For Teachers: Alignment to Curriculum Frameworks

Note: Lesson plans in this series are aligned to one or more of the following sets of standards:

- U.S. Science Education Standards (http://www.nap.edu/catalog.php?record_id=4962)
- U.S. Next Generation Science Standards (http://www.nextgenscience.org/)
- International Technology Education Association’s Standards for Technological Literacy (http://www.iteea.org/TAA/PDFs/xstnd.pdf)
- U.S. Common Core State Standards for Mathematics (http://www.corestandards.org/Math)
- Computer Science Teachers Association K-12 Computer Science Standards (http://csta.acm.org/Curriculum/sub/K12Standards.html)

◆ National Science Education Standards Grades 5-8 (ages 10 - 14)

CONTENT STANDARD B: Physical Science
As a result of their activities, all students should develop an understanding of
- Motions and forces
- Transfer of energy

CONTENT STANDARD F: Science in Personal and Social Perspectives
As a result of activities, all students should develop understanding of
- Science and technology in society

CONTENT STANDARD G: History and Nature of Science
As a result of activities, all students should develop understanding of
- History of science

◆ National Science Education Standards Grades 9-12 (ages 14-18)

CONTENT STANDARD A: Science as Inquiry
As a result of activities, all students should develop
- Abilities necessary to do scientific inquiry
- Understandings about scientific inquiry

CONTENT STANDARD B: Physical Science
As a result of their activities, all students should develop understanding of
- Interactions of energy and matter

◆ Next Generation Science Standards – Grades 5-8 (Ages 10-14)

Motion and Stability: Forces and Interactions
- MS-PS2-3. Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.

Energy
- MS-PS3-2. Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.
◆ Standards for Technological Literacy (All Ages)

**Technology and Society**

◆ Standard 7: Students will develop an understanding of the influence of technology on history.

**Design**

◆ Standard 10: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.

**The Designed World**

◆ Standard 16: Students will develop an understanding of and be able to select and use energy and power technologies.