

Science & Engineering Practices (SEP)

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



Science & Engineering Practices (SEP)

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



Science & Engineering Practices (SEP)

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



Science & Engineering Practices (SEP)

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



Disciplinary Core Ideas (DCI)

Physical Science

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 Science



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/Space Science

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

Engineering Design

ETS1.A Defining and Delimiting Engineering Problems
ETS1.B Developing Possible Solutions
ETS1.C Optimizing the Design Solution

Disciplinary Core Ideas (DCI)

Physical Science

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 Science



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/Space Science

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

Engineering Design

ETS1.A Defining and Delimiting Engineering Problems
ETS1.B Developing Possible Solutions
ETS1.C Optimizing the Design Solution

Disciplinary Core Ideas (DCI)

Physical Science

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 Science



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/Space Science

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

Engineering Design

ETS1.A Defining and Delimiting Engineering Problems
ETS1.B Developing Possible Solutions
ETS1.C Optimizing the Design Solution

Disciplinary Core Ideas (DCI)

Physical Science

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 Science



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/Space Science

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

Engineering Design

ETS1.A Defining and Delimiting Engineering Problems
ETS1.B Developing Possible Solutions
ETS1.C Optimizing the Design Solution

Crosscutting Concepts (CCC)

- Patterns
- Cause and effect: Mechanism and explanation
- Scale, proportion, and quantity.
- Systems and system models.
- Energy and matter: Flows, cycles, and conservation.
- Structure and function.
- Stability and change.



Crosscutting Concepts (CCC)

- Patterns
- Cause and effect: Mechanism and explanation
- Scale, proportion, and quantity.
- Systems and system models.
- Energy and matter: Flows, cycles, and conservation.
- Structure and function.
- Stability and change.



Crosscutting Concepts (CCC)

- Patterns
- Cause and effect: Mechanism and explanation
- Scale, proportion, and quantity.
- Systems and system models.
- Energy and matter: Flows, cycles, and conservation.
- Structure and function.
- Stability and change.



Crosscutting Concepts (CCC)

- Patterns
- Cause and effect: Mechanism and explanation
- Scale, proportion, and quantity.
- Systems and system models.
- Energy and matter: Flows, cycles, and conservation.
- Structure and function.
- Stability and change.



For additional resources, go to:
www.gwaea.org

For additional resources, go to:
www.gwaea.org

For additional resources, go to:
www.gwaea.org

For additional resources, go to:
www.gwaea.org