams. Get to know them in this slide show.

**Benthic Macroinvertebrate**

This organism has a chitinous exoskeleton, an external supportive structure shared by many invertebrates. It is one of several defining characteristics of the taxonomic phylum.

This organism has hard mouth parts that are adapted to eating both plant and animal matter.

- body with chitinous exoskeleton, jointed legs, and/or hard mouth parts
- body without chitinous exoskeleton, jointed legs, or hard mouth parts

Potomac Highlands Watershed School  
Cacapon Institute  
August 2009

**An Introduction to Stream Sampling**

animated by Jennifer Gillies



Potomac Highlands Watershed School  
Cacapon Institute  
2009

I've got the **Sedimentation Blues**

animated by Jen Gillies