

Grades K-2: Overview

Science and Engineering Practices (SEPs)

- 1 Asking Questions and Defining Problems: s Formulating simple descriptive questions that can be tested.** [K-2.SEP.1](#)

- 2 Developing and Using Models: Using and developing models that represent concrete events or design solutions, including diagrams, drawings, physical replicas, dioramas, dramatizations, or storyboards.** [K-2.SEP.2](#)

- 3 Planning and Carrying Out Investigations: Designing and conducting simple investigations, based on fair tests, which provide data to support explanations or design solutions.** [K-2.SEP.3](#)

- 4 Analyzing and Interpreting Data: Collecting, recording, and sharing observations.** [K-2.SEP.4](#)

- 5 Using Mathematics and Computational Thinking: Recognizing ways that mathematics can be used to describe the natural and designed world(s).** [K-2.SEP.5](#)

- 6 Constructing Explanations and Designing Solutions: Using evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.** [K-2.SEP.6](#)

- 7 Engaging in Argument from Evidence: Comparing ideas and representations about the natural and designed world(s).** [K-2.SEP.7](#)

- 8 Obtaining, Evaluating, and Communicating Information: Using observations and texts to gather and communicate new information** [K-2.SEP.8](#)

Crosscutting Concepts (CCCs)

- 1 Patterns: Patterns in the natural and human-designed world can be observed, used to describe phenomena, and used as evidence.** [K-2.CCC.1](#)

- 2 Cause and Effect: Mechanism and Prediction: Events have causes that generate observable patterns. Simple tests can be designed to gather evidence to support or refute students' ideas about causes.** [K-2.CCC.2](#)

- 3 Scale, Proportion, and Quantity: Relative scales allow objects and events to be compared and described (e.g., bigger and smaller; hotter and colder; faster and slower). Standard units are used to measure length.** [K-2.CCC.3](#)

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- 4 Systems and System Models: Objects and organisms can be described in terms of their parts. Systems in the natural and designed world have parts that work together.** K-2.CCC.4
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- 5 Energy and Matter: Flows, Cycles, and Conservation: Objects may break into smaller pieces, be put together into larger pieces, or change shapes.** K-2.CCC.5
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- 6 Structure and Function: The shape and stability of structures of natural and designed objects are related to their function(s).** K-2.CCC.6
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- 7 Stability and Change: Some things stay the same while other things change. Things may change slowly or rapidly.** K-2.CCC.7