

Physical Science offers a focused curriculum designed around the understanding of critical physical science concepts, including the nature and structure of matter, the characteristics of energy, and the mastery of critical scientific skills.

Course topics include an introduction to kinematics, including gravity and two-dimensional motion; force; momentum; waves; electricity; atoms; the periodic table of elements; molecular bonding; chemical reactivity; gases; and an introduction to nuclear energy. Teacher-scored labs encourage students to apply the scientific method.

This course is built to state standards.

Length: Two Semesters

### **Unit 1: Science and Engineering**

- Science
- Scientific and Engineering Processes
- Wrap-Up: Science and Engineering

### **Unit 2: Energy**

- What Is Energy?
- Thermal Energy
- Doing Science: Energy
- Wrap-Up: Energy

### **Unit 3: Forces**

- Force and Motion
- Momentum and Collisions
- Wrap-Up: Forces

### **Unit 4: Electromagnets**

- Electricity and Magnetism
- Electromagnetism
- Wrap-Up: Electromagnets

### **Unit 5: Semester Wrap-Up**

### **Unit 6: Waves**

- Wave Properties and Interactions
- Electromagnetic Waves
- Applications of Waves
- Wrap-Up: Waves

### **Unit 7: Structure and Properties of Matter**

- Structure of Matter

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- Properties of Matter
  - Wrap-Up: Structure and Properties of Matter

**Unit 8: Chemical Reactions**

- Describing Chemical Reactions
- Factors Affecting Chemical Reactions
- Wrap-Up: Chemical Reactions

**Unit 9: Nuclear Reactions**

- Fission, Fusion, and Radioactive Decay
- Modeling Nuclear Reactions
- Wrap-Up: Nuclear Reactions

**Unit 10: Semester Wrap-Up**