

Chem 1710 – Energy Usage

Study Guide: This is an interdisciplinary unit on energy. All material is web, worksheet, and lab based. Your textbook is a good reference source for many of the concepts covered.

Objectives: You should be able to:

- define the unit of the BTU and understand its use as an energy unit as well as the calorie, Joule, and kilowatt-hr
- summarize the historical use and development of American energy resources including consumption by type of resource and area
- understand and explain factors that show the interrelationship of the energy problems of the U.S. in a global perspective
- summarize the availability, advantages and disadvantages of our present major fuel sources (oil, natural gas, coal, hydro) and possible alternatives for the future (such as solar, wind, geothermal, tidal, biomass and nuclear fusion)
- use the R factor concept to make decisions about building heating and cooling
- evaluate the energy use and needs of the home

Activities and Assignments:

- Reading assignment - "Energy: The American Perspective" (found in the Energy History link from our 1710 activities web page) and "History of Energy Consumption in the United States: 1775-2009 (found at a link from the page <http://www.eia.gov/totalenergy/>)
- Lecture
- Web Energy Lab using Department of Energy web site
- Home Energy Audit Lab
- Energy Conservation worksheet