

Origins of the Solar System:

STANDARDS ADDRESSED

Grades K-4

Science-

History and Nature of Science

Science as a Human Endeavor

- Science and technology have been practiced by people for a long time.
- Men and women have made a variety of contributions throughout the history of science and technology.
- Science will never be finished.

Language Arts-

Writing Standards

- Standard 4- Gathers and uses information for research purposes.

Speaking and Listening Standards

- Standard 8- Demonstrates competence in speaking and listening as tools for learning.

Technology

- Standard 4- Understands the nature of technological design.

Life Skills Standards-

Thinking and Reasoning

- Standard 1- Understands and applies the basic principles of presenting an argument.
- Standard 3- Effectively uses mental processes that are based on identifying similarities and differences (compares, contrasts, classifies).
- Standard 4- Understands and applies basic principles of hypothesis testing and scientific inquiry.

Working With Others

- Standard 1- Contributes to the overall effort of a group.

Grades 5-8

Science-

Earth and Space Science

Earth in the Solar System

- The Earth is the third planet from the sun in a system....
- Most objects in the solar system are in regular and predictable motion.
- Gravity is the force that keeps planets in orbit....

History and Nature of Science

Science as a Human Endeavor

- Some scientists work in teams, and some work alone....

Nature of Science and Scientific Knowledge

- Scientists do and have changed their ideas about nature....
- It is normal for scientists to differ....

History of Science/ Historical Perspectives

- Many individuals have contributed to the traditions of science.

Language Arts-

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Grades 9-12

Science-

Earth and Space Science

The Origin and Evolution of the Earth System

- The solar system formed from a nebular cloud of gas 4.6 billion years ago.

The Origin and Evolution of the Solar System

- The origin of the universe remains one of the greatest questions in science.
- Early in the history of the universe, matter...clumped together by gravitational attraction....
- Stars produce energy from nuclear reactions....

History and Nature of Science

Science as a Human Endeavor

- Individuals and teams have contributed and will continue to contribute to the scientific enterprise.

Nature of Science and Scientific Knowledge

- Science distinguishes itself from other ways of knowing....
- Scientific explanations must meet certain criteria
- All scientific knowledge is subject to change....

History of Science/ Historical Perspectives

- The historical perspective of scientific explanations demonstrates how scientific knowledge changes by evolving over time, almost always building on earlier knowledge.

Language Arts-

Writing Standards **Origins of the Solar System:**

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