



## TOWNSHIP SCHOOL DISTRICT Course Overview



### Course Name Physical Science

#### General Information

Credits: N/A

Weighted: no

Prerequisite: none

Length: Full Year

Format: Meets Daily

Grade: 8

#### Course Description

The 8<sup>th</sup> grade Physical Science course will explore the principles of motion, forces and energy; waves, sound and light; the nature of matter; applications of chemistry; and electricity and magnetism. At the beginning of the year, there will be a comprehensive overview of watersheds, aquatic organisms, and ecosystems in preparation for the annual 8<sup>th</sup> grade Sandy Hill field study.

This course is a Physical Science course, and does not directly converge with the Keystone BIOLOGY exam that will be administered. It is, however, aligned with the 8<sup>th</sup> grade science PSSA exam.

#### Course Objectives:

At the conclusion of this course, students will be able to:

- Apply the scientific method
- Construct a data appropriate graph
- Perform calculations from data obtained and analyze results in the context of the lab
- Make real-world connections
- Identify, utilize, and gain experience in using physical science and dissection tools appropriately
- Understand and utilize appropriate physical science vocabulary to explain various phenomena
- Write a science lab report that follows the RTSD guidelines
- Perform dimensional analysis of metric units
- Explain physical principles including gravity, pressure, force, density, magnetism, and electricity and how they affect daily life
- Understand the relationship between various physical principles and how these principles affect one another
- Recognize future science employment opportunities and the work of science pioneers

## **Common Assessments:**

### **Required Assessments:**

#### Common Assessments:

- WLB
- Final – Energy Essay

#### Common Course Assessments

- LTF Labs: Meltdown, Walk the Line, Barbie Bungee Jumping, Running the Stairs
- Periodic Table Project
- Invention Convention
- Midterm
- Wave Sound and Light Demonstration
- Chapter tests and quizzes

## **Major Units of Study:**

- Review of Watersheds and marine organisms (dissection)
- Nature of Matter
- Electricity and Magnetism
- Motion, Forces and Energy
- Waves, Sound and Light

## **Materials & Texts**

### **Required Texts and Resources:**

#### Common Texts and Resources:

##### Glencoe Middle School Series:

- Nature of Matter
- Electricity and Magnetism
- Motion, Forces, and Energy
- Wave, Sound and Light

##### Carolina Biological STC Series:

- Properties of Matter
- Electrical Energy and Circuit Design
- Energy, Machines, and Motion

### **Supplemental Texts and Resources (use may vary):**

- Laying the Foundation Lessons and Assessments