

## **Science**

### **Physics Concepts**

Core Texts:

*Physics Concepts and Connections*, Hobson

*Understanding Physics*, Asimov

Core Concepts

### **Trimester One**

How things move

Measuring motion: speed and velocity

Measuring motion: acceleration

Galileo

Connecting force and acceleration

Newton

Gravity

Newtonian worldview

### **Trimester Two**

Conservation of Energy

Work

Measuring energy

Transformation of energy

The Second Law of Thermodynamics

Heat

Entropy

Transportation of efficiency

Electromagnetic Waves

Electromagnetic waves and light

Solar radiation

### **Trimester Three**

Relativity Theory

Einstein

Galileo

The relativity of time

The Universe According to Einstein

Relativity of velocity

Relativity of Mass

Newton

Quantum Theory

Post-Newtonian physics, Quantization, Radiation, Matter