

Manuscript Number:

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### National Science Education Standards

#### Content Standards: grades 5-8

Which of the following NSES Content Standards are promoted in this manuscript?

##### Standard A: Science as Inquiry

- abilities necessary to do scientific inquiry
- understanding about scientific inquiry

##### Standard B: Physical Science

- properties and changes of properties of matter
- motion and forces
- transfer of energy

##### Standard C: Life Science

- structure and function in living systems
- reproduction and heredity
- regulation and behavior
- populations and ecosystems
- diversity and adaptations of organisms

##### Standard D: Earth and Space Science

- structure of the earth system
- Earth's history
- Earth in the solar system

##### Standard E: Science and Technology

- abilities of technological design
- understanding about science and technology

##### Standard F: Science in Personal and Social Perspectives

- personal health
- populations, resources, and environments
- natural hazards
- risks and benefits
- science and technology in society

##### Standard G: History and Nature of Science

- science as a human endeavor
- nature of science
- history of science

<http://www.nap.edu/readingroom/books/nses/6d.html>

### Iowa Teaching Standards and Model Criteria

Which of the following Iowa Teaching Standards is a teacher likely to improve upon by using ideas from this manuscript?

**Standard 1:** Demonstrates ability to enhance academic performance and support for implementation of the school district's student achievement goals.

*(For example: provides evidence of student learning to students, families, and staff; Uses student performance data as a guide for decision making; Accepts and demonstrates responsibility for creating a classroom culture that supports the learning of every student; Participates in and contributes to a school culture that focuses on improved student learning)*

**Standard 2:** Demonstrates competence in content knowledge appropriate to the teaching position.

**Standard 3:** Demonstrates competence in planning and preparing for instruction.

**Standard 4:** Uses strategies to deliver instruction that meets the multiple learning needs of students.

**Standard 5:** Uses a variety of methods to monitor student learning.

**Standard 6:** Demonstrates competence in classroom management.

**Standard 7:** Engages in professional growth.

**Standard 8:** Fulfills professional responsibilities established by the school district.

*(For example: demonstrates an understanding of and respect for all learners and staff; collaborates with students, families, colleagues, and communities to enhance student learning)*

<http://www.iowa.gov/boee/stndrds.html>