

Science and Engineering Practices

1. Asking Questions (for science) and Defining Problems (for engineering)
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 (for science) and Designing Solutions (for engineering)
7. Engaging in Argument from Evidence
8. Obtaining, Evaluating, and Communicating Information

Disciplinary Core Ideas

PHYSICAL SCIENCES

- PS1: Matter and Its Interactions
- PS2: Motion and Stability: Forces and Interactions
- PS3: Energy
- PS4: Waves and Their Applications in Technologies for Information Transfer

LIFE SCIENCES

- LS1: From Molecules to Organisms: Structures and Processes
- LS2: Ecosystems: Interactions, Energy, and Dynamics
- LS3: Heredity: Inheritance and Variation of Traits
- LS4: Biological Evolution: Unity and Diversity

EARTH AND SPACE SCIENCES

- ESS1: Earth's Place in the Universe
- ESS2: Earth's Systems
- ESS3: Earth and Human Activity

ENGINEERING, TECHNOLOGY, AND APPLICATIONS OF SCIENCE

- ETS1: Engineering Design
- ETS2: Links Among Engineering, Technology, Science and Society

Crosscutting Concepts

1. Patterns
2. Cause and Effect: Mechanisms 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

NGSS Performance Expectation
Analysis **KEY**

Grade Level: The grade level(s) of the Performance Expectation

DCI: Disciplinary Core Idea

Title of the Standard: Heading on the top of the page of the standard

P.E.: Performance Expectation

AB: Assessment Boundary

CS: Clarification Statement

SEP: Science and Engineering Practice

CC: Crosscutting Concept

CCSS: Common Core State Standards

RL: Reading Literature

RI: Reading Informational Text

RF: Reading Foundational Skills

W: Writing

SL: Speaking & Listening

L: Language

RST: Reading Science & Technical Subjects

WHST: Writing in History, Science, & Technical Subjects

CC: Counting and Cardinality

OA: Operations & Algebraic Thinking

NBT: Number & Operation in Base Ten

NF: Number & Operations – Fractions

MD: Measurement and Data

G: Geometry

RP: Ratios and Proportional Relationships

NS: Number System

EE: Expressions and Equations

F: Functions

SP: Statistics and Probability