

Pre-AP Physics

Timeframe: Week 7

Topic: Ch 5 Work and Energy

Objectives

The student will understand the scientific definitions of work and energy.

The student will understand that energy is a conserved entity.

The student will understand interconversions of energy.

The student will understand the difference and relationships of power and work.

Lessons

Work, Kinetic energy, potential energy

Conservation of energy and power

Activities

Lecture

Worksheets

Video

Lab activity

Demonstrations

Review

Exam

TEKS

HS. The student knows the laws governing motion.

HS.4D Develop and interpret a free-body diagram for force analysis.

HS.4C Demonstrate the effects of forces on the motion of objects.

HS.4B Analyze examples of uniform and accelerated motion including linear, projectile, and circular.

HS. The student knows that changes occur within a physical system and recognizes that energy and momentum are conserved.

HS.5D Demonstrate the conservation of energy and momentum.

HS.5A Interpret evidence for the work-energy theorem.

HS.5B Observe and describe examples of kinetic and potential energy and their transformations.

HS. Science processes.

HS. The student uses scientific methods during field and laboratory investigations.

HS.2B Make quantitative observations and measurements with precision.

HS.2F Read the scale on scientific instruments with precision.