

**3501.0925 GRADE 5 STANDARDS.****Subpart 1. The nature of science and engineering.**

A. The practice of science. The student will understand that science is a way of knowing about the natural world, is done by individuals and in groups, and is characterized by empirical criteria, logical argument, and skeptical review.

B. The practice of science. The student will understand that scientific inquiry requires identification of assumptions, use of critical and logical thinking, and consideration of alternative explanations.

C. Interactions among science, technology, engineering, mathematics, and society. The student will understand that men and women throughout the history of all cultures, including Minnesota American Indian tribes and communities, have been involved in engineering design and scientific inquiry.

D. Interactions among science, technology, engineering, mathematics, and society. The student will understand that tools and mathematics help scientists and engineers see more, measure more accurately, and do things that they could not otherwise accomplish.

Subp. 2. **Physical science; motion.** The student will understand that an object's motion is affected by forces and can be described by the object's speed and the direction it is moving.

**Subp. 3. Earth and space science.**

A. Earth structure and processes. The student will understand that the surface of the Earth changes. The student will understand that some changes are due to slow processes and some changes are due to rapid processes.

B. Human interactions with Earth systems. The student will understand that in order to maintain and improve their existence, humans interact with and influence Earth systems.

**Subp. 4. Life science.**

A. Structure and function in living systems. The student will understand that living things are diverse with many different characteristics that enable them to grow, reproduce, and survive.

B. Interdependence among living systems. The student will understand that natural systems have many components that interact to maintain the living system.

C. Human interactions with living systems. The student will understand that humans change environments in ways that can be either beneficial or harmful to themselves and other organisms.

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