Energy Skate Park: Basics The Law of Conservation of Energy Part One

Purpose: When a skateboarder wants to launch himself as high as possible off the half-pipe, how does he achieve this? The skate park is an excellent example of the conservation of energy. The law of conservation of energy tells us that we can never create or destroy energy, but we can change its form.

In this thinking activity, you will analyze energy transformation among gravitational potential energy, kinetic energy, and energy lost due to collisions or friction (thermal energy) as a skateboarder rides along a track.



- 1. Open the "Energy Skate Park: Basics" PhET simulation.
- 2. Take some time to play with the simulation. Turn on the "**Bar Graph**," "**Grid**," and "**Speed**" options on the right side of the screen. Become familiar with the "**Reset**" buttons on the right and how to change the speed of the simulation with the buttons on the bottom. <u>When you are</u> <u>ready to continue, hit the "**Reset All**" button</u>.
- 3. Turn on the "Bar Graph," "Grid," and "Speed" options.)
- 4. Set the skater **2 meters above the ground** on the ramp and release him.