



Component Idea	Scope	Performance Expectation	DCI Element	Science and Engineering Practice(s)	Crosscutting Concepts
 <b>ESS1 Earth's Place in the Universe</b>					
The Universe and Its Stars	<b>Patterns of Motion</b>	MS-ESS1-1	ESS1.A (A)	Developing and Using Models	Patterns
	<b>The Universe</b>	MS-ESS1-2	ESS1.A (B)	Developing and Using Models	Systems and System Models
Earth and the Solar System	<b>The Solar System</b>	MS-ESS1-2   MS-ESS1-3	ESS1.B (A)	Developing and Using Models   Analyzing and Interpreting Data	Scale, Proportion, and Quantity   Systems and System Models
	<b>Earth, Sun, and Moon System</b>	MS-ESS1-1	ESS1.B (B)	Developing and Using Models	Patterns
	<b>Formation of the Solar System</b>	MS-ESS1-2	ESS1.B (C)	Developing and Using Models	Systems and System Models
The History of Planet Earth	<b>Geologic History of Earth</b>	MS-ESS1-4	ESS1.C (A1)	Constructing Explanations and Designing Solutions	Scale, Proportion, and Quantity
	<b>Seafloor Spreading</b>	MS-ESS2-3	ESS1.C (A2)	Analyzing and Interpreting Data	Patterns

Component Idea	Scope	Performance Expectation (PE)	Disciplinary Core Idea (DCI)	Science and Engineering Practice(s) (SEP)	Crosscutting Concepts (CCC)
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 <b>ESS2 Earth's Systems</b>					
Earth's Materials and Systems	<b>Earth Materials</b>	MS-ESS2-1	ESS2.A(A)	Developing and Using Models	Stability and Change
Plate Tectonics and Large-Scale System Interactions	<b>Geoscience Processes</b>	MS-ESS2-2	ESS2.A (B)	Constructing Explanations and Designing Solutions	Scale, Proportion, and Quantity
	<b>Maps of Ancient Lands</b>	MS-ESS2-3	ESS2.B (0)	Analyzing and Interpreting Data	Patterns
The Roles of Water in Earth's Surface Processes	<b>The Water Cycle</b>	MS-ESS2-4	ESS2.C (AC)   ESS2.C (C)	Developing and Using Models	Energy and Matter
	<b>Water in the Atmosphere</b>	MS-ESS2-5	ESS2.C (B)	Planning and Carrying Out Investigations	Cause and Effect
	<b>Water on Earth</b>	MS-ESS2-6	ESS2.C (D)	Developing and Using Models	Systems and System Models
	<b>Weathering and Erosion</b>	MS-ESS2-2	ESS2.C (E)	Constructing Explanations and Designing Solutions	Scale, Proportion, and Quantity
Weather and Climate	<b>Influences on Weather and Climate</b>	MS-ESS2-6	ESS2.D (A)	Developing and Using Models	Systems and System Models
	<b>Predicting Weather</b>	MS-ESS2-5	ESS2.D (B)	Planning and Carrying Out Investigations	Cause and Effect
	<b>Ocean's Influence on Weather and Climate</b>	MS-ESS2-6	ESS2.D (C)	Developing and Using Models	Systems and System Models

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## ESS3 Earth and Human Activity

Natural Resources	<b>Human Dependence on Natural Resources</b>	MS-ESS3-1	ESS3.A (0)	Constructing Explanations and Designing Solutions	Cause and Effect
Natural Hazards	<b>Natural Hazard Predictions</b>	MS-ESS3-2	ESS3.B(0)	Analyzing and Interpreting Data	Patterns
Human Impacts on Earth Systems	<b>Changes to Earth's Environment</b>	MS-ESS3-3	ESS3.C (A)	Constructing Explanations and Designing Solutions	Cause and Effect
	<b>Consumption of Natural Resources</b>	MS-ESS3-3   MS-ESS3-4	ESS3.C (B)	Constructing Explanations and Designing Solutions   Engaging in Argument from Evidence	Cause and Effect
Global Climate Change	<b>Human Activities and Global Climate Change</b>	MS-ESS3-5	ESS3.D (0)	Asking Questions and Defining Problems	Stability and Change