Alabama Science

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

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

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

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

7 **Stability and Change: Some things stay the same while other things change. Things may change slowly or rapidly.** K-2.CCC.7