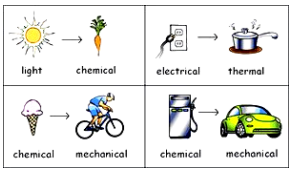

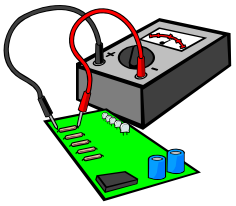
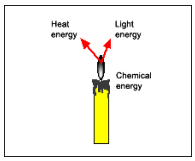

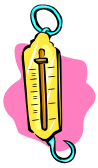
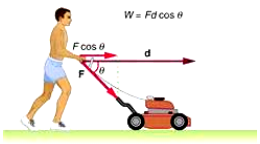

THE UNIVERSITY OF ALABAMA **Office of Research on Teaching in the Disciplines- Outreach**

Physical Science in the 21st Century (PS-21): Improving Teacher Quality and Mastery of Content- 2013-2014

Partners: Alabama Commission on Higher Education (ACHE), UA College of Education –Science Education; UA College of Arts and Sciences – Physics Department and Chemistry Department; UA Office of Research on Teaching in the Disciplines; and Alabama School Systems

The University of Alabama introduces a newly funded professional development project, ***Physical Science in the 21st Century,*** and extends an invitation to participate in the activities during the school year **2013 - 2014**. This institute is open to all in-service teachers who teach, or plan to teach, in the physical sciences. Teacher substitute funding is available for each workshop. CEU or UA graduate credit can also be arranged. Materials and technology are available for your classroom to try out.

When and Where: Workshops to be held on The University of Alabama campus.

Institute Dates		**Tentative Science Concept Areas (teacher input welcome)**
Friday, Oct 4, 2013, 3408 SEC UA Campus 8:30 am-4:00 pm	Institute 1:	• **Force & Motion and Work & energy in physical systems** • **Transferring chemical energy to light energy, conservation of energy, examples from chemiluminescence,** • **Relevance of Common Core and Next Generation Science Stds**
Friday, Nov 8, 2013, 3408 SEC UA Campus 8:30 am-4:00 pm	Institute 2:	• **Properties of sound, including speed of sound, sound levels, and synthesis and analysis of different types of sounds.** • **Using the kinetic theory to explain states of matter, phase changes, solubility, and chemical reactions** • **Using Common Core and Next Generation Science Standards**
Friday, Jan 24, 2014, 3408 SEC UA Campus 8:30 am-4:00 pm	Institute 3	• **Magnetism due to induction, currents, and permanent magnets**. • **Solutions and Solubility** • **Using technology in science lessons and labs** • **Using Common Core and Next Generation Science Standards**
Friday, February 28, 2014, 3408 SEC UA Campus 8:30 am-4:00 pm	Institute 4:	• **Practical DC circuits, including light bulbs, LEDs, and light sensors.** • **Equilibrium in a chemical system –maintaining and creating change** • **Using Common Core and Next Generation Science Standards** • **Working with Other Teachers in a Professional Learning Community**

Continuous Professional Development Online - Group activities, communication, mentors

Project Personnel from the University of Alabama involve:
Dr. James W. Harrell - UA Physics and Astronomy Department; Dr. John Vincent - UA Chemistry Department; Dr. Dennis Sunal, Dr. Cynthia Sunal & Dr. Donna Turner -UA Department of Curriculum and Instruction; Dr. Michael Odell, project evaluator, University of Texas at Tyler

If you are interested in participation in these workshops, you are encouraged to contact Dr. Dennis Sunal at dwsunal@bama.ua.ed or Donna Turner at dpturner@crimson.ua.edu.

(*Funded with a grant awarded through the No Child Left Behind/Title II Program administered by Alabama Commission on Higher Education (ACHE): Improving Teacher Quality: Mastery of Content.)*