



# Southmoreland School District Physics CP Curriculum Overview

## **Physics CP Overview:**

This program of studies in physics should provide you with an introduction to the field of physics. You will be presented with the basic physical laws and procedures by which they are established. You will have an opportunity to gain experience in application of scientific methods of investigation as used in physics. You will be exposed to the concepts of mechanics, matter and energy, wave motion, electricity and magnetism, electronic, atomic physics and nuclear physics.

## **Module Titles:**

**Module 1: Introduction to Physics and Physics Tools**

**Module 2: Motion**

**Module 3: Force and Newton's Laws**

**Module 4: Energy**

**Module 5: Rotational Motion**

## **Module Overviews:**

### **Module 1: Introduction to physics and Physics Tools**

Includes an in-depth study of physics and physics tools: How to examine physics problems: Review of math concepts with physics variables and units: Showing work required work: how to properly diagram a physics problem.

### **Module 2: Motion**

Includes the study of 1 dimensional motion with speed, velocity, and acceleration: 2 dimensional motion and the addition of vectors: Projectile motion in gravitational fields.

### **Module 3: Force and Newton's Laws**

Includes the study of Newton's laws in 1 and 2 dimensions: How force can result in balanced and unbalanced situations: How force relates to failure of materials:

### **Module 4: Energy**

Includes the study of the law of conservation of energy: How energy is used in modern life: sources of energy: Elastic and inelastic collisions with momentum using the Impulse Momentum theorem.



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## **Module 5: Rotational Motion**

Includes the study of Rotational motion: How rotational motion relates to translational motion: