HUGK12 Activity

TITLE:

Newton’s Laws

PREPAREDBY:

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DCPS STANDARDS:

8.5.2. Describe kinetic energy as the energy of motion (e.g., a rolling ball) and potential energy as the energy of position or configuration (e.g., a raised object or a compressed spring).

GOAL:

Students will observe examples of Newton’s Laws.

OBJECTIVES:

Students will be able to observe differences in forces exerted on various objects.

PREREQUISITE KNOWLEDGE:

Background

Newton's Three Laws:

1) An object, which is moving at a constant velocity or at a state of rest, does not change its state unless a force acts upon it.

2) Acceleration of an object increases, as the amount of force causing the acceleration increases when mass is constant.

3) For every force, there is an equal and opposite force.

ESSENTIAL QUESTION:

How do objects with the same mass or different masses respond to a collision?

LABORATORY MATERIALS:

Pairs of objects with similar masses
Pairs of objects with different masses

DIFFERENTIATING INSTRUCTION:

English Language Limited students should have no problems with this activity.

RATIONALE:

This activity is designed to have students become familiar with Newton's Laws of Motion.

RESEARCH ACTIVITY:

Students will crash objects into each other.

EVALUATION AND ASSESMENT:

Students will evaluate differences between crashes of objects with the same mass and objects with different masses.