

MSAD 75 Teaching and Learning Framework

Science: Grade Two Power Standards

Power Standards are a subset of the complete list of standards for each grade and for each subject. They represent the “safety net” of standards every teacher ensures all students have the opportunity to learn.

MLR A-C: The Process Skills of Science

The Science and Technology Standards outline the essential understandings of these disciplines. Standard A describes four themes that serve as a broad scaffold for understanding and organizing student understanding of the content and processes of science and technology. Standard B describes the processes of scientific inquiry and technological design. As a complement to the expectations of inquiry and design outlined in Standard B, Standard C describes the enterprises of science and technology and the connection to society. Standards D and E have What students are expected to do that encompass the subject matter conventionally referred to as life, physical, and earth and space science. It is essential that classroom instruction integrate the processes and ideas of Standards A, B, and C with the knowledge of Standards D and E, rather than teach them separately. Instruction should support students in asking questions and making inquiries to help them, understand and solve problems that require the integration of knowledge and processes in authentic contexts.

MLR E: The Living Environment

Students understand that cells are the basic unit of life, that all life as we know it has evolved through genetic transfer and natural selection to create a great diversity of organisms, and that these organisms create interdependent webs through which matter and energy flow. Students understand similarities and differences between humans and other organisms and the interconnections of these interdependent webs.

Grade Two Standards

What students are expected to do

Big Ideas: E1 Biodiversity

Core Content: Students describe similarities and differences in the observable behaviors, features, and needs of plants and animals.

- a. Describe similarities and differences in the way plants and animals look and the things that they do.
- b. Describe some features of plants and animals that help them live in different environments.
- c. Describe how organisms change during their lifetime.

MLR E: The Living Environment cont.’**Grade Two Standards****What students are expected to do****Big Ideas: E2 Ecosystems**

Core Content: Students understand how plants and animals depend on each other and the environment in which they live.

- a. Explain that animals use plants and other animals for food, shelter, and nesting.
- b. Compare different animals and plants that live in different environments of the world.

Big Ideas: E3 Cells

Core Content: Students describe parts and wholes of living things, their basic needs, and the structures and processes that help them stay alive.

- a. List living things and their parts. Explain that parts of living are so small we can only see them using magnifiers.
- b. List the basic things that most organisms need to survive.
- c. Identify structures that help organisms do things to stay alive.

Big Ideas: E4 Heredity and Reproduction

Core Content: Students describe the cycle of birth, development, and death in different organisms and the ways in which organisms resemble their parents.

- a. Give examples of how organisms are like their parents and not like them.
- b. Describe the life cycle of a plant or animal (including being born, growing, reproducing, and dying).

Big Ideas: E5 Evolution

Core Content: Students describe similarities and differences between present day and past organisms that helped the organisms to live in their environment.

- a. Describe some organisms' features that allow the organisms to live in places others cannot.
- b. Explain how some kinds of organisms that once lived on Earth have completely disappeared, although they were similar to some that are alive today.