

SUGGESTED PACING	
<p>STRAND: EARTH AND SPACE SCIENCE (ESS) Topic: Earth's Surface This topic focuses on the variety of processes that shape and reshape Earth's surface. Content Statements:</p> <ul style="list-style-type: none"> • The surface of Earth changes due to erosion and deposition. • Water, wind and ice physically remove and carry (erosion) rock, soil and sediment and deposit the material in a new location. • Gravitational force affects movements of water, rock and soil. 	
PRINT RESOURCES	DIGITAL RESOURCES
<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 3, Lessons 2 and 4 • Unit 3, TE pages 123A-138A, 157A-160 • Unit 3, Inquiry Flip Chart page 17-21 • Science and Engineering Leveled Readers: <ul style="list-style-type: none"> ○ On-Level/Below Level: <i>Earth's Changing Surface & Natural Resources</i> ○ Above Level: <i>Conserving Earth's Resources</i> 	<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 3, Lesson 2 Digital Lesson with Virtual Lab • Unit 3, Lesson 4 Digital Lesson with Virtual Lab
SCIENCE AND ACADEMIC VOCABULARY	
<p>Deposition, Erosion, Sediment, Weathering</p>	
DIFFERENTIATION	FIELD EXPERIENCE CONNECTIONS
<p>Basic (Extra Support)</p> <ul style="list-style-type: none"> • Unit 3 Response to Intervention - TE page 107I • Unit 3 TE pages 127, 129, 133 <p>Advanced (Enrichment)</p> <ul style="list-style-type: none"> • Unit 3 TE pages 127, 129, 133 • Unit 3 STEM - Flipchart page 20, TE pages 107G, 155-156B <p>English Language Learners</p> <ul style="list-style-type: none"> • Unit 3 TE pages 107J-107K, 126, 130 	<p>Greater Cleveland Aquarium's N.E.M.O: Nurturing the Environment by Maintaining Ohio Program.</p> <p>Program details: Aquatic animal adaptation investigation. Use STEM design to build a model fish to live in a specific habitat, Predict how environmental changes may affect fish. To prepare in advance-attend two professional development sessions to receive Classroom Aquarium and a flash drive with year-long curriculum connections.</p> <p>For information contact: Ray Patacca & Erin Bauer 216-862-8803 x7703 or education@greaterclevelandaquarium.com</p>
INQUIRY SKILLS	
<ul style="list-style-type: none"> • Draw Conclusions • Experiment • Formulate or Use Models 	<ul style="list-style-type: none"> • Infer • Plan and Conduct a Simple Investigation
<ul style="list-style-type: none"> • Predict • Use Models 	
HANDS-ON INQUIRY AND APPLICATION	
<ul style="list-style-type: none"> • "Grooving with Glaciers" (Flipchart page 18, TE pages 107E, 123A) • "Which Will Weather Faster?" (Flipchart page 18, TE pages 107E, 123A) • "How Does Water Change Earth's Surface?" (Flipchart page 21, TE pages 107G, 157A-160) 	<p><i>Differentiated Inquiry</i></p> <ul style="list-style-type: none"> • Unit 3, TE page 158A <ul style="list-style-type: none"> ○ Test Variables Affecting Erosion (Easy) ○ Model How Ice Can Break Rocks (Easy) ○ Model Soil Conservation Techniques (Average) • Modeling the Dust Bowl (Challenging)
ASSESSMENTS/PROGRESS MONITORING	ASSESSMENT GUIDE
<ul style="list-style-type: none"> • Sum it Up <ul style="list-style-type: none"> ○ Unit 3, Lesson 2 - SE page 134, TE page 134 • Brain Check and Apply Concepts <ul style="list-style-type: none"> ○ Unit 3, Lesson 2 - SE pages 135-138, TE pages 135-138 	<ul style="list-style-type: none"> • Lesson Quiz <ul style="list-style-type: none"> ○ Unit 3, Lesson 2 - page AG 26 ○ Unit 3, Lesson 4 - page AG 28

ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: ELA

Journeys

- Writing Connection - TE page 125
- Writing Connection - TE page 131
- Make Connections - TE page 138A
 - Writing Connection - The Story of Sediment (Challenging)
- Writing Connection - TE page 159

Journeys Connections:

- Lesson 6, Whole Group - Read Aloud - The Tunguska Event (T13)
- Lesson 11, Whole Group - Anchor Text - Hurricanes: Earth's Mightiest Storms (T27)
- Lesson 11, Whole Group - Newspaper Article - Recovering from Katrina (T39)
- Lesson 11, Small Group - Vocabulary Reader - Tornadoes (T63)
- Lesson 11, Small Group - On Level Reader - Tsunami (T67)
- Lesson 11, Small Group - ELL Reader - The Big, Dangerous Wave (T69)
- Lesson 12, Whole Group - Anchor Text - The Earth Dragon Awakes (T103)
- Lesson 12, Whole Group - Informational Text - Twisters (T113)
- Lesson 24, Small Group - Vocabulary Reader - Dangerous Waves (T293)
- Lesson 28, Whole Group - Photo Essay - Making the Most from Trash (T117)

ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: MATH

Math Expressions

- Math Connection - TE page 128
- Math Expressions Connections:
 - Unit 5 Lesson 1: Measuring Length MX TE pages 451-458
 - Unit 5 Lesson 4: Customary Measures of Length MX TE pages 475-480
 - Unit 7 Lesson 10: Compare Decimals to Hundredths MX TE pages 673-682
- Math Connection - TE page 132
- Math Expressions Connections:
 - Unit 5 Lesson 1: Measuring Length MX TE pages 451-458
 - Unit 5 Lesson 3: Units of Time MX TE pages 467-474
 - Unit 5 Lesson 4: Customary Measures of Length MX TE pages 475-480
 - Unit 5 Lesson 7: Solve Measurement Problems MX TE pages 497-502
 - Unit 5 Lesson 8: Focus on Mathematical Practices MX TE pages 503-508
- Make Connections - TE page 138A
- Math Connection - Solve a Word Problem (Average)
- Math Expressions Connections:
 - Unit 1 Lesson 7: Add Greater Numbers MX TE pages 55-60
 - Unit 1 Lesson 11: Subtract Greater Numbers MX TE pages 83-90
 - Unit 1 Lesson 12: Practice Addition and Subtraction MX TE pages 91-96
 - Unit 1 Lesson 13: Problem Solving with Greater Numbers MX TE pages 97-104
 - Unit 1 Lesson 14: Focus on Mathematical Practices MX TE pages 105-110
 - Unit 2 Lesson 4: Model One-Digit by Two-Digit Multiplication MX TE pages 139-140
 - Unit 2 Lesson 10: One-Digit by Three-Digit Multiplication MX TE page 186
 - Unit 2 Lesson 11: Multistep Word Problems MX TE pages 189-198
 - Unit 2 Lesson 15: Practice Multiplication MX TE pages 223-230
 - Unit 3 Lesson 3: Discuss 2-Digit and 4-Digit Quotients MX TE pages 285-294
 - Unit 3 Lesson 4: Digit-by-Digit Method MX TE pages 295-302
 - Unit 3 Lesson 6: Divide by Any Method MX TE pages 313-318
 - Unit 3 Lesson 10: Mixed Problem Solving MX TE pages 339-344
 - Unit 3 Lesson 11: Focus on Mathematical Practices MX TE pages 345-350
 - Unit 4 Lesson 8: Solve Multistep Problems MX TE page 414

SUGGESTED PACING	
<p>STRAND: LIFE SCIENCE (LS) Topic: Earth's Living History This topic focuses on using fossil evidence and living organisms to observe that suitable habitats depend upon a combination of biotic and abiotic factors. Content Statements:</p> <ul style="list-style-type: none"> • Changes in an organism's environment are sometimes beneficial to its survival and sometimes harmful. • Ecosystems can change gradually or dramatically. When the environment changes, some plants and animals survive and reproduce and others die or move to new locations. An animal's patterns of behavior are related to the environment. This includes the kinds and numbers of other organisms present, the availability of food and resources, and the physical attributes of the environment. 	
PRINT RESOURCES	DIGITAL RESOURCES
<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 4, Lessons 3 and 4 • Unit 4, TE pages 183A-206B • Unit 4, Inquiry Flip Chart pages 24-26 • Unit 4, Science and Engineering Levelled Readers: <ul style="list-style-type: none"> ○ On -Level/Below Level: <i>How Do Organisms Interact With Their Environment?</i> ○ Above Level: <i>Tiger Sharks in the Seagrass</i> • Unit 5, Lesson 2 • Unit 5, TE pages 225A-242A • Unit 5, Inquiry Flip Chart page 29 	<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 4, Lesson 3 Digital Lesson • Unit 4, Lesson 4 Digital Lesson with Virtual Lab • Unit 5, Lesson 2 Digital Lesson
	SCIENCE AND ACADEMIC VOCABULARY
	<p>Extinction, Succession</p>
DIFFERENTIATION	FIELD EXPERIENCE CONNECTIONS
<p>Basic (Extra Support)</p> <ul style="list-style-type: none"> • Unit 4 Response to Intervention - TE page 165I • Unit 4 TE pages 186, 189, 191, 193, 194 • Unit 5 Response to Intervention - TE page 211I • Unit 5 TE pages 231, 233, 235 <p>Advanced (Enrichment)</p> <ul style="list-style-type: none"> • Unit 4 TE pages 186, 189, 191, 193, 194 • Unit 4 STEM - Flipchart page , TE pages • Unit 5 TE pages 231, 233, 235 • Unit 5 STEM - Flipchart page 28, TE pages 211E, 223-224B <p>English Language Learners</p> <ul style="list-style-type: none"> • Unit 4 TE pages 165J-165K, 184, • Unit 5 TE pages 211J-211K, 228, 232, 234 	<p>Greater Cleveland Aquarium's N.E.M.O: Nurturing the Environment by Maintaining Ohio Program.</p> <p>Program details: Aquatic animal adaptation investigation. Use STEM design to build a model fish to live in a specific habitat, Predict how environmental changes may affect fish. To prepare in advance-attend two professional development sessions to receive Classroom Aquarium and a flash drive with year-long curriculum connections.</p> <p>For information contact: Ray Patacca & Erin Bauer 216-862-8803 x7703 or education@greaterclevelandaquarium.com</p>
INQUIRY SKILLS	
<ul style="list-style-type: none"> • Compare • Draw Conclusions • Gather Data • Hypothesize • Identify and Control Variables • Observe • Plan and Conduct a Simple Investigation • Record Data 	
HANDS-ON INQUIRY AND APPLICATION	
<ul style="list-style-type: none"> • "Hunting for Beans" (Flipchart page 24, TE pages 165F, 183A) • "Compost in a Bag" (Flipchart page 24, TE pages 165F, 183A) • "How Does Drought Affect Plants?" (Flipchart page 25, TE pages 165G, 203A-204A) • "Footprints in the Sand" (Flipchart page 29, TE pages 211F, 225A) • "A Place for a Vacation?" (Flipchart page 29, TE pages 211F, 225A) 	<p><i>Differentiated Inquiry</i></p> <ul style="list-style-type: none"> • Unit 4, TE page 204A <ul style="list-style-type: none"> ○ Control Variables (Easy) ○ Display Data on a Graph (Easy) ○ Investigate Water Conservation (Average) ○ Design an Experiment (Challenging)

ASSESSMENTS/PROGRESS MONITORING	ASSESSMENT GUIDE
<ul style="list-style-type: none"> • Sum it Up <ul style="list-style-type: none"> ○ Unit 4, Lesson 3 - SE page 196, TE page 196 ○ Unit 5, Lesson 2 - SE page 236, TE page 236 • Brain Check and Apply Concepts <ul style="list-style-type: none"> ○ Unit 4, Lesson 3 - SE pages 325-328, TE pages 325-328 ○ Unit 5, Lesson 2 - SE pages 197-200, TE pages 197-200 	<ul style="list-style-type: none"> • Lesson Quiz <ul style="list-style-type: none"> ○ Unit 4, Lesson 3 - page AG 70 ○ Unit 4, Lesson 4 - page AG 71 ○ Unit 5, Lesson 2 - page AG 48
ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: ELA	
<p>Journeys</p> <ul style="list-style-type: none"> • Writing Connection - TE page 187 • Writing Connection - TE page 188 • Writing Connection - TE page 192 • Make Connections - TE page 200A <ul style="list-style-type: none"> ○ Writing Connection - Write a Persuasive Letter (Easy) ○ Language Arts Connection - Determine Word Origins (Average) • Writing Connection - TE page 201 • Writing Connection - TE page 227 • Writing Connection - TE page 230 • Make Connections - TE page 240A <ul style="list-style-type: none"> ○ Writing Connection - Explain How Scientists Work (Average) • Writing Connection - TE page 241 	
ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: MATH	
<p>Math Expressions</p> <ul style="list-style-type: none"> • Math Connection - TE page 185 • <i>Math Expressions Connections:</i> <ul style="list-style-type: none"> ○ Unit 1 Lesson 6: Make New Groups for Addition MX TE pages 45-54 ○ Unit 1 Lesson 7: Add Greater Numbers MX TE pages 55-60 ○ Unit 1 Lesson 8: Estimation and Mental Math MX TE pages 61-68 ○ Unit 1 Lesson 9: Subtract from Thousands MX TE pages 69-76 ○ Unit 1 Lesson 11: Subtract Greater Numbers MX TE pages 83-90 ○ Unit 1 Lesson 12: Practice Addition and Subtraction MX TE pages 91-96 ○ Unit 1 Lesson 13: Problem Solving with Greater Numbers MX TE pages 97-104 ○ Unit 1 Lesson 14: Focus on Mathematical Practices MX TE pages 105-110 • Math Connection - TE page 190 • <i>Math Expressions Connections:</i> <ul style="list-style-type: none"> ○ Unit 1 Lesson 7: Add Greater Numbers MX TE pages 55-60 ○ Unit 1 Lesson 11: Subtract Greater Numbers MX TE pages 83-90 ○ Unit 1 Lesson 12: Practice Addition and Subtraction MX TE pages 91-96 ○ Unit 1 Lesson 13: Problem Solving with Greater Numbers MX TE pages 97-104 ○ Unit 1 Lesson 14: Focus on Mathematical Practices MX TE pages 105-110 ○ Unit 2 Lesson 4: Model One-Digit by Two-Digit Multiplication MX TE pages 139-140 ○ Unit 2 Lesson 10: One-Digit by Three-Digit Multiplication MX TE page 186 ○ Unit 2 Lesson 11: Multistep Word Problems MX TE pages 189-198 ○ Unit 2 Lesson 15: Practice Multiplication MX TE pages 223-230 ○ Unit 3 Lesson 3: Discuss 2-Digit and 4-Digit Quotients MX TE pages 285-294 ○ Unit 3 Lesson 4: Digit-by-Digit Method MX TE pages 295-302 ○ Unit 3 Lesson 6: Divide by Any Method MX TE pages 313-318 ○ Unit 3 Lesson 10: Mixed Problem Solving MX TE pages 339-344 ○ Unit 3 Lesson 11: Focus on Mathematical Practices MX TE pages 345-350 ○ Unit 4 Lesson 8: Solve Multistep Problems MX TE page 414 • Math Connection - TE page 195 • <i>Math Expressions Connections:</i> <ul style="list-style-type: none"> ○ Unit 5 Lesson 1: Measuring Length MX TE pages 451-458 ○ Unit 5 Lesson 7: Solve Measurement Problems MX TE pages 497-502 ○ Unit 5 Lesson 8: Focus on Mathematical Practices MX TE pages 503-508 • Math Connection - TE page 226 • <i>Math Expressions Connections:</i> <ul style="list-style-type: none"> ○ Unit 2 Lesson 4: Model One-Digit by Two-Digit Multiplication MX TE pages 139-140 ○ Unit 2 Lesson 10: One-Digit by Three-Digit Multiplication MX TE page 186 ○ Unit 4 Lesson 8: Solve Multistep Problems MX TE page 414 • Math Connection - TE page 229 	

SUGGESTED PACING	
<p>STRAND: LIFE SCIENCE (LS) Topic: Earth's Living History This topic focuses on using fossil evidence and living organisms to observe that suitable habitats depend upon a combination of biotic and abiotic factors. Content Statements:</p> <ul style="list-style-type: none"> Fossils can be compared to one another and to present-day organisms according to their similarities and differences. The concept of biodiversity is expanded to include different classification schemes based upon shared internal and external characteristics of organisms. Most types of organisms that have lived on Earth no longer exist. Fossils provide a point of comparison between the types of organisms that lived long ago and those existing today. 	
PRINT RESOURCES	DIGITAL RESOURCES
<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> Unit 5, All Lessons Unit 5, TE pages 213A-248A Unit 5, Inquiry Flip Chart page 27-30 	<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> Unit 5, Lesson 1 Digital Lesson Unit 5, Lesson 2 Digital Lesson Unit 5, Lesson 3 Digital Lesson with Virtual Lab
	SCIENCE AND ACADEMIC VOCABULARY
	Cast, Fossil, Index Fossil, Mass Extinction, Mold
DIFFERENTIATION	FIELD EXPERIENCE CONNECTIONS
<p>Basic (Extra Support)</p> <ul style="list-style-type: none"> Unit 5 Response to Intervention - TE page 211I Unit 5 TE pages 215, 217, 231, 233, 235 <p>Advanced (Enrichment)</p> <ul style="list-style-type: none"> Unit 5 TE pages 215, 217, 231, 233, 235 Unit 5 STEM - Flipchart page 28, TE pages 211E, 223-224B <p>English Language Learners</p> <ul style="list-style-type: none"> Unit 5 TE pages 211J-211K, 214, 218, 228, 232, 234 	<p>Greater Cleveland Aquarium's N.E.M.O: Nurturing the Environment by Maintaining Ohio Program.</p> <p>Program details: Aquatic animal adaptation investigation. Use STEM design to build a model fish to live in a specific habitat, Predict how environmental changes may affect fish. To prepare in advance-attend two professional development sessions to receive Classroom Aquarium and a flash drive with year-long curriculum connections.</p> <p>For information contact: Ray Patacca & Erin Bauer 216-862-8803 x7703 or education@greaterclevelandaquarium.com</p>
INQUIRY SKILLS	
<ul style="list-style-type: none"> Classify/Order Communicate Compare 	<ul style="list-style-type: none"> Draw Conclusions Formulate or Use Models Gather, Record, Display or Interpret Data
<ul style="list-style-type: none"> Infer Observe 	
HANDS-ON INQUIRY AND APPLICATION	
<ul style="list-style-type: none"> "What Made It?" (Flipchart page 27, TE pages 211D, 213A) "Comparing Fossils" (Flipchart page 27, TE pages 211D, 213A) "Footprints in the Sand" (Flipchart page 29, TE pages 211F, 225A) "A Place for a Vacation?" (Flipchart page 29, TE pages 211F, 225A) "How Can Scientists Use Fossils?" (Flipchart page 30, TE pages 211G, 243A-244A) 	<p><i>Differentiated Inquiry</i></p> <ul style="list-style-type: none"> Unit 5, TE page 244A <ul style="list-style-type: none"> Identify Fossil Types (Easy) Determining the Age of Rocks (Average) Match Rock Layers (Average) Draw a Conclusion (Challenging)
ASSESSMENTS/PROGRESS MONITORING	ASSESSMENT GUIDE
<ul style="list-style-type: none"> Sum it Up <ul style="list-style-type: none"> Unit 5, Lesson 1 - SE page 220, TE page 220 Unit 5, Lesson 2 - SE page 236, TE page 236 Brain Check and Apply Concepts <ul style="list-style-type: none"> Unit 5, Lesson 1 - SE pages 221-222, TE pages 221-222 Unit 5, Lesson 2 - SE pages 237-240, TE pages 237-240 Unit 5 Review - TE pages 245A-248 Unit 5 Short Option Performance Assessment - TE page 247 	<ul style="list-style-type: none"> Lesson Quiz <ul style="list-style-type: none"> Unit 5, Lesson 1 - page AG 47 Unit 5, Lesson 2 - page AG 48 Unit 5, Lesson 3 - page AG 49 Unit 5 Test and Performance Task with Long Option Rubric - pages AG 50-AG 55

ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: ELA

Journeys

- Writing Connection - TE page 216
- Writing Connection - TE page 227
- Writing Connection - TE page 230
- Make Connections - TE page 240A
 - Writing Connection - Explain How Scientists Work (Average)
- Writing Connection - TE page 241

ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: MATH

Math Expressions

- Math Connection - TE page 219
- *Math Expressions Connections:*
 - Unit 1 Lesson 6: Make New Groups for Addition MX TE pages 45-54
 - Unit 1 Lesson 7: Add Greater Numbers MX TE pages 55-60
 - Unit 1 Lesson 8: Estimation and Mental Math MX TE pages 61-68
 - Unit 1 Lesson 9: Subtract from Thousands MX TE pages 69-76
 - Unit 1 Lesson 11: Subtract Greater Numbers MX TE pages 83-90
 - Unit 1 Lesson 12: Practice Addition and Subtraction MX TE pages 91-96
 - Unit 1 Lesson 13: Problem Solving with Greater Numbers MX TE pages 97-104
 - Unit 1 Lesson 14: Focus on Mathematical Practices MX TE pages 105-110
- Make Connections - TE page 222A
- Math Connection - Make a Scale Drawing (Challenging)
- *Math Expressions Connections:*
 - Unit 1 Lesson 14: Focus on Mathematical Practices MX TE page 106
- Math Connection - TE page 226
- *Math Expressions Connections:*
 - Unit 2 Lesson 4: Model One-Digit by Two-Digit Multiplication MX TE pages 139-140
 - Unit 2 Lesson 10: One-Digit by Three-Digit Multiplication MX TE page 186
 - Unit 4 Lesson 8: Solve Multistep Problems MX TE page 414
- Math Connection - TE page 229

SUGGESTED PACING	
<p>STRAND: PHYSICAL SCIENCE (PS) Topic: Electricity, Heat and Matter This topic focuses on the conservation of matter and the processes of energy transfer and transformation, especially as they apply to heat and electrical energy. Content Statements:</p> <ul style="list-style-type: none"> • The total amount of matter is conserved when it undergoes a change. • When an object is broken into smaller pieces, when a solid is dissolved in a liquid or when matter changes state (solid, liquid, gas), the total amount of matter remains constant. 	
PRINT RESOURCES	DIGITAL RESOURCES
<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 6, Lessons 2-4, 6 • Unit 6, TE pages 267A-286A, 301A-304 • Unit 6, Inquiry Flip Chart page 32-35, 37 • Unit 6, Science and Engineering Leveled Readers: <ul style="list-style-type: none"> ○ On -Level/Below Level: <i>What Is Matter?</i> ○ Above Level: <i>Sculpting With Physical Resources</i> 	<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 6, Lesson 2 Digital Lesson with Virtual Lab • Unit 6, Lesson 3 Digital Lesson • Unit 6, Lesson 4 Digital Lesson with Virtual Lab • Unit 6, Lesson 6 Digital Lesson with Virtual Lab
	SCIENCE AND ACADEMIC VOCABULARY
	Chemical Change, Conservation of Mass, Physical Change, Reaction
DIFFERENTIATION	FIELD EXPERIENCE CONNECTIONS
<p>Basic (Extra Support)</p> <ul style="list-style-type: none"> • Unit 6 Response to Intervention - TE page 249K • Unit 6 TE pages 270, 274, 276 <p>Advanced (Enrichment)</p> <ul style="list-style-type: none"> • Unit 6 TE pages 270, 274, 276 • Unit 6 STEM - Flipchart page 32, TE pages 249E, 265-266B <p>English Language Learners</p> <ul style="list-style-type: none"> • Unit 6 TE pages 249L-249M, 272, 275 	<p>Greater Cleveland Aquarium's N.E.M.O: Nurturing the Environment by Maintaining Ohio Program.</p> <p>Program details: Aquatic animal adaptation investigation. Use STEM design to build a model fish to live in a specific habitat, Predict how environmental changes may affect fish. To prepare in advance-attend two professional development sessions to receive Classroom Aquarium and a flash drive with year-long curriculum connections.</p> <p>For information contact: Ray Patacca & Erin Bauer 216-862-8803 x7703 or education@greaterclevelandaquarium.com</p>
INQUIRY SKILLS	
<ul style="list-style-type: none"> • Compare • Draw Conclusions 	<ul style="list-style-type: none"> • Experiment • Identify and Control Variables
	<ul style="list-style-type: none"> • Measure • Observe
	<ul style="list-style-type: none"> • Predict
HANDS-ON INQUIRY AND APPLICATION	
<ul style="list-style-type: none"> • "How Does Water Change?" (Flipchart page 33, TE pages 249E, 267A-268) • "Observe Some Chemical Changes" (Flipchart page 34, TE pages 249F, 269A) • "Shhh! Secret Messages" (Flipchart page 34, TE pages 249F, 269A) • "What is Conservation of Mass?" (Flipchart page 35, TE pages 249G, 258A-286A) • "How Do Substances Change When They Form a Solution?" (Flipchart page 37, TE pages 249I, 301A-304) 	<p><i>Differentiated Inquiry</i></p> <ul style="list-style-type: none"> • Unit 6, TE page 268A <ul style="list-style-type: none"> ○ Does Volume Affect Mass (Easy) ○ Investigate Freezing (Easy) ○ Test a Chemical Reaction (Average) ○ Design an Experiment (Challenging) • Unit 6, TE page 286A <ul style="list-style-type: none"> ○ Comparing Masses (Easy) ○ Measuring Masses (Average) ○ Experimenting with Mass (Average) ○ Drawing Conclusions (Challenging) • Unit 6, TE page 302A <ul style="list-style-type: none"> ○ Compare the Rate of Dissolving (Easy) ○ Measure Solubility of Salt and Sugar (Average) ○ Observe Liquid Solutions (Average) ○ Determine the Effect of Temperature on Solubility (Challenging)

ASSESSMENTS/PROGRESS MONITORING	ASSESSMENT GUIDE
<ul style="list-style-type: none"> • Sum it Up <ul style="list-style-type: none"> ○ Unit 6, Lesson 3 - SE page 280, TE page 280 • Brain Check and Apply Concepts <ul style="list-style-type: none"> ○ Unit 6, Lesson 3 - SE pages 281-284, TE pages 281-284 • Unit 6 Review - TE pages 305A-308 • Unit 6 Short Option Performance Assessment - TE page 307 	<ul style="list-style-type: none"> • Lesson Quiz <ul style="list-style-type: none"> ○ Unit 6, Lesson 2 - page AG 58 ○ Unit 6, Lesson 3 - page AG 59 ○ Unit 6, Lesson 4 - page AG 60 ○ Unit 6, Lesson 6 - page AG 62 • Unit 6 Test and Performance Task with Long Option Rubric - pages AG 63-AG 69
ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: ELA	
<p>Journeys</p> <ul style="list-style-type: none"> • Writing Connection - TE page 273 • Writing Connection - TE page 277 • Writing Connection - TE page 279 <ul style="list-style-type: none"> • Make Connections - TE page 284A <ul style="list-style-type: none"> ○ Writing Connection - Write a Menu (Challenging) • Writing Connection - TE page 303 	
ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: MATH	
<p>Math Expressions</p> <ul style="list-style-type: none"> • Math Connection - TE page 271 • <i>Math Expressions Connections:</i> <ul style="list-style-type: none"> ○ Unit 5 Lesson 2: Metric Measures of Liquid Volume and Mass MX TE pages 459-466 ○ Unit 5 Lesson 5: Customary Measures of Weight and Liquid Volume MX TE pages 481-488 ○ Unit 5 Lesson 7: Solve Measurement Problems MX TE pages 497-502 • Math Connection - TE page 278 • Make Connections - TE page 284A • Math Connection - Calculate Mass (Easy) • <i>Math Expressions Connections:</i> <ul style="list-style-type: none"> ○ Unit 5 Lesson 2: Metric Measures of Liquid Volume and Mass MX TE pages 459-466 ○ Unit 5 Lesson 5: Customary Measures of Weight and Liquid Volume MX TE pages 481-488 ○ Unit 5 Lesson 7: Solve Measurement Problems MX TE pages 497-502 	

SUGGESTED PACING		
<p>STRAND: PHYSICAL SCIENCE (PS) Topic: Electricity, Heat and Matter This topic focuses on the conservation of matter and the processes of energy transfer and transformation, especially as they apply to heat and electrical energy. Content Statements:</p> <ul style="list-style-type: none"> • Energy can be transformed from one form to another or can be transferred from one location to another. • Energy transfers from hot objects to cold objects as heat, resulting in a temperature change. • Electric circuits require a complete loop of conducting materials through which an electrical energy can be transferred. • Electrical energy in circuits can be transformed to other forms of energy, including light, heat, sound and motion. • Electricity and magnetism are closely related. 		
PRINT RESOURCES	DIGITAL RESOURCES	
<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 7, All Lessons • Unit 7, TE pages 309-350 • Unit 7, Inquiry Flip Chart pages 38-42 • Unit 7, Science and Engineering Leveled Readers: <ul style="list-style-type: none"> ○ On-Level/Below Level: <i>How Do We Use Forms of Energy?</i> ○ Above Level: <i>What Happens Under the Hood?</i> • Unit 8, All Lessons • Unit 8, TE pages 353A-404 • Unit 8, Inquiry Flip Chart pages 43-48 • Unit 8, Science and Engineering Leveled Readers: <ul style="list-style-type: none"> ○ On-Level/Below Level: <i>How Do We Generate and Use Electricity?</i> ○ Above Level: <i>Energy On Demand: Making Electricity</i> 	<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 7, Lesson 1 Digital Lesson • Unit 7, Lesson 2 Digital Lesson with Virtual Lab • Unit 7, Lesson 3 Digital Lesson • Unit 7, Lesson 4 Digital Lesson with Virtual Lab • Unit 8, Lesson 1 Digital Lesson • Unit 8, Lesson 2 Digital Lesson with Virtual Lab • Unit 8, Lesson 3 Digital Lesson with Virtual Lab • Unit 8, Lesson 4 Digital Lesson • Unit 8, Lesson 5 Digital Lesson 	
SCIENCE AND ACADEMIC VOCABULARY		
<p>Chemical Energy, Circuit, Conductor, Current Electricity, Electric Motor, Electrical Energy, Electricity, Electromagnet, Energy, Generator, Heat, Insulator, Kinetic Energy, Magnet, Mechanical Energy, Parallel Circuit, Potential Energy, Series Circuit, Static Electricity, Thermal Energy</p>		
DIFFERENTIATION	FIELD EXPERIENCE CONNECTIONS	
<p>Basic (Extra Support)</p> <ul style="list-style-type: none"> • Unit 7 Response to Intervention - TE page 309K • Unit 7 TE pages 313, 315, 321, 335, 338 • Unit 8 Response to Intervention - TE page 351K • Unit 8 TE pages 357, 359, 373, 375, 376, 388, 389, 391 <p>Advanced (Enrichment)</p> <ul style="list-style-type: none"> • Unit 7 TE pages 313, 315, 321, 335, 338 • Unit 7 STEM - Flipchart page 42, TE pages 309I, 345-346B • Unit 8 TE pages 357, 359, 373, 375, 376, 388, 389, 391 • Unit 8 STEM - Flipchart page 48, TE pages 351I, 399-400B <p>English Language Learners</p> <ul style="list-style-type: none"> • Unit 7 TE pages 309L-309M, 312, 319, 320, 336, 339 • Unit 8 TE pages 351L-351M, 356, 358, 372, 374, 378, 390, 392, 394 	<p>Greater Cleveland Aquarium's N.E.M.O: Nurturing the Environment by Maintaining Ohio Program.</p> <p>Program details: Aquatic animal adaptation investigation. Use STEM design to build a model fish to live in a specific habitat, Predict how environmental changes may affect fish. To prepare in advance-attend two professional development sessions to receive Classroom Aquarium and a flash drive with year-long curriculum connections.</p> <p>For information contact: Ray Patacca & Erin Bauer 216-862-8803 x7703 or education@greaterclevelandaquarium.com</p>	
INQUIRY SKILLS		
<ul style="list-style-type: none"> • Classify/Order • Communicate • Compare 	<ul style="list-style-type: none"> • Draw Conclusions • Gather, Record, Display, or Interpret Data • Observe 	<ul style="list-style-type: none"> • Plan and Conduct a Simple Investigation • Predict

HANDS-ON INQUIRY AND APPLICATION		
<ul style="list-style-type: none"> • “Energy Sources” (Flipchart page 38, TE pages 309D, 311A) • “Up Periscope!” (Flipchart page 38, TE pages 309D, 311A) • “Where Does Energy Come From?” (Flipchart page 39, TE pages 309E, 329A-330) • “Sunny Side Up!” (Flipchart page 40, TE pages 309F, 333A) • “Ready to Insulate!” (Flipchart page 40, TE pages 309G, 333A) • “How Do Conductors and Insulators Differ?” (Flipchart page 41, TE pages 309H, 343A-344) • “Static Cling” (Flipchart page 43, TE pages 351D, 353A) • “Electric Materials Test” (Flipchart page 43, TE pages 351D, 353A) • “How Do Electric Charges Interact?” (Flipchart page 44, TE pages 351E, 367A-368A) • “What Is an Electric Circuit?” (Flipchart page 45, TE pages 351F, 369A-370A) • “Compare Two Circuits” (Flipchart page 46, TE pages 351G, 371A) • “Bright Lights” (Flipchart page 46, TE pages 351G, 371A) • “Build an Electromagnet” (Flipchart page 47, TE pages 351H, 387A) • “Is There Current?” (Flipchart page 47, TE pages 351H, 387A) 	<p><i>Differentiated Inquiry</i></p> <ul style="list-style-type: none"> • Unit 7, TE page 330A <ul style="list-style-type: none"> ○ How Can Marbles Transfer Energy? (Easy) ○ How Can a Slingshot Make a Ball Go Farther? (Easy) ○ How Does Height Affect Potential Energy’s Change to Kinetic Energy? (Average) ○ How Does the Mass of a Ball Affect the Distance It Travels? (Challenging) • Unit 7, TE page 344A <ul style="list-style-type: none"> ○ Observe Radiation (Easy) ○ Experiment with Radiation (Easy) ○ Test Other Materials (Average) ○ Isolate Conductivity (Challenging) • Unit 8, TE page 368A <ul style="list-style-type: none"> ○ Bend Water (Easy) ○ Light a Light Bulb with a Comb (Easy) ○ Test Materials for Charge (Average) ○ Make an Electroscope (Challenging) • Unit 8, TE page 370A <ul style="list-style-type: none"> ○ Test Materials for a Circuit (Easy) ○ Use a Lamp as a Switch (Easy) ○ Investigate Circuits (Average) ○ Invent a Switch (Challenging) 	
ASSESSMENTS/PROGRESS MONITORING	ASSESSMENT GUIDE	
<ul style="list-style-type: none"> • Sum it Up <ul style="list-style-type: none"> ○ Unit 7, Lesson 1 - SE page 324, TE page 324 ○ Unit 7, Lesson 3 - SE page 340, TE page 340 ○ Unit 8, Lesson 1 - SE page 360, TE page 360 ○ Unit 8, Lesson 4 - SE page 380, TE page 380 ○ Unit 8, Lesson 5 - SE page 396, TE page 396 • Brain Check and Apply Concepts <ul style="list-style-type: none"> ○ Unit 7, Lesson 1 - SE pages 325-328, TE pages 325-328 ○ Unit 7, Lesson 3 - SE pages 341-342, TE pages 341-342 ○ Unit 8, Lesson 1 - SE pages 361-366, TE pages 361-366 ○ Unit 8, Lesson 4 - SE pages 381-384, TE pages 381-384 ○ Unit 8, Lesson 5 - SE pages 397-398, TE pages 397-398 • Unit 7 Review - TE pages 347A-350 • Unit 7 Short Option Performance Assessment - TE page 349 • Unit 8 Review - TE pages 401A-404 • Unit 8 Short Option Performance Assessment - TE page 403 	<ul style="list-style-type: none"> • Lesson Quiz <ul style="list-style-type: none"> ○ Unit 7, Lesson 1 - page AG 70 ○ Unit 7, Lesson 2 - page AG 71 ○ Unit 7, Lesson 3 - page AG 72 ○ Unit 7, Lesson 4 - page AG 73 ○ Unit 8, Lesson 1 - page AG 81 ○ Unit 8, Lesson 2 - page AG 82 ○ Unit 8, Lesson 3 - page AG 83 ○ Unit 8, Lesson 4 - page AG 84 ○ Unit 8, Lesson 5 - page AG 85 • Unit 7 Test and Performance Task with Long Option Rubric - pages AG 74-AG 80 • Unit 8 Test and Performance Task with Long Option Rubric - pages AG 86-AG 92 	
ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: ELA		
<p>Journeys</p> <ul style="list-style-type: none"> • Writing Connection - TE page 318 • Make Connections - TE page 328A <ul style="list-style-type: none"> ○ Language Arts Connection - Write a Report About Local Sources of Energy (Average) • Writing Connection - TE page 331 • Writing Connection - TE page 337 • Writing Connection - TE page 354 • Writing Connection - TE page 360 • Make Connections - TE page 366A <ul style="list-style-type: none"> ○ Writing Connection - Write an Electricity Narrative (Average) 		<ul style="list-style-type: none"> • Writing Connection - TE page 377 • Make Connections - TE page 384A <ul style="list-style-type: none"> ○ Writing Connection - Safety Rules (Easy) ○ Language Arts Connection - Word Origins (Average) • Writing Connection - TE page 385 • Writing Connection - TE page 393 • Make Connections - TE page 398A <ul style="list-style-type: none"> ○ Writing Connection - Write a Description (Easy)

ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: MATH

Math Expressions

- Math Connection - TE page 316
- *Math Expressions Connections:*
 - Unit 3 Lesson 7: Just Under Quotient Digits MX TE page 324
 - Unit 5 Lesson 4: Customary Measures of Length MX TE pages 475-480
- Math Connection - TE page 334
- *Math Expressions Connections:*
 - Unit 5 Lesson 1: Measuring Length MX TE pages 451-458
 - Unit 5 Lesson 7: Solve Measurement Problems MX TE pages 497-502
 - Unit 5 Lesson 8: Focus on Mathematical Practices MX TE pages 503-508
 - Unit 7 Lesson 10: Compare Decimals to Hundredths MX TE pages 673-682
 - Unit 7 Lesson 12: Compare Decimals Greater Than 1 MX TE pages 693-698
- Make Connections - TE page 342A
- Math Connection - Calculate Savings (Challenging)
- *Math Expressions Connections:*
 - Unit 2 Lesson 4: Model One-Digit by Two-Digit Multiplication MX TE pages 139-140
 - Unit 2 Lesson 10: One-Digit by Three-Digit Multiplication MX TE page 186
 - Unit 4 Lesson 8: Solve Multistep Problems MX TE page 414
- Math Connection - TE page 355
- *Math Expressions Connections:*
 - Unit 8 Lesson 2: Measuring Angles MX TE pages 719-726
 - Unit 8 Lesson 3: Circles and Angles MX TE pages 727-732
 - Unit 8 Lesson 4: Name Triangles MX TE pages 741
 - Unit 8 Lesson 6: Real World Problems MX TE pages 751-756
- Math Connection - TE page 361
- *Math Expressions Connections:*
 - Unit 2 Lesson 4: Model One-Digit by Two-Digit Multiplication MX TE pages 139-140
 - Unit 2 Lesson 10: One-Digit by Three-Digit Multiplication MX TE page 186
 - Unit 4 Lesson 8: Solve Multistep Problems MX TE page 414
 - Unit 5 Lesson 3: Units of Time MX TE pages 467-474
- Math Connection - TE page 379
- *Math Expressions Connections:*
 - Unit 2 Lesson 4: Model One-Digit by Two-Digit Multiplication MX TE pages 139-140
 - Unit 2 Lesson 10: One-Digit by Three-Digit Multiplication MX TE page 186
 - Unit 4 Lesson 8: Solve Multistep Problems MX TE page 414
- Make Connections - TE page 384A
- Math Connection - Use Numbers (Challenging)
- Math Connection - TE page 395
- *Math Expressions Connections:*
 - Unit 6 Lesson 1: Understand Fractions MX TE pages 515-520
 - Unit 6 Lesson 2: Fractions that Add to One MX TE pages 524-527
 - Unit 6 Lesson 3: Add and Subtract Fractions with Like Denominators MX TE pages 537-538
 - Unit 6 Lesson 4: Mixed Numbers and Fractions Greater Than 1 MX TE pages 542-547
 - Unit 7 Lesson 4: Equivalent Fractions Using Multiplication MX TE pages 622-626
 - Unit 7 Lesson 5: Equivalent Fractions Using Division MX TE pages 630-634
 - Unit 7 Lesson 6: Compare Fractions with Unlike Denominators MX TE pages 638-642
 - Unit 7 Lesson 8: Relate Fractions and Decimals MX TE pages 659-660
- Make Connections - TE page 398A
- Math Connection - Find a Rule (Easy)
- *Math Expressions Connections:*
 - Unit 6 Lesson 4: Mixed Numbers and Fractions Greater Than 1 MX TE page 546
 - Unit 6 Lesson 7: Multiply a Fraction by a Whole Number MX TE pages 568-572
 - Unit 6 Lesson 8: Practice Multiplying a Fraction by a Whole Number MX TE pages 576-578
 - Unit 6 Lesson 9: Mixed Practice MX TE page 584
- Math Connection - Design an Experiment (Average)
- *Math Expressions Connections:*
 - Unit 1 Lesson 14: Focus on Mathematical Practices MX TE page 106