

The 3 Dimensions

Science & Eng. Practices

(SEPs)

- Asking questions and defining problems
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations & designing solutions
- Engaging in argument from evidence
- Obtaining, evaluating and communicating information

Disciplinary Core Ideas

(DCIs)

- **Physical Science**
 - Matter and its interactions
 - Motion & Stability: Forces & Interactions
 - Energy
 - Waves & Their Applications in Technologies for Info. Transfer
- **Life Science**
 - From Molecules to Organisms: Structure & Processes
 - Ecosystems: Interactions, Energy & Dynamics
 - Heredity: Inheritance & Variation of Traits
 - Biological Evolution: Unity & Diversity
- **Earth & Space Science**
 - Earth's Place in Universe
 - Earth's Systems
 - Earth & Human Activity
- **Engineering Technology & Applications of Science**
 - Engineering Design
 - Links Among Engineering, Technology, Science & Society

Crosscutting Concepts

(CCs)

- Patterns
- Cause and effect: mechanism and explanation
- Scale, proportion and quantity
- Systems and system models
- Energy and matter: flows, cycles and conversion
- Structure and function
- Stability and change