

Correlation to Show Compatibility of *Earth Science: Geology, the Environment, and the Universe* with the Next Generation Science Standards Disciplinary Core Ideas

Earth Science: Geology, the Environment, and the Universe provides optimal flexibility for the initial implementation of the Next Generation Science Standards (NGSS) into your curriculum. This correlation to the Disciplinary Core Ideas (DCIs) will help guide and inform your curriculum decisions as you transition the NGSS into your science instruction.

Lesson Title	Disciplinary Core Ideas	Pages
Chapter 1 • The Nature of Science		
1 Earth Science	ESS2.A, ESS2.E	6-9
2 Methods of Scientists		10-16
3 Communication in Science	ESS3.B, ESS3.D	17-27
Chapter 2 • Mapping Out World		
1 Latitude and Longitude	Prerequisite for Earth science content.	30-33
2 Types of Maps	Prerequisite for Earth science content.	34-40
3 Remote Sensing	ESS3.D	41-57
Chapter 3 • Matter and Change		
1 Matter	PS1.A	60-65
2 Combining Matter	PS1.B, ESS2.C	66-72
3 States of Matter	PS1.A, ESS2.C	73-83
Chapter 4 • Minerals		
1 What is a Mineral?	Prerequisite topic for ESS2.A and ESS3.A.	86-95
2 Types of Minerals	Prerequisite topic for ESS2.A and ESS3.A.	96-109
Chapter 5 • Igneous Rocks		
1 What are igneous rocks?	Prerequisite topic for ESS2.A and ESS3.A.	112-117
2 Classification of Igneous Rocks	Prerequisite topic for ESS2.A and ESS3.A.	118-131
Chapter 6 • Sedimentary and Metamorphic Rocks		
1 Formation of Sedimentary Rocks	Prerequisite topic for ESS2.A and ESS3.A.	134-140
2 Types of Sedimentary Rocks	Prerequisite topic for ESS2.A and ESS3.A.	141-147
3 Metamorphic Rocks	Prerequisite topic for ESS2.A and ESS3.A.	148-161

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Chapter 7 • Weathering, Erosion, and Soil

1 Weathering	ESS2.A, ESS2.C	164-170
2 Erosion and Deposition	ESS2.A, ESS2.C	171-175
3 Soil	ESS2.A, ESS2.C, ESS3.C, ESS3.D	176-191

Chapter 8 • Mass Movements, Wind, and Glaciers

1 Mass Movements	ESS2.A, ESS2.C	194-200
2 Wind	ESS2.A	201-206
3 Glaciers	ESS2.A, ESS2.C, ESS3.B	207-221

Chapter 9 • Surface Water

1 Surface Water Movement	ESS2.A, ESS2.C	224-231
2 Stream Development	ESS2.A, ESS2.C	232-237
3 Lakes and Freshwater Wetlands	ESS2.C, ESS3.C	238-249

Chapter 10 • Groundwater

1 Movement and Storage of Groundwater	ESS2.C	252-258
2 Groundwater Weathering and Deposition	ESS2.C	259-262
3 Groundwater Supply	ESS2.C, ESS3.A, ESS3.C, ESS3.D	263-279

Chapter 11 • Atmosphere

1 Atmospheric Basics	ESS2.C, ESS2.D	282-288
2 Properties of the Atmosphere	ESS2.C, ESS2.D	289-296
3 Clouds and Precipitation	ESS2.C, ESS2.D	297-311

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Chapter 12 • Meteorology

1 The Causes of Weather	ESS2.D	314-317
2 Weather Systems	ESS2.D	318-323
3 Gathering Weather Data	This topic is an extension of ESS2.D.	324-328
4 Weather Analysis and Prediction	This topic is an extension of ESS2.D.	329-341

Chapter 13 • The Nature of Storms

1 Thunderstorms	This topic is an extension of ESS2.D.	344-349
2 Severe Weather	This topic is an extension of ESS2.D.	350-354
3 Tropical Storms	This topic is an extension of ESS2.D.	355-360
4 Recurrent Weather	This topic is an extension of ESS2.D.	361-373

Chapter 14 • Climate

1 Defining Climate	ESS2.D	376-380
2 Climate Classification	ESS2.D	381-386
3 Climatic Changes	ESS2.A	387-392
4 Impact of Human Activities	ESS2.A, ESS2.D, ESS3.A, ESS3.D	393-403

Chapter 15 • Earth's Oceans

1 An Overview of Oceans	ESS2.C	406-412
2 Seawater	ESS2.C	313-420
3 Ocean Movements	ESS2.C	421-435

Chapter 16 • The Marine Environment

1 Shoreline Features	ESS2.A	438-446
2 Seafloor Features	ESS2.A	447-465

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Chapter 17 • Plate Tectonics		
1 Drifting Continents	ESS1.C, ESS2.B	468-472
2 Seafloor Spreading	ESS1.C, ESS2.BA, ESS2.B	473-479
3 Plate Boundaries	ESS1.C, ESS2.BA, ESS2.B	480-485
4 Causes of Plate Motions	ESS1.C, ESS2.BA, ESS2.B	486-497
Chapter 18 • Volcanism		
1 Volcanoes	ESS2.A, ESS2.B, ESS3.B	500-507
2 Eruptions	ESS2.A, ESS2.B, ESS3.B	508-513
3 Intrusive Activity	ESS2.A	514-525
Chapter 19 • Earthquakes		
1 Forces Within Earth	ESS2.A, ESS3.B	528-533
2 Seismic Waves and Earth's Interior	ESS2.A	534-538
3 Measuring and Locating Earthquakes	ESS2.B	539-544
4 Earthquakes and Society	ESS3.B	545-559
Chapter 20 • Mountain Building		
1 Crust-Mantle Relationships	ESS2.A	562-566
2 Orogeny	ESS2.B	567-573
3 Other Types of Mountain Building	ESS2.B, ESS3.B	574-587
Chapter 21 • Fossils and the Rock Record		
1 The Rock Record	ESS1.C	590-594
2 Relative-Age Dating	This topic is an extension of ESS1.C.	595-600
3 Absolute-Age Dating	This topic is an extension of ESS1.C and PS1.C	601-605
4 Fossil Remains	This topic is an extension of ESS1.C.	606-617

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Chapter 22 • The Precambrian Earth

1 Early Earth	ESS1.C, ESS2.B	620-622
2 Formation of the Crust and Continents	ESS1.C, ESS2.A	623-627
3 Formation of the Atmosphere and Oceans	ESS1.C, ESS2.D, ESS2.E	628-632
4 Early Life on Earth	ESS2.E	633-645

Chapter 23 • The Paleozoic, Mesozoic, and Cenozoic Eras

1 The Paleozoic Era	ESS2.E	648-654
2 The Mesozoic Era	ESS2.E	655-659
3 The Cenozoic Era	ESS2.E, ESS3.B	660-675

Chapter 24 • Earth Resources

1 Natural Resources	ESS3.A, ESS3.C	678-681
2 Resources from Earth's Crust	ESS3.C	682-686
3 Air Resources	ESS2.D, ESS3.A	687-692
4 Water Resources	ESS2.C, ESS3.A, ESS3.C, ESS3.D	693-705

Chapter 25 • Energy Resources

1 Conventional Energy Resources	ESS3.A	708-713
2 Alternative Energy Resources	ESS3.A, ESS3.C	714-719
3 Conservation of Energy Resources	ESS3.C	720-731

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Chapter 26 • Human Impact on Resources

1 Populations and the Use of Natural Resources	ESS3.A, ESS3.C,	734-736
2 Human Impact on Land Resources	ESS3.A, ESS3.C, ESS3.D	737-742
3 Human Impact on Air Resources	ESS2.D, ESS3.A, ESS3.C, ESS3.D	743-747
4 Human Impact on Water Resources	ESS2.D, ESS3.A, ESS3.C, ESS3.D	748-761

Chapter 27 • The Sun-Earth-Moon System

1 Tools of Astronomy	This topic is a prerequisite for ESS1.A.	764-769
2 The Moon	This topic is a prerequisite for ESS1.B.	770-774
3 The Sun-Earth-Moon System	This topic is a prerequisite for ESS1.B.	775-793

Chapter 28 • Our Solar System

1 Formation of the Solar System	ESS1.B	796-803
2 The Inner Planets	ESS1.B, ESS2.C	804-810
3 The Outer Planets	Ess1.B	811-815
4 Other Solar System Objects	ESS1.B	816-827

Chapter 29 • Stars

1 The Sun	ESS1.A	830-836
2 Measuring the Stars	ESS1.A	837-846
3 Stellar Evolution	ESS1.A	847-859

Chapter 30 • Galaxies and the Universe

1 The Milky Way Galaxy	ESS1.A	862-868
2 Other Galaxies in the Universe	ESS1.A	869-877
3 Cosmology	ESS1.A	878-889