

Activity 1 “Let’s get the ball rolling”

MAIN IDEAS: The important concepts and skills covered in this activity are ...

- The higher the release point of the ball on the ramp, the faster the ball will be rolling when it reaches the bottom of the ramp.
- Repeating a measurement several times and then averaging the results will yield a more reliable result than any single measurement.

Activity 2 “Knock ‘em Down”

MAIN IDEAS: The important concepts and skills covered in this activity are ...

- A moving object has energy because of its motion. This energy, called **kinetic energy**, gives us an indication of how much a moving object can change the motion of other objects.
- The kinetic energy of an object is determined by its speed and mass. Increasing the size of the speed and/or the mass increases the object’s kinetic energy.
- **Energy Transfer** takes place whenever energy is ‘passed’ from one object to another object.

Activity 3 “Passing Energy Along”

MAIN IDEAS: The important concepts and skills covered in this activity are ...

- The kinetic energy of an object determines the amount of change it can produce in the motion of other objects.
- The kinetic energy of an object can be transferred to other objects.
- Objects can have stored energy that is called **potential energy**. A common form of potential energy is due to the Earth’s gravity. It is called the gravitational potential energy and depends on the object’s mass and how high it is above the ground.
- **Energy Transformation** occurs whenever energy changes from one form to another form.
- The kinetic energy of objects can be transferred to the tiny particles that make up the objects. When this happens, the kinetic energy becomes disorganized and does not contribute to the motion of the objects. Collectively, this random kinetic energy is called **heat energy**.