

Unit 1**Essential Question: What Materials Make Up the Earth?****Major Understandings:**

- LE 1.1d** Non-living things can be human-created or naturally occurring.
- PS 2.1d** Erosion and deposition result from the interaction among air, water and land.
- PS 3.1b** Matter has properties (color, hardness, odor, sound, taste, etc.) that can be observed through the senses.
- PS 3.1c** Objects have properties that can be observed, described, and/or measured: length, width, volume, size, shape, mass or weight, temperature, texture, flexibility, reflectiveness of light.
- PS 3.1d** Measurements can be made with standard metric units.
- PS 3.1e** The material(s) an object is made up of determine some specific properties of the object (sink/float). Properties can be observed or measured with tools such as hand lenses, metric rulers, thermometers, balances, magnets, circuit testers, and graduated cylinders.
- PS 3.1f** Objects and/or materials can be sorted or classified according to their properties.
- PS 3.1g** Some properties of an object are dependent on the conditions of the present surroundings in which the object exists. For example: temperature, lighting, moisture,

*Unit One also addresses the Process Skills as outlined in the NYC Science Scope and Sequence

Grade 2

Lesson 1 – What Inquiry Skills Will We Use?

Objective(s):

- To use senses to observe.
- To understand that people use science processes to solve problems.
- To analyze information to make predictions.
- To know the difference between observation and personal interpretation.

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE viiiB Science Background TE viii, 2 Video Segment 0200 When Minutes Count TE 2	Ready, Set, Science 1 Assess Prior Knowledge TE 2 Investigate TE 3	Investigate Further TE 3, LM 14 Daily Inquiry TE 2, DI 1 Inquiry Skill Mini-Lesson TE 3, IS 1 ESOL TE 1	

Lesson 2 – What Inquiry Skills Will We Use?

Objective(s):

- To use senses to observe.
- To understand that people use science processes to solve problems.
- To analyze information to make predictions.
- To know the difference between observation and personal interpretation.

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	Ready, Set, Science 1 Reading in Science TE 4-9 Insta-Lab TE 7		Curriculum Integration Writing Link – TE 9

Grade 2

Lesson 3 – What Is The Scientific Method?**Objective(s):**

- To analyze information to make predictions.
- To use tools to measure.
- To know ways in which tools are used by scientists.

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE viiiB Science Background TE 10 Video Segment 0201 When Minutes Count TE 10	Ready, Set, Science 2 Assess Prior Knowledge TE 10 Investigate TE 11	Investigate Further TE 11, LM 16 Daily Inquiry TE 10, DI 2 Inquiry Skill Mini-Lesson TE 11, IS 2	

Lesson 4 – How Do We Use Inquiry Skills?**Objective(s):**

- To analyze information to make predictions.
- To use tools to measure.
- To know ways in which tools are used by scientists.

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	Ready, Set, Science 2 Reading in Science TE 10-17 Insta-Lab TE 16	Reading Review TE 17	Curriculum Integration Math – TE 17

Grade 2

Lesson 5 – How Do Scientists Work?

Objective(s):

- To participate in groups to conduct experiments.
- To understand that people use science processes to solve problems.
- To analyze information to draw conclusions using information and prior knowledge.

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE viiiB Video Segment 0202 When Minutes Count TE 18	Ready, Set, Science 3 Assess Prior Knowledge TE 18 Investigate TE 19	Investigate Further TE 19, LM 18 Daily Inquiry TE 18, DI 3 Inquiry Skill Mini-Lesson TE 19, IS 3	

Lesson 6 – How Do Scientists Work?

Objective(s):

- To participate in groups to conduct experiments.
- To understand that people use science processes to solve problems.
- To analyze information to draw conclusions using information and prior knowledge.

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	Ready, Set, Science 3 Reading in Science TE 20-23 Insta-Lab TE 21	Reaching Review TE 23	Curriculum Integration Art – TE 23

Grade 2

Lesson 7 – Animal Coverings

Objective(s):

- To promote scientific inquiry.
- To use a scientific method to plan and conduct a long-term investigation.
- To design an experiment to learn how body coverings help animals live where they do.

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Science Background TE 27a Preparation TE 27a-27b	Unit 1 Experiment Experiment Lesson Plan TE 27a-27b	Options for Inquiry TE 27a	

Lesson 8 – What Are Living and Nonliving Things?

Objective(s):

- To classify things as living and nonliving.
- To explain that living things all need food, water, and air.

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 28B Science Background TE 28 Video Segment 1600 When Minutes Count TE 30	Unit 1, 1.1 Assess Prior Knowledge TE 28 Investigate TE 31	Investigate Further TE 31, LM 24 Daily Inquiry TE 30, DI 4 Inquiry Skill Mini-Lesson TE 31, IS 4	

Grade 2

Lesson 9 – What Changes the Earth’s Surface?

Objective(s):

- To use a hand lens to observe changes to matter.
- To identify causes and effects to changes to Earth’s surface.
- To describe features of Earth’s surface.

PS 2.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Science Background TE 32	Unit 1, 1.1 Reading in Science TE 32-37 Insta-Lab TE 35 Transparencies RS 4	Reaching All Learners <ul style="list-style-type: none"> • Reteach TE 28C • On-Level TE 28C • Challenge TE 28C, 33 • ESL 28D, 36 Reading Review TE 37 Reading Support & Homework 37, RS 5-6	Curriculum Integration Writing – TE 37 Social Studies – TE 34

Lesson 10 – What Are Rocks, Sand, and Soil?

Objective(s):

- To draw conclusions about the hardness of rocks.
- To recognize that Earth’s surface is made up of different solid materials.

PS 2.1d, PS 3.1b, c, d, e, f, g

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 28B Science Background TE 38 Video Segment 2301 When Minutes Count TE 38	Unit 1, 1.2 Access Prior Knowledge TE 38 Investigate TE 39	Investigate Further TE 39, LM 26 Daily Inquiry TE 38 DI 5 Inquiry Skill Mini-Lesson TE 39, IS 5	

Grade 2

Lesson 11 – What Are Rocks, Sand, and Soil?

Objective(s):

- To draw conclusions about the hardness of rocks.
- To recognize that Earth’s surface is made up of different solid materials.

PS 2.1d, PS 3.1b, c, d, e, f, g

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	<p>Unit 1, 1.2 Reading in Science TE 40 Insta-Lab TE 43</p>	<p>Reaching All Learners • Challenge TE 43, 42 • ESL/ESOL TE 40 Reading Review TE 45, RS 7-8</p>	<p>Curriculum Integration Writing – TE 41 Math – TE 45 Physical Education – TE 44</p>

Lesson 12 – How Can We Learn From Fossils?

Objective(s):

- To communicate how tools can help people obtain information and make work easier.
- To explain what can be learned from fossils.
- To describe how fossils are formed.

PS 3.1b, c, d, e

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
<p>Plan Ahead for Activities TE 28B Video Segment 1601 When Minutes Count TE 36</p>	<p>Unit 1, 1.3 Assess Prior Knowledge TE 46 Investigate TE 47</p>	<p>Investigate Further TE 47, LM 28 Daily Inquiry TE 46, DI 6 Inquiry Skill Mini-Lesson TE 37, IS 6</p>	

Grade 2

Lesson 13 – What Can We Learn From Fossils?

Objective(s):

- To communicate how tools can help people obtain information and make work easier.
- To explain what can be learned from fossils.
- To describe how fossils are formed.

PS 3.1b, c, d, e

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	<p>Unit 1, 1.3 Reading in Science TE 44-49 Insta-Lab TE 48</p>	<p>Reaching All Learners</p> <ul style="list-style-type: none"> • ESL/ESOL TE 48 • Reteach TE 46 <p>Reading Review TE 49 Reading Support & Homework RS 9-10</p>	<p>Curriculum Integration Social Studies – TE 45 Art – TE 44, 49 Writing – TE 47</p>

Lesson 14 – How Can People Use Natural Resources?

Objective(s):

- To draw conclusions about the way natural resources are used.
- To identify air, water, rocks, soil, plants, and animals as natural resources.
- To describe ways people use natural resources.

PS 2.1d, PS 3.1b, c, d, e, f, g

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
<p>Plan Ahead for Activities TE 28B Video Segment 1603 When Minutes Count TE 50</p>	<p>Unit 1, 2.1 Assess Prior Knowledge TE 50 Investigate TE 51</p>	<p>Investigate Further TE 51, LM 30 Daily Inquiry TE 50, DI 7 Inquiry Skill Mini-Lesson TE 51, IS 7</p>	

Grade 2

Lesson 15 – How Can People Use Natural Resources?**Objective(s):**

- To draw conclusions about the way natural resources are used.
- To identify air, water, rocks, soil, plants, and animals as natural resources.
- To describe ways people use natural resources.

PS 2.1d, PS 3.1b, c, d, e, f, g

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Science Background: TE 68	Unit 1, 2.1 Reading in Science TE 64-71 Transparency: RS 7 Insta-Lab: TE 69	Reaching All Learners <ul style="list-style-type: none"> • Reteach TE 60C, 70 • On-Level TE 60C • Challenge TE 60C, 65 • ESL TE 60D, 66 Reading Review TE 71 Reading Support & Homework 71, RS 12-13	Curriculum Integration Math – TE 69 Writing – TE 71 Art – TE 67

Lesson 16 – How Can People Harm Natural Resources?**Objective(s):**

- To observe how objects decompose.
- To describe the causes and effects of pollution.
- To identify ways that resources are wasted.
- To know ways people can cause positive and negative changes to the environment.

LE 1.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 60B Science Background TE 72 Video Segment 2304	Unit 1, 2.2 Assess Prior Knowledge TE 72 Investigate TE 73	Investigate Further TE 73, LM 32 Daily Inquiry TE 72 DI 8 Inquiry Skill Mini-Lesson TE 73, IS 8	

Grade 2

Lesson 17 – How Can People Harm Natural Resources?**Objective(s):**

- To observe how objects decompose.
- To describe the causes and effects of pollution.
- To identify ways that resources are wasted.
- To know ways people can cause positive and negative changes to the environment.

LE 1.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	Unit 1, 2.2 Reading in Science TE 52-57 Transparency: RS 7 Insta-Lab: TE 55	Reaching All Learners <ul style="list-style-type: none"> • Challenge TE 74, 77 • ESL TE 78 Reading Review TE 79 Reading Support & Homework 14-15	Curriculum Integration Writing – TE 75 Math – TE 76, 79

Lesson 18 – How Can People Protect Natural Resources?**Objective(s):**

- To plan an investigation to make something useful from used things.
- To identify ways to protect natural resources.
- To know ways people can cause positive changes to the environment.

LE 1.1d, LE 2.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 60B Science Background TE 80 Video Segment 2305 When Minutes Count TE 80	Unit 1, 2.3 Assess Prior Knowledge TE 80 Investigate TE 81	Investigate Further TE 80, LM 34 Daily Inquiry TE, DI 9 Inquiry Skill Mini-Lesson TE 81, IS 9	

Grade 2

Lesson 19 – How Can People Harm Natural Resources?**Objective(s):**

- To plan an investigation to make something useful from used things.
- To identify ways to protect natural resources.
- To know ways people can cause positive changes to the environment.

LE 1.1d, LE 2.1d

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	Unit 1, 2.3 Reading in Science TE 82-87 Insta-Lab: TE 83	Reaching All Learners <ul style="list-style-type: none"> • Challenge TE 84 • ESL TE 83 Reading Review TE 87 Reading Support & Homework 16-17	Curriculum Integration Writing – TE 85 Social Studies – TE 86 Art – TE 87