




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

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 ESS2 Earth's Systems					
Earth's Materials and Systems	Earth Materials	MS-ESS2-1	ESS2.A(A)	Developing and Using Models	Stability and Change
Plate Tectonics and Large-Scale System Interactions	Geoscience Processes	MS-ESS2-2	ESS2.A (B)	Constructing Explanations and Designing Solutions	Scale, Proportion, and Quantity
	Maps of Ancient Lands	MS-ESS2-3	ESS2.B (0)	Analyzing and Interpreting Data	Patterns
The Roles of Water in Earth's Surface Processes	The Water Cycle	MS-ESS2-4	ESS2.C (AC) ESS2.C (C)	Developing and Using Models	Energy and Matter
	Water in the Atmosphere	MS-ESS2-5	ESS2.C (B)	Planning and Carrying Out Investigations	Cause and Effect
	Water on Earth	MS-ESS2-6	ESS2.C (D)	Developing and Using Models	Systems and System Models
	Weathering and Erosion	MS-ESS2-2	ESS2.C (E)	Constructing Explanations and Designing Solutions	Scale, Proportion, and Quantity
Weather and Climate	Influences on Weather and Climate	MS-ESS2-6	ESS2.D (A)	Developing and Using Models	Systems and System Models
	Predicting Weather	MS-ESS2-5	ESS2.D (B)	Planning and Carrying Out Investigations	Cause and Effect
	Ocean's Influence on Weather and Climate	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	Human Dependence on Natural Resources	MS-ESS3-1	ESS3.A (0)	Constructing Explanations and Designing Solutions	Cause and Effect
Natural Hazards	Natural Hazard Predictions	MS-ESS3-2	ESS3.B(0)	Analyzing and Interpreting Data	Patterns
Human Impacts on Earth Systems	Changes to Earth's Environment	MS-ESS3-3	ESS3.C (A)	Constructing Explanations and Designing Solutions	Cause and Effect
	Consumption of Natural Resources	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	Human Activities and Global Climate Change	MS-ESS3-5	ESS3.D (0)	Asking Questions and Defining Problems	Stability and Change