Wireless PC Workshop

Friday, August 10, 2007

Funded by the HHMI 2004 Biological Sciences Education Award to Kenyon College
Location: Knox County Educational Service Center, 308 Martinsburg Road, Mt. Vernon, OH
Time: 8:45AM-4:00PM Continental Breakfast and Lunch provided.

Your school has received a set of 16 wireless laptop PCs from the HHMI 2004 award. The PC lab is to be used for interactive science teaching. The workshop offersbasic training and experience with the PC lab, and presents the use of a wireless PC lab in selected interactive applications in biological and physical science. As a condition of the grant, your school will be expected to report on classroom use of the PC lab at the end of the 2007-2008 academic year.

SESSION 1: 9:00-10:15am

Basic Use of Wireless Lab. Everything from turning the system on and setting up for use, to differences from desktop labs, care and maintenance, trouble shooting, and storage. Presenter: Justin Mann, Knox County Schools.

SESSION 2: 10:30-11:45am Choice of A, B, or C:

A. Cat and Rat Anatomy Tutorials. Web-based inquiry activities involving students and anatomy and dissection. Presenter: Drew Kerkhoff, Biology Dept, Kenyon College.

B. Inquiry-Based Learning. Review of Inquiry-Based Learning using web-based inquiry activities, criteria for web-based instruction, and website examples for use in your classroom. **Strongly advised for first time HHMI workshop participants. Presenter: Elle Button, MV Middle School.

C. Genetics: Flowers and Biomorphs: Learn Mendelian genetics by crossing your own flowers the way Mendel did. Simulate evolution through accumulation of genetic change in imaginary creatures called Biomorphs. Presenter: Joan Slonczewski, Biology Dept, Kenyon.

LUNCH 12:00-1:00pm

SESSION 3: 1:00-2:15pm Choice of A, B or C:

A. Introduction to Excel. An overview of Excel for use in the science classroom including web based inquiry activity resulting in collecting, graphing and interpreting data. ****Advised for first time participants.** Presenter: Kristin Allerding, MV Middle School.

B. Bird Evolution using "BIRRD" database. Identify patterns in the spatial distribution of finches across the Galapagos archipelago by hypothesizing uniform vs. random distribution, or distribution in terms of geological and ecological factors. Presenter: Drew Kerkhoff, Biology Dept, Kenyon College.

C. Planetary Orbits. Move the planets from their orbits and change the solar systems using on line simulations of Newtonian orbits. Shoot projectiles to reach targets and send objects into orbit exploring the effects of gravity and air resistance.

SESSION 4: 2:30-3:45 Choice of A or B:

A. Temperature with I-buttons and Excel. Review use of I-button temperature recording device in experiments which may investigate heat transfer. Use data collected in more advanced Excel format. (Highly recommended!) Presenter: Drew Kerkhoff, Biology Dept, Kenyon College.

B. Planets, Flowers/Biomorphs, Excel, Inquiry Web Based activities. Review of all tutorials presented; whatever session may have been missed. Presenters: Slonczewski and Button.