#3 Forces and Interactions

Content Area: **Science**
Course(s): **Science 5**
Time Period: **Undefined**
Length: **Undefined**
Status: **Published**

Unit Overview

Essential Questions

What affects the motion of objects?

What are forces?

What are Newton's laws?

What are machines?

Content

The effect of unbalanced forces on an object results in a change of motion.

Patterns of motion can be used to predict future motion.

Some forces act through contact, some forces act even when the objects are not in contact.

The gravitational force of Earth acting on an object near Earth’s surface pulls that object toward the planet’s center

Newton's first law of motion says that an object will stay in uniform motion unless a net force acts on the object. Newton's second law of motion describes how acceleration, mass, and force are related. Newton's third law of motion states that when one object exerts a force on a second object, the second object exerts a force on the first.

Skills

Describe some forces that cause objects to move.

Understand that a given object will have more change of motion with a large force than with a small force and that agiven force will cause more change of motion on small masses than large masses.

Describe different kinds of machines and understand how they work.

Assessments

Apply understanding of force and motion to explain why it takes more force to move an object with a large mass such as a baseball than an object with a small mass such as a golf ball.

Study Guide

Chapter Review

Chapter Test

Benchmark Practice

Interactive notebook

STEM Activities- TBD

Lessons/Learning Scenarios

Lesson 1:

Read and discuss pages 464-469

Teacher made Power Point throughout

Lesson 2:

Read and discuss pages 470-477

Power Point presentation throughout/Q/A session

Investigate Newton Laws- related labs- TBD

Investigate It lab- What forces affect the motion of a rocket- pg. 486-487

Interactive notebook with hands-on activities throughout

Standards

SCI.5.5-PS2-1	Support an argument that the gravitational force exerted by Earth on objects is directed down.

Resources