

DoDEA Grade 6 Science Standards

S1: Scientific Inquiry

The student demonstrates abilities necessary to do scientific inquiry and an understanding about scientific inquiry; that is, the student:

- S1a:** develops research questions that can be answered through scientific investigations.
- S1b:** accesses, evaluates and uses information from a variety of reliable sources.
- S1c:** designs, conducts, and records scientific investigations following the general procedures of scientific inquiry.
- S1d:** applies appropriate tools and techniques to systematically collect, record, analyze, interpret and present data.
- S1e:** develops logical descriptions, explanations, predictions, and models using evidence.
- S1f:** recognizes and analyzes interpretations, conclusions, and predictions based upon alternative evidence and explanations.
- S1g:** communicates scientific procedures, explanations, and conclusions using appropriate scientific language and mathematics.

S2: History and Nature of Science

The student demonstrates an understanding of science as a human endeavor, and the history and nature of science; that is, the student:

- S2a:** describes how doing science requires varying human abilities, interest and habits of mind (such as: reasoning, insight, skill, creativity, intellectual honesty, tolerance of ambiguity, skepticism, and openness to new ideas.)
- S2b:** identifies contributions of individuals from diverse cultures who have extended the knowledge in science and technology.
- S2c:** explains how the effects of science and technology affect cultural development, innovation and human history.

S3: Science in Personal and Social Perspectives

The student demonstrates an understanding of safety and risks and benefits associated with natural and personal hazards; that is, the student:

- S3a:** demonstrates personal and group safety and resource conservation.
- S3b:** compares the safety precautions needed during different natural hazards.
- S3c:** describes the risks, costs, and benefits of human decisions related to natural hazards.
- S3d:** explores causes of environmental degradation and resources depletion.

S4: Science and Technology

The student demonstrates an understanding about science and technology, and the nature of technological design; that is, the student:

- S4a:** explores how societal challenges may drive scientific research.
- S4b:** designs and conducts a test on an invention (or existing product) based on specified criteria.
- S4c:** compares the intended benefits and unintended consequences of technology and how it impacts society.
- S4d:** describes how technology responds to societal needs.

S5: Physical Science

The student demonstrates a conceptual understanding of matter, motions and forces, and transfer of energy; that is, the student:

- S5a:** investigates how some common elements combine to form mixtures and compounds.
- S5b:** identifies and illustrates the multiple forces on the movement, speed, and direction of an object.
- S5c:** communicates how energy can be transferred through conduction, convection, and radiation, and how objects have potential energy and kinetic energy.

S6: Life Science

The student demonstrates a conceptual understanding of the structure and function of living systems, populations and ecosystems; that is, the student:

- S6a:** compares and contrasts structure and function in single celled and multicellular organisms.
- S6b:** compares asexual and sexual reproduction and infers their role in the survival of a species.
- S6c:** assesses the relationships among producers, consumers, and decomposers in ecosystems.

S7: Earth and Space Sciences

The student demonstrates a conceptual understanding of the Earth's systems, history, and place in the solar system; that is, the student:

- S7a:** explains the processes of the Earth that produce gradual changes, such as weathering, erosion, and the development of landforms.
- S7b:** evaluates the impact of atmospheric changes (clouds, air masses and precipitation) and other factors (oceans, meteors, and glaciers) on weather, climate, and landforms.
- S7c:** catalogues the planets of this solar system including Earth.

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