

Watershed of a Local Farm Pond

- a. Description:** My project will be to develop a lesson plan on groundwater hydrology as part of a unit that I currently do on watersheds and water quality.
- b. Objectives:** The students will learn how the water cycle works by understanding both the “underground” components and the “above ground” drainage components. The students will become familiar with water testing techniques and how to interpret their results with respect to water quality. The students will also analyze what factors affect the water quality of the groundwater and the pond. The students will use their data to make decisions about water management.
- c. Implementation:** The students will use GPS/GIS data to map out the watershed for a local farm pond. They will conduct physical and chemical tests (following the IOWATER protocols) on the farm pond. They will then select several wells in the watershed area and perform the tests on the well water. They will do a land use assessment of the area and develop water management guidelines for the watershed area. A project report will be turned in following an outline that will be given to them at the beginning of the project.
- d. Evaluation:** Student reports will be assessed using a rubric that includes a checklist of the tasks that the students were asked to perform.