

Student-scientists ask, "Is our water at risk?"

Student-scientists in Mrs. Campbell's sixth grade class at Grove Hill are participating in an exciting and relevant project – the National Geographic Kidsnet program, "Is Our water at Risk?" during this unit, students have been part of a worldwide research team that is investigating the quality of groundwater.

Our team at Grove Hill has been studying the watershed of the Shenandoah River to identify possible point source and non-point source pollutants that may be present in our water. Local issues seem to be the location of factories and towns right along the river, the use of chicken litter and other chemicals on farms and lawns, runoff from farms, roads, and parking lots, and litter. Mr. James Shifflett of the Shenandoah Valley Soil and Water Conservation District visited our class and

discussed these problems. He presented some of the solutions that people in our area have been using to try to improve the quality of our water, along with the quality of the water in the Chesapeake Bay.



We have conducted tests on the river for turbidity, coliform bacteria, and acidity. We found our water to have a medium turbidity (mostly because all the rain and high water carrying sediment). We found that coliform bacteria are present in the water. This can indicate the presence of

dangerous pathogens that primarily comes from animal wastes in the water. We also found that the river has a pH of 5.5, which is mildly acidic. All of these factors indicate that the Shenandoah River may be at risk.

We have used the Internet to communicate our findings to our teammates. This includes classes from all over the United States, as well as Turkey, the Czech Republic, the United Kingdom, and Sicily. We will be looking at the data that they collect to make some predictions about their water quality.

Students will finish this unit by coming up with a plan to improve the water quality of the Shenandoah River. This has been a wonderful opportunity for students to make real-life applications of the scientific knowledge they learn in school.