

National Science Standards

Grades 5-8

As Addressed by Challenger Learning Center's

e-Mission: Space Station Alpha



Content Standard A: Abilities Necessary to Do Scientific Inquiry

- Use appropriate tools and techniques to gather, analyze, and interpret data.
- Develop descriptions, explanations, predictions, and models using evidence.
- Think critically and logically to make the relationships between evidence and explanations.
- Recognize and analyze alternative explanations and predictions.
- Communicate scientific procedures and explanations.
- Use mathematics in all aspects of scientific inquiry.

Content Standard B: Physical Science

- Properties and changes of properties in matter.
- Motions and forces.
- Transfer of energy.

Content Standard C: Life Science

- Hereditary information is contained in genes, located in the chromosomes of each cell. Each gene carries a single unit of information. An inherited trait of an individual can be determined by one or by many genes, and a single gene can influence more than one trait. A human cell contains many thousands of different genes.
- The characteristics of an organism can be described in terms of a combination of traits. Some traits are inherited, and others result from interactions with the environment.
- All organisms must be able to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment.
- For ecosystems the major source of energy is sunlight.

Content Standard D: Earth and Space Science

- Earth in the solar system.

Content Standard E: Science and Technology

- Abilities of technological design.
- Understandings about science and technology.

Content Standard F: Science in Personal and Social Perspectives

- Personal health.
- Populations, resources, and environments.
- Natural hazards.
- Risks and benefits.
- Science and technology in society.

Content Standard G: History and Nature of Science

- Science as a human endeavor.
- Nature of science.
- History of science.