

Next Generation Science Standards:

Science and Engineering Practices

“Practices” require both skill and knowledge. Scientists engage in practices to investigate the natural world and build models/theories. Engineers engage in practices to design and build models/systems.

1. Asking questions and defining problems
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations and designing solutions
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

Crosscutting Concepts

Crosscutting concepts have application across all domains of science. They are a way of linking the different domains of science into a coherent and scientifically-based view of the world.

1. Patterns
2. Cause and effect: Mechanism and explanation
3. Scale, proportion, and quantity
4. Systems and system models
5. Energy and matter: Flows, cycles, and conservation
6. Structure and function
7. Stability and change



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