2008-2009 Teacher Workshops

Climate Change in the Classroom

PHENOLOGICAL OBSERVATIONS—Part 1

September 27, 2008, Colorado State University, 8:30a—4p

Teacher participants will be trained on how to implement a small set of specific data collection protocols and research activities though a series of workshops and follow-up meetings. All activities will be kept simple and easy to implement, using low-cost equipment as much as possible. The objective of the workhop is to learn about phenology, the seasonal changes in living organisms, and why it is important from a local and global climate perspective. We will explore how to make observations and measurements of phenologic characteristics on local plant species and learn how to develop a Project Phenology Study Site.

INVASIVE SPECIES MONITORING USING GPS AND GIS

October 18, 2008, Colorado State University, 8:30a—4p

Our goal in providing you with this training session is to equip you with the knowledge, skills, and abilities to map locations of common Colorado invasive plants using a GPS, record data about these plants in a PDA, and then finally upload these data into our national database and mapping system for invasive species locations. Our specific objectives are to (1) teach you the use of GPS units for field data collection and fun field exercises, (2) teach you the importance of standardized field data collection monitoring protocols to detect species distribution changes in relation to climate change, and (3) provide you with possible field exercises that you can incorporate into your classroom.

GIS AND COMPLEXITY SCIENCE: COMPARING WATERSHEDS IN PUERTO RICO AND COLORADO

November 15, 2008, Colorado State University, 8:30a—4p

You will examine cutting edge tools for addressing the interdisciplinary nature of the study of physical systems within a social context – watersheds. Using Google Earth, GIS, and NetLogo, you will be introduced to the latest tools that are easily accessible on the Internet. You will work through examples of comparing watersheds in Puerto Rico and Colorado. You will venture into the realm of agent-based modeling using NetLogo on a case study in Puerto Rico and discuss how such an example would be applied in Colorado.

WINTER ECOLOGY

January 24, 2009, TBA, 8:30a—4p

The Winter Ecology workshop will explore the stresses of cold temperatures on animals, plants, and humans in a snowy field setting. We will look at the biochemical changes of plants in a winter environment along with adaptations of specific species. We will also discuss the effects of winter on wildlife and how specific behavioral responses may increase survival probability. And finally, we will look at our own biophysical responses to cold temperatures and how humans that live in northern latitudes have adapted over time. This class will provide fun ideas and experiments to take back to the classroom and get students motivated to go outside on those long January days.

EARTH MATERIALS AND HEALTH

February 28 and March 7, 2009, University of Northern Colorado, 8:00a—5p

This course seeks to engage the student with Earth materials on a personal basis by discussing the general occurrences and properties of Earth materials and how they are used in medical settings, including remedies used in the home and everyday life. COURSE COST $219, TUITION AND FEES $250. To register, contact UNC Extended Studies 800-232-1749 and sign up for ESCI 575-604.

PHENOLOGICAL OBSERVATIONS—Part 2

April 18, 2009, Colorado State University, 8:30a—4p

Teacher participants will be trained on how to implement a small set of specific data collection protocols and research activities though a series of workshops and follow-up meetings. All activities will be kept simple and easy to implement, using low-cost equipment as much as possible. The objective of the workhop is to learn about phenology, the seasonal changes in living organisms, and why it is important from a local and global climate perspective. We will explore how to make observations and measurements of phenologic characteristics on local plant species and learn how to develop a Project Phenology Study Site.

To sign-up for a workshop, please email Kim Melville-Smith (**kimberly.melville-smith@colostate.edu**) and state which workshops you are interested in. You must attend 2 workshops a semester to be eligible for 1 graduate credit per semester (UNC workshop excluded since credit is available from UNC).