

Name: _____

Physics Unit Exam

Exam is on: _____

You are permitted to write down any notes you wish on both sides of a 3 by 5 index card. Rules for notecards:

- You are responsible to bring your index card to class on the day of the exam.
- You must produce your own card and turn it in after the exam.
- You cannot use or share anyone else's card on the exam.
- You cannot exceed the area of the index card's front and back.

Written Test Format

- 36 Multiple-choice questions cover 3 topics:
 - Definitions of energy (20 questions)
 - Energy conversions and transfers (8 questions)
 - Planning and carrying out experiments (8 questions)
- The test will be completed on Schoology in class

Terms (in no particular order)

Chemical energy
Closed system
Controlled variable
Conversion
Current
Dependent variable
Elastic energy
Elasticity
Electrical energy
Experiment
Frequency
Gravitational energy

Height
Independent variable
Intensity
Kinetic energy
Law of Conservation of Energy
Light energy
Mass
Open system
Pendulum
Perpetual motion
Pitch
Potential Energy

Rube Goldberg
Rigidity
Sound energy
Speed
Thermal energy
Temperature
Transfer
Transform
Voltage
Volume
X- axis
Y-axis

Ideas to Study

- Be able to explain how energy is converted or transferred during an event or using an everyday object. See the energy conversion stations review for examples.
- Compare and contrast transfer, transform, and convert.
- Be able to explain how energy is converted when an object falls.
- Be able to explain how a pendulum works.
- Be able to explain how energy is converted when a rubber ball falls.
- Know the 8 types of energy we discussed in class.
- Know the factors that affect the 8 types of energy discussed in class.
- Be able to categorize the 8 types of energy we learned in class as potential or kinetic energy.
- Be able to explain how open and closed systems relate to energy.

- Be able to explain why perpetual motion cannot exist.
- Be able to explain what causes an object to stop moving.
- Be able to explain why it is that when you drop a ball it cannot bounce up to its original height.
- What does the Law of Conservation of Energy mean?
- How do you design a fair experiment?
- How do you find an average of 3 numbers?
- What is an outlier?

Be familiar with the forms of energy, definitions and their factors

Form	Definition	Factors
Kinetic Energy	Energy of _____.	_____ and _____
Gravitational Energy	_____ energy associated with the ability to _____.	_____ and _____
_____ Energy	_____ energy released when an object is deformed and returns to his original shape on its own.	Deformation and Rigidity
Thermal Energy	Energy derived from the _____ of _____ in a substance.	_____ and Mass
_____ Energy	Form of energy associated with the _____ of matter	Volume and _____
_____ Energy	_____ energy released during a _____	Mass and _____
_____ Energy	Energy derived from the flow of _____ in a circuit	_____ and Voltage
_____ Energy	Form of energy associated with the movement of photons or _____ waves.	_____ and Frequency

Study Materials

- Review all labs
- Review scientific principles
- Brain Building Broadcasts