

Getting a Feel For Gravity

National Science Education Standards addressed:

Grades K–4

Science as Inquiry:

As a result of activities in grade k-4, all students should develop

- Abilities necessary to do scientific inquiry
 - Ask a question about objects, organisms and events in the environment
 - Employ simple equipment and tools to gather data and extend the senses
- Understandings about scientific inquiry
 - Scientists use different kinds of investigations depending on the questions they are trying to answer. Types of investigations include describing events and doing a fair test (experimenting)

Earth and Space Science:

As a result of their activities in grades K-4, all students should develop an understanding of

- Objects in the Sky
 - The sun, moon, stars all have properties, locations and movements that can be observed and described.
- Changes in the Earth and Sky
 - Objects in the sky have patterns of movement.

Earth History and Nature of Science:

As a result of activities in grades K-4, all students should develop understanding of

- Science as a human endeavor

Grades 5-8

Science as Inquiry:

As a result of their activities in grades 5-8, all students should develop an understanding of

- Develop descriptions, explanations, predictions and models using evidence

Physical Science:

As a result of their activities in grades 5-8, all students should develop an understanding of

- Motions and Forces
 - The motion of an object can be described by its position, direction of motion, and speed
 - If more than one force acts on an objects along a straight lines, then the forces will reinforce and cancel one another, depending on their direction and magnitude. Unbalanced forces will cause changes in the speed or direction of an object's motion.
- Transfer of Energy
 - Energy is a property of many substances and is associated with [heat, light, electricity,] mechanical motion [sound, nuclei and the nature of a chemical]. Energy is transferred in many ways.

Earth and Space Science:

- Earth in the Solar System
 - The Earth is the third planet from the sun in a system that includes the moon, the sun, eight other planets and their moons, and smaller objects, such as asteroids and comets
 - Most objects in the solar system are in regular and predictable motion.
 - Gravity is the force that keeps planets in orbit around the sun and governs the rest of the motion in the solar system.