




Component Idea	Scope	Performance Expectation (PE)	Disciplinary Core Idea (DCI)	Science and Engineering Practice(s) (SEP)	Crosscutting Concepts (CCC)
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 ESS1 Earth's Place in the Universe					
Earth and the Solar System	Kepler's Laws	HS-ESS1-4	ESS1.B	Using Mathematics and Computational Thinking	Scale, Proportion, and Quantity
The History of Planet Earth	Earth's Early History	HS-ESS1-6	ESS1.C	Constructing Explanations and Designing Solutions	Stability and Change
The Universe and Its Stars	The Sun	HS-ESS1-1	ESS1.A	Developing and Using Models	Scale, Proportion, and Quantity
	The Stars	HS-ESS1-2 HS-ESS1-3	ESS1.A	Constructing Explanations and Designing Solutions Obtaining, Evaluating, and Communicating Information	Energy and Matter
	The Big Bang Theory	HS-ESS1-2	ESS1.A	Constructing Explanations and Designing Solutions Obtaining, Evaluating, and Communicating Information	Energy and Matter
	The Formation of Elements	HS-ESS1-3	ESS1.A	Obtaining, Evaluating, and Communicating Information	Energy and Matter
The History of Planet Earth	Earth's Formation	HS-ESS1-5	ESS1.C	Engaging in Arguments from Evidence	Patterns

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 ESS2 Earth's Systems					
Earth Materials and Systems:	Earth's Feedback Systems	HS-ESS2-1 HS-ESS2-2	ESS2.A	Developing and Using Models Analyzing and Interpreting Data	Stability and Change
	Modeling Earth's Interior	HS-ESS2-3	ESS2.A	Developing and Using Models	Energy and Matter
	Changes in Climate	HS-ESS2-4	ESS2.A	Developing and Using Models	Cause and Effect
Plate Tectonics and Large-Scale System Interactions	Plate Tectonics and Earth's Features	HS-ESS2-3 HS-ESS2-1	ESS2.B	Developing and Using Models	Energy and Matter Stability and Change
The Role of Water in Earth's Surface Processes	Properties of Water	HS-ESS2-5	ESS2.C	Planning and Carrying Out Investigations	Structure and Function
Biogeology	Earth's Surface and Life	HS-ESS2-7	ESS2.E	Engaging in Arguments from Evidence	Stability and Change
Weather and Climate	Foundations of Earth's Global Climate	HS-ESS2-2 HS-ESS2-4	ESS2.D	Analyzing and Interpreting Data	Stability and Change Cause and Effect
	Rising Carbon Dioxide Concentrations	HS-ESS2-4 HS-ESS2-6	ESS2.D	Developing and Using Models	Cause and Effect Energy and Matter
	Biogeochemical Cycles	HS-ESS2-6 HS-ESS2-7	ESS2.D	Developing and Using Models Engaging in Argument from Evidence	Energy and Matter Stability and Change

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 ESS3 Earth and Human Activity					
Natural Resources	Human Activity and Natural Resources	HS-ESS3-1	ESS3.A	Constructing Explanations and Designing Solutions	Cause and Effect
	Energy and Mineral Resources	HS-ESS3-2	ESS3.A	Engaging in Argument from Evidence	none
Natural Hazards	Natural Hazards	HS-ESS3-1	ESS3.B	Constructing Explanations and Designing Solutions	Cause and Effect
Human Impacts on Earth Systems	Responsible Management of Natural Resources	HS-ESS3-3	ESS3.C	Using Mathematics and Computational Thinking	Stability and Change
	Human Activities and Natural Systems	HS-ESS3-4	ESS3.C	Constructing Explanations and Designing Solutions	Stability and Change
Global Climate Change	Global and Regional Climate Change	HS-ESS3-5	ESS3.D	Analyzing and Interpreting Data	Stability and Change
	Ocean, Atmosphere and Biosphere Interactions	HS-ESS3-6	ESS3.D	Using Mathematics and Computational Thinking	Systems and System Models