



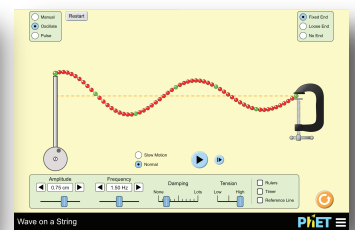
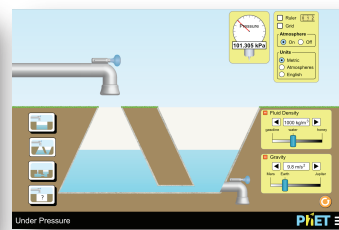
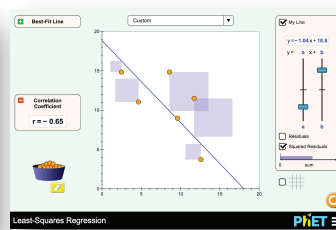
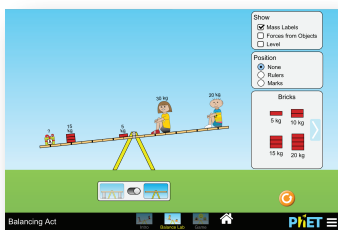
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Concept Question

As she skates down the track, will her energy increase, decrease, or stay the same?

Lab

Design an experiment to determine the relationship between kinetic energy and speed.

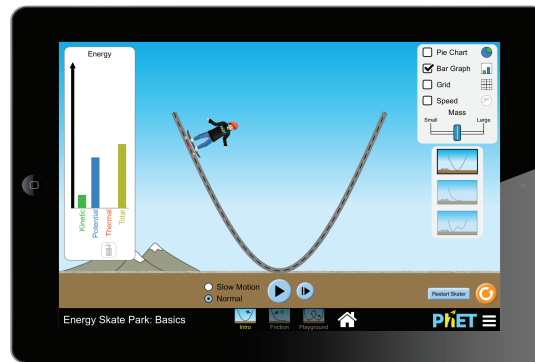
Group Work

Share your findings from lab. Identify evidence that could be used for each claim.

Homework

Explore adding friction. Describe how friction changes the skater's motion and energy.

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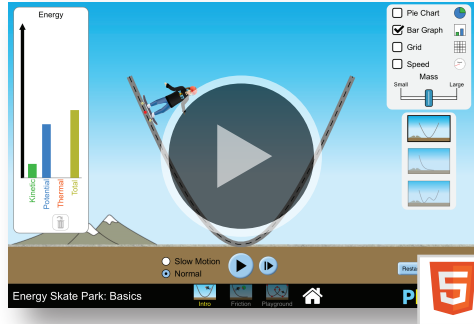
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Energy Skate Park: Basics



- Conservation of Energy
- Kinetic Energy
- Potential Energy

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Example Physics Simulations

Motion

- Balancing Act
- Buoyancy / Density
- Collision Lab
- Energy Skate Park (Original & Basics)
- Fluid Pressure and Flow
- Forces and Motion
- Gravity and Orbits
- Gravity Force Lab
- Ladybug Motion 2D
- Ladybug Revolution
- Masses & Springs
- Maze Game
- The Moving Man
- My Solar System
- Normal Modes
- Pendulum Lab
- Projectile Motion
- Ramp: Forces and Motion
- Resonance
- Torque

Electricity, Magnets & Circuits

- Balloons and Static Electricity
- Capacitor Lab
- Charges and Fields
- Circuit Construction Kit
- Conductivity
- Electric Field Hockey
- Faraday Electromagnetic Lab
- John Travoltage

- Magnets and Electromagnets
- Ohm's Law
- Radio Waves & Electromagnetic Fields
- Resistance in a Wire
- Semiconductors
- Signal Circuit

Heat & Thermo

- Balloons & Buoyancy
- Blackbody Spectrum
- Friction
- Gas Properties
- The Greenhouse Effect
- Microwaves
- States of Matter

Light & Radiation

- Bending Light
- Blackbody Spectrum
- Color Vision
- Fourier: Making Waves
- Geometric Optics
- The Greenhouse Effect
- Lasers
- Microwaves
- Molecules and Light
- Neon Lights & Other Discharge Lamps
- Optical Tweezers and Applications
- Photoelectric Effect
- Radio Waves & Electromagnetic Fields
- Radiating Charge
- Wave Interference

Sound & Waves

- Fourier: Making Waves
- Radio Waves & Electromagnetic Fields
- Sound
- Wave Interference
- Wave on a String

Work, Energy & Power

- Energy Skate Park (Original & Basics)
- Generator
- Masses & Springs
- Nuclear Fission
- The Ramp

Quantum Phenomena

- Alpha Decay, Beta Decay
- Band Structure
- Davisson-Germer: Electron Diffraction
- Fourier: Making Waves
- Lasers
- Models of the Hydrogen Atom
- Neon Lights & Other Discharge Lamps
- Nuclear Fission
- Photoelectric Effect
- Quantum Bound States
- Quantum Tunneling and Wave Packets
- Quantum Wave Interference
- Rutherford Scattering
- Semiconductors
- Stern-Gerlach Experiment