

Technology Goals

For this unit, the student's final product will be a PowerPoint portfolio of their work on watersheds. In order to create this, several technologies will be used:

- Digital cameras and image software, for documenting field work
- Mapping (ArcView GIS) software for creating maps and locating sources of pollution within our watershed.
- Internet research (for GIS data to be mapped and for information on students chosen environmental issue)
- PowerPoint to collect and combine electronic resources from the other steps of this project and to create a portfolio that can be viewed on the Internet.

Skills and Equipment

Students will need to learn several skill sets to be able to use these technologies comfortably:

- Basic OS use, including opening and saving documents, running applications, inputting from the mouse and keyboard
- Internet searching – search engines, keywords, formulating good search terms
- Basic mapping software (ArcView Student edition) use, with data sets pre-selected and formatted by a teacher
- Digital camera operation, downloading photos, editing images (Photoshop)
- PowerPoint use

For this unit, students will have access to the grade's PC laptop cart, consisting of 18 Dell D600 laptops, running Windows XP with Office XP,

Photoshop CS, internet and email access and ArcView student edition software, as well as the school's class set of digital cameras.

Vision

Throughout the watershed unit, students will be exploring scientific concepts and the issues surrounding them. To tie their thinking and experiences together, students will create a portfolio of their observations, reflections, research, and ideas. Using technology to create and share this portfolio will enable student's creativity as well as allowing them to share with a broader audience.

Early in the unit, students will record their observation of both field sites within our watershed and their work in the science lab creating models with a digital camera. As we explore our watershed physically, students will create maps using ArcView to help them understand the concepts of buffer zones and pollutant transport. Finally, as we discuss related literature, and political and social issues students will use the Internet as a tool, searching for online and print information using the computer.

This will give students a number of electronic 'products' to share – digital images, digital maps, web sites, and their written reflections in digital format. Using PowerPoint, the students will combine these products with their thoughts and reflections and share their final presentation with classmates and family members over the Internet.

Web Resources

Students will use a variety of web resources during this unit. Three of the strongest sites on this topic for students are:

<http://www.epa.gov/ow/kids.html>

<http://www.watersheds.org/kids/>

<http://www.sciencenewsforkids.org/>

<http://www.neponset.org/>

Three resources that I as a teacher would use to improve my knowledge of the topic are:

<http://www.epa.gov/owow/>

<http://www.epa.gov/surf/>

<http://slaggarden.cfa.cmu.edu/education/modules/index.html>

In addition, resources that would help us use the planned technology for this unit are:

<http://www.adobe.com/education/digkids/main.html>

http://www.dzfx.com/workshops/list/2/Microsoft_PowerPoint-Office_2000-XP/

<http://skadi.milton.edu:8000/kcweb/kcHome>