

Unit 4

Essential Question: How do natural events affect our world?

Major Understandings:

PS2.1c Water is recycled by natural processes on Earth.

- evaporation: changing of water (liquid) into water vapor (gas)
- condensation: changing of water vapor (gas) into water (liquid)
- precipitation: rain, sleet, snow, hail
- runoff: water flowing on Earth's surface
- groundwater: water that moves downward into the ground

PS2.1d Erosion and deposition result from the interaction among air, water, and land.

- Interaction between air and water breaks down earth materials
- Pieces of earth material may be moved by air, water, wind, and gravity
- Pieces of earth material will settle or deposit on land or in the water in different places
- Soil is composed of broken-down pieces of living and non-living earth material

PS 2.1e Extreme natural events (floods, fires, earthquakes, volcanic eruptions, hurricanes, tornadoes, and other severe storms) may have positive or negative effects on living things.

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Lesson 1

Objective(s):

- Experiment to see how rocks break down.
- Describe how weathering affects rock.
- Explain how erosion affects rock.

PS 2.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 190B Science Background TE 206 Video Segment 4302 When Minutes Count TE 206	Unit C 6.3 <i>How Do Weathering and Erosion Affect?</i> Assess Prior Knowledge TE 206 Vocabulary TE 208 Investigate TE 207	Investigate Further TE 207 Daily Inquiry TE 206 Inquiry Skill Mini-Lesson TE 207	Curriculum Integration TE 188B

Lesson 2

Objective(s):

- Describe how weathering affects rock.
- Explain how erosion affects rock.

PS 2.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 190B	Unit C 6.3 <i>How Do Weathering and Erosion Affect?</i> Reading in Science TE 208-212 Insta-Lab TE 211	Reaching All Learners <ul style="list-style-type: none"> • Reteach TE 209, 211 • ESL/ESOL TE 212 Reading Review TE 213 Quick Study TE 213 Reading Support and Homework, RS 44, RS 45	Curriculum Integration TE 188B Art – TE 210 Math – TE 212, 213 Writing – TE 213 Social Studies – TE 213

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Lesson 3

Objective(s):

- Compare particle sizes in different types of soil.
- Describe what soil is.
- Explain how soil forms, and how soils differ.

PS 2.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 190B Science Background TE 214 Video Segment 4303 When Minutes Count TE 214	Unit C 6.4 <i>What Is Soil?</i> Assess Prior Knowledge TE 214 Vocabulary TE 216 Investigate TE 215	Investigate Further TE 215 Daily Inquiry TE 214 Inquiry Skill Mini-Lesson TE 215	Curriculum Integration TE 188B

Lesson 4

Objective(s):

- Describe how water changes states.
- Explain how temperature changes the states of matter.

PS 2.1d, PS 2.1e

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 190B Science Background TE 218	Unit C 6.4 <i>What Is Soil?</i> Reading in Science TE 216-220 Insta-Lab TE 219	Reaching All Learners • Challenge TE 219 • ESL/ESOL TE 220 Reading Review TE 221 Quick Study TE 221 Reading Support and Homework, RS 46, RS 47	Curriculum Integration TE 188B Social Studies – TE 217, 221 Writing – TE 221 Math – TE 221

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Lesson 5

Objective(s):

Identify and describe the forces that change Earth’s surface.

PS 2.1e

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 228B Science Background TE 238 Video Segment 4315 When Minutes Count TE 238	Unit C 7.2 <i>What Causes Changes to Earth’s Landforms?</i> Assess Prior Knowledge TE 238 Vocabulary TE 240 Investigate TE 239	Investigate Further TE 239 Daily Inquiry TE 238 Inquiry Skill Mini-Lesson TE 239	Curriculum Integration TE 188B

Lesson 6

Objective(s):

Identify and describe the forces that change Earth’s surface.

PS 2.1e

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 228B Science Background TE 243, 245	Unit C 7.2 <i>What Causes Changes to Earth’s Landforms?</i> Reading in Science TE 240-246 Insta-Lab TE 241	Reaching All Learners <ul style="list-style-type: none"> • Challenge TE 241 • Reteach TE 242 • ESL/ESOL TE 246 Reading Review TE 247 Quick Study TE 247 Reading Support and Homework, RS 51, RS 52	Curriculum Integration TE 188B Art – TE 244, 247 Writing – TE 247 Math – TE 247

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Lesson 7

Objective(s):

- Describe how scientists are trying to save the Great Sphinx and the pyramids.
- Discuss what we can learn from evaluating the color of soil.

PS 2.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Science Background TE 222, 224	Science Spin TE 222-223 Science Spin TE 224	Science Projects TE 225	Curriculum Integration TE 188B Writing – TE 223

Unit of Study Objective:

Describe and illustrate the natural processes, by which water is recycled on earth (i.e., ground water and runoff).

Lesson 8

Objective(s):

- Describe the water cycle.
- Understand how precipitation forms.

PS 2.1c

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 264B Science Background TE 264, 266 Video Segment 4304 When Minutes Count TE 266	Unit D 8.1 <i>What Is the Water Cycle?</i> Assess Prior Knowledge TE 264 Vocabulary TE 268 Investigate TE 267	Reaching All Learners • ESL/ESOL TE 265 Investigate Further TE 267 Daily Inquiry TE 266 Inquiry Skill Mini-Lesson TE 267	Curriculum Integration TE 262B

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Lesson 9

Objective(s):

- Describe the water cycle.
- Understand how precipitation forms.

PS 2.1c

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 264B Science Background TE 271	Unit D 8.1 <i>What Is the Water Cycle?</i> Reading in Science TE 268-272 Insta-Lab TE 271	Reaching All Learners • Reteach TE 269, 270 • ESL/ESOL TE 272 Reading Review TE 273 Quick Study TE 273 Reading Support and Homework, RS 57, RS 58	Curriculum Integration TE 262B Math – TE 273 Writing – TE 273 Social Studies – TE 273

Lesson 10

Objective(s):

Demonstrate how a flood can occur.

PS 2.1c, PS 2.1e

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 264B Science Background TE 274 Video Segment 4305 When Minutes Count TE 274	Unit D 8.2 <i>How Is The Weather Cycle Related to Weather?</i> Assess Prior Knowledge TE 274 Vocabulary TE 276 Investigate TE 275	Investigate Further TE 275 Daily Inquiry TE 274 Inquiry Skill Mini-Lesson TE 275	Curriculum Integration TE 262B

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Lesson 11

Objective(s):

Describe different kinds of precipitation.

PS 2.1c, PS 2.1e

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 264B	<p>Unit D 8.2 <i>How Is The Weather Cycle Related to Weather?</i> Reading in Science TE 276-280 Insta-Lab TE 279</p>	<p>Reaching All Learners</p> <ul style="list-style-type: none"> • Enrichment TE 278 • Challenge TE 280 <p>Reading Review TE 281 Quick Study TE 281 Reading Support and Homework, RS 59, RS 60</p>	<p>Curriculum Integration TE 262B Art – TE 277 Math – TE 278, 281 Writing – TE 281 Health – TE 281</p>

Lesson 12

Objective(s):

- Describe how temperature affects the water cycle.
- Describe how landforms affect the water cycle.

PS 2.1c

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
<p>Plan Ahead for Activities TE 264B Science Background TE 282 Video Segment 4306 When Minutes Count TE 282</p>	<p>Unit D 8.3 <i>How Do Land Features Influence the Water Cycle?</i> Assess Prior Knowledge TE 282 Vocabulary TE 284 Investigate TE 283</p>	<p>Investigate Further TE 283 Daily Inquiry TE 282 Inquiry Skill Mini-Lesson TE 283</p>	<p>Curriculum Integration TE 262B</p>

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Lesson 13

Objective(s):

- Describe how temperature affects the water cycle.
- Describe how landforms affect the water cycle.

PS 2.1c, PS 2.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 264B Science Background TE 285	Unit D 8.3 <i>How Do Land Features Influence the Water Cycle?</i> Reading in Science TE 284-286 Insta-Lab TE 286	Reaching All Learners • ESL/ESOL TE 286 Reading Review TE 287 Quick Study TE 287 Reading Support and Homework, RS 61, RS 62	Curriculum Integration TE 262B Writing- TE 287 Math- TE 287 PE- TE 287

Unit of Study Objective:

Research the negative and positive impact of extreme natural events on living things:

- Earthquakes
- Volcanoes
- Hurricanes
- Tornadoes
- Floods
- Fires

Lesson 14

Objective(s):

PS 2.1e

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Additional Resources at www.hpscience.com Science Up Close Science Spin	Unit D 8.2 How Is The Weather Cycle Related to Weather? Unit Experiment TE 190 Reading in Science TE 243, 258, 274, 298 Investigate TE 275 Insta-Lab TE 279	Leveled Readers • Earthquake Extreme Weather	