Land Use Activity *Handout*

Students will examine possible correlations between land use patterns and water pollution.

INSTRUCTIONS:

1. Access the website www.Seminole.WaterAtlas.org and choose a watershed.
2. Create a bar or pie graph illustrating how the surrounding lands are used.
3. Choose 10 watersheds (Or as many as decided.)
4. Use this data to rank in order, from high to low, the watersheds and their specific land use parameters.
5. Now compare the water quality statistics of the chosen watersheds and then compare with each other the same way as before.
6. Construct bar or pie graphs in this comparison using the terms of the web site.

QUESTIONS:

1. Is there a relationship between dissolved oxygen, fecal bacteria, and the % of agricultural land in the watersheds? Dissolved Oxygen (DO) and fecal coliform data can be accessed through www.Seminole.WaterAtlas.org > Research tab > Data Download. To find information on dissolved oxygen, fecal bacteria, and other factors, click on Research Documents and Metadata for Scientists. Select either Advanced Graphing Tool or Download Data. These tools are also found on lake water quality tab web pages. Follow the directions. Use the back arrow to select a different parameter. Not all lakes will have data on al parameters. Select the water quality data in columns and on an Excel Spreadsheet. Either make graphs in Excel, or return to the Research Documents page and download graphs of data locations and dates that have the information you seek. In 2003, the Seminole County Stormwater Division installed real-time sensors in selected lakes. Go back to the home page (click on the sailboat logo) to Real Time Data > Water Quality > Dissolved Oxygen.
2. Is there a relationship between water clarity and the percentage of built lands in the watershed?
3. Is the overall health of the watershed related to a high percentage of land being conserved?
4. Investigate the number of lakes in a particular watershed. Is there a correlation between the number of bodies of water and the overall health of the watershed?