**Energy Chapter 8**



**See** [**https://www.learningctronline.com/courses**](https://www.learningctronline.com/courses) **for Materials and Resources.**

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**T****opics:**

1. Momentum & Energy

**Objectives:**

* *Identify and give examples of the components of momentum (mass, speed, direction) in the motion of objects.*
* *Calculate momentum involving elastic collisions and inelastic collisions while showing the conservation of momentum.*
* *Define impulse in terms of force, time, and change in momentum. Explain practical applications of impulse (e.g. sports).*
* Define and calculate Potential Energy (PE) in terms of gravitational PE, and explain elastic PE.
* Define and calculate Kinetic Energy (KE) related to the motion of objects.
* Recognize maximum PE, maximum KE, maximum velocity, rest position, and when PE = KE for moving objects.
* Identify specific forms of energy and how they can be transformed into other forms.

TAKE NOTE (Assignments are all 1 week)

1. Reading (Hewitt Text)

1. Worksheet: Energy Transformations Practice
2. Problem Set Energy
3. Lab: Energy (Potential Energy & Kinetic Energy)
4. Create Notes Study Guide using objectives, major, minor points.

1. Exam: Momentum & Energy
2. Week 12 Devotional (<https://www.learningctronline.com/devotional>)

**Text**: Chapter 8 Energy (Hewitt)

**Class Notes: Use the Document provided**

**Homework**:

* Worksheet: Energy Transformations Practice
* Problem Set Energy

**Lab**: Energy (Potential Energy & Kinetic Energy)

* Perform the lab as directed using the worksheet provided.
* Complete all calculations and data, showing work whenever appropriate.
* Conclusions should be answered in complete sentences that convey a complete thought.
* Save the documents into your LAB folder in the Physics folder on your desktop.

**TEST:** Exam Momentum & Energy

1) the academic integrity policy

* Tests must be completed **WITHOUT** referring to books, notes, the internet, people, or any outside resources.
* Students **MAY** use the approved Periodic Tables, approved Reference Tables, or approved equation (formula) sheet (provided by the teacher) along with calculators and scratch paper.
* A guardian should be proctoring the test. Proctoring means to monitor the following:

2) Take the **"in one sitting"**, meaning that once you start the test, you must complete it without interruption.

3) There is a **45-minute time limit** on the exam. Please have the proctor write the time taken at the top of your answer sheet with their signature or initials.

4) Proctors should NOT be reading the test or engaging students during the test.

5) Do NOT use RED font. Black font is best.

Supplemental Resources (Optional)

1. Momentum & Energy Problem Set (Basics)

<https://screencast-o-matic.com/watch/cFX2bVrfkF> Pendulum Swing (1:16)

<http://somup.com/crhw2OqqJ1> Energy with Wiley Coyote (4:18)