

Water Testing

Summary

Students will use water quality tests to determine the quality of water collected from local water systems.

Time Frame

1 class periods of 60 minutes each

Group Size

Small Groups

Materials

- water test kits, LaMotte "Pondwater Tour" or "Water Monitoring" (Ben Meadows: [LaMotte Water Monitoring Kit](#) (website))
- sources of water
- beakers
- sample bottles or plastic bags
- [student sheet](#) (attached)

Background for Teachers

Time Required:

If collection of water is done on or near school grounds, plan according to distance. Test time in class is about 50 minutes depending on the number of tests being done. Additional time will be needed to analyze results.

There are a variety of water test kits available in most science supply catalogs. The test tablets are easy to use and relatively inexpensive. Which water tests you order depends on your budget and local water supplies. If you have mine tailings nearby you might want to test for heavy metals, if a hog farm is in your vicinity, nitrates and ammonia tests would be appropriate. The "Pondwater Tour" comes with dissolved oxygen, nitrate, pH, and ammonia but almost any other test can be ordered. There are several manufacturers of the test kits and any should be OK for this activity. Students can bring water in from their homes, yards, ditches, streams, wells or ponds. If you wish the class to sample together, a field trip is always exciting for students. The water tests can be done in the field as well as classroom. If you want water that is a "known" quantity and will give positive tests, create your own by mixing appropriate pollutants in several batches of water.

Student Prior Knowledge

Students should know about types and sources of water pollution. They should know which substances in water are most harmful and which are not.

Instructional Procedures

Explain to students that they will be testing a local water source for quality. Tell them how to sample at home or describe how the class will be obtaining water.

Show students water test kits and demonstrate correct usage.

After the samples are taken (about 100 mL is enough for several tests) allow students time to perform water tests.

Have students report their findings to class (a blackboard or overhead project may be used to

write them on) and complete analysis questions.

Assessment Plan

Scoring Guide:

1. Student collects and returns a water sample.....10 pts
2. Student performs water tests and records results.....15 pts
3. Students correctly answers analysis questions.....5 pts
4. Conclusion present and thoughtfully written.....5 pts

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)