

SUGGESTED PACING

SCIENCE INQUIRY AND APPLICATION

Content Statements: During the years of PreK-4, all students must become proficient in the use of the following scientific processes, with appropriate laboratory safety techniques, to construct their knowledge and understanding in all science content areas:

- Observe and ask questions about the natural environment
- Plan and conduct simple investigations
- Employ simple equipment and tools to gather data and extend the senses
- Use appropriate mathematics with data to construct reasonable explanations
- Communicate about observations, investigations and explanations
- Review and ask questions about the observations and explanations of others

STRAND: EARTH AND SPACE SCIENCE (ESS)

Topic: The Atmosphere

This topic focuses on air and water as they relate to weather and weather changes that can be observed and measured.

Content Statements:

- The atmosphere is made up of air.
- Air has properties that can be observed and measured. The transfer of energy in the atmosphere causes air movement, which is felt as wind. Wind speed and direction can be measured.

Content Statements:

- Water is present in the air.
- Water is present in the air as clouds, steam, fog, rain, ice, snow, sleet or hail.
- When water in the air cools (change of energy), it forms small droplets of water that can be seen as clouds.
- Water can change from liquid to vapor in the air and from vapor to liquid. The water droplets can form into raindrops.
- Water droplets can change to solid by freezing into snow, sleet or hail.
- Clouds are moved by flowing air.

Content Statements:

- Long- and short-term weather changes occur due to changes in energy.
- Changes in energy affect all aspects of weather, including temperature, precipitation amount and wind.

PRINT RESOURCES

ScienceFusion

- Unit 1, TE pages 1A-1M;1-40; TR1-3
- Unit 7, Lessons 1 and 3
- Unit 7, TE pages 265A-274A; 277A-286A
- Unit 7, Inquiry Flip Chart pages 33, 35
- Unit 7, Science and Engineering Leveled Readers
 - On-Level/Below Level - *Why Is Weather Important?*
 - Above Level - *The American Weather Hall of Fame*

DIGITAL RESOURCES

ScienceFusion

- Unit 1, Digital Lessons
- Unit 7, Lesson 1 Digital Lesson
- Unit 7, Lesson 3 Digital Lesson

SCIENCE AND ACADEMIC VOCABULARY

Unit 1: Communicate, Draw Conclusions, Hypothesis, Inquiry Skills, Investigate, Science Tools, Thermometer

Unit 7: Condense, Evaporate, Precipitation, Temperature, Water Cycle, Weather, Weather Pattern, Wind

DIFFERENTIATION

Basic (Extra Support)

- Unit 7 Response to Intervention - TE page 263K
- Unit 7 TE pages 268, 270, 278, 280

Advanced (Enrichment)

- Unit 7 TE pages 268, 270, 278, 280

English Language Learners

- Unit 7 TE pages 263L-263M, 266, 271, 279, 282

FIELD EXPERIENCE CONNECTIONS

Cleveland Museum of Natural History's INSPIRE: Reach Every Child Program.

Program details: Standards-based experience focusing on interactions within habitats. Students engage in hands-on learning activities that utilize real museum specimens and live native Ohio animals to illustrate key scientific elements.

To prepare In advance, each teacher receives: Teacher Guide Teacher pre-visit video, Student pre-visit video and a pre-visit interactive lesson.

For information contact: Heather Lee 216-231-4600 x3405 or hlee@cmnh.org

INQUIRY SKILLS	
<ul style="list-style-type: none"> • Compare • Gather, Record, Display, and Interpret Data • Measure 	<ul style="list-style-type: none"> • Observe • Plan and Conduct a Simple Investigation • Predict
HANDS-ON INQUIRY AND APPLICATION	
<ul style="list-style-type: none"> • “Weather Journal” (Flipchart page 33, TE pages 263D, 265A) • “Wind Watching” (Flipchart page 33, TE pages 263D, 265A) 	<ul style="list-style-type: none"> • “Take My Temperature” (Flipchart page 35, TE pages 263F, 277A) • “Highs and Lows” (Flipchart page 35, TE pages 263F, 277A)
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 272, TE page 272 ○ Unit 7, Lesson 3 - SE page 284, TE page 284 • Brain Check and Apply Concepts <ul style="list-style-type: none"> ○ Unit 7, Lesson 1 - SE pages 273-274, TE pages 273-274 ○ Unit 7, Lesson 3 - SE pages 285-286, TE pages 285-286 	<ul style="list-style-type: none"> • Lesson Quiz <ul style="list-style-type: none"> ○ Unit 7, Lesson 1 - page AG 70 ○ Unit 7, Lesson 3 - page AG 72
ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: ELA	
<p>Journeys</p> <ul style="list-style-type: none"> • Writing Connection - TE page 267 • Make Connections - TE page 274A <ul style="list-style-type: none"> ○ Writing Connection - Match Questions-and-Answer Cards (Average) 	<ul style="list-style-type: none"> • Writing Connection - TE page 283 • Make Connections - TE page 286A <ul style="list-style-type: none"> ○ Writing Connection - Match Questions-and-Answer Cards (Average)
ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: MATH	
<p>Math Expressions</p> <ul style="list-style-type: none"> • Math Connection - TE page 269 • Math Expressions Connections: <ul style="list-style-type: none"> ○ Unit 3 Lesson 7: Estimate and Measure with Inches MX TE pages 323-330 • Make Connections - TE page 274A • Math Connection - Collect Temperature Data (Challenging) • Math Expressions Connections: <ul style="list-style-type: none"> ○ Unit 4 Lesson 6: Practice and Explain a Method MX TE page 394 • Math Connection - TE page 281 • Math Expressions Connections: <ul style="list-style-type: none"> ○ Unit 1 Lesson 10: Add To and Take From Word Problems MX TE pages 71-76 ○ Unit 1 Lesson 11: Add To and Take From Problems—Unknown All Positions MX TE pages 77-84 ○ Unit 1 Lesson 12: Put Together/Take Apart Problems MX TE pages 85-90 ○ Unit 1 Lesson 13: Special Put Together/Take Apart Problems MX TE pages 91-98 ○ Unit 1 Lesson 16: Mixed Word Problems MX TE pages 111-116 ○ Unit 1 Lesson 20: Mixed Word Problems MX TE pages 141-146 ○ Unit 1 Lesson 21: Focus on Mathematical Practices MX TE pages 147-152 ○ Unit 4 Lesson 4: Subtraction Word Problems MX TE pages 373-378 ○ Unit 4 Lesson 12: Word Problems with Addition and Subtraction MX TE pages 427-432 ○ Unit 4 Lesson 14: Practice Addition and Subtraction MX TE pages 439-444 ○ Unit 4 Lesson 16: Word Problems with Unknown Addends MX TE pages 451-456 ○ Unit 4 Lesson 17: More Word Problems with Unknown Addends MX TE pages 457-462 • Make Connections - TE page 286A • Math Connection - Make Graphs of Temperature Data (Challenging) • Math Expressions Connections: <ul style="list-style-type: none"> ○ Unit 4 Lesson 6: Practice and Explain a Method MX TE page 394 ○ Unit 5 Lesson 5: Introduce Bar Graphs MX TE pages 535-542 ○ Unit 5 Lesson 6: Read Bar Graphs MX TE pages 543-550 ○ Unit 5 Lesson 7: Solve Problems Using a Bar Graph MX TE pages 551-558 ○ Unit 5 Lesson 8: Collect and Graph Data MX TE pages 559-564 ○ Unit 5 Lesson 9: Make Graphs and Interpret Data MX TE pages 565-570 ○ Unit 5 Lesson 10: Focus on Mathematical Practices MX TE pages 571-576 	

SUGGESTED PACING	
<p>STRAND: LIFE SCIENCE (LS) Topic: Interactions within Habitats This topic focuses on how ecosystems work by observations of simple interactions between the biotic/living and abiotic/nonliving parts of an ecosystem. Just as living things impact the environment in which they live, the environment impacts living things. Content Statements:</p> <ul style="list-style-type: none"> • Some kinds of individuals that once lived on Earth have completely disappeared, although they were something like others that are alive today. • Living things that once lived on Earth no longer exist; their basic needs were no longer met. 	
PRINT RESOURCES	DIGITAL RESOURCES
<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 3, Lessons 5 and 6 • Unit 3, TE pages 119A-130A • Unit 3, Inquiry Flip Chart pages 16-17 • Unit 3, Science and Engineering Leveled Readers: <ul style="list-style-type: none"> ○ On-Level/Below Level: <i>What Do Plants and Animals Need?</i> 	<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 3, Lesson 5 Digital Lesson • Unit 3, Lesson 6 Digital Lesson with Virtual Lab
	SCIENCE AND ACADEMIC VOCABULARY
	Dinosaur, Extinct, Fossil
DIFFERENTIATION	FIELD EXPERIENCE CONNECTIONS
<p>Basic (Extra Support)</p> <ul style="list-style-type: none"> • Unit 3 Response to Intervention - TE page 77K • Unit 3 TE pages 121, 122 <p>Advanced (Enrichment)</p> <ul style="list-style-type: none"> • Unit 3 TE pages 121, 122 <p>English Language Learners</p> <ul style="list-style-type: none"> • Unit 3 TE pages 77L-77M, 120, 123 	<p>Cleveland Museum of Natural History's INSPIRE: Reach Every Child Program. Program details: Standards-based experience focusing on interactions within habitats. Students engage in hands-on learning activities that utilize real museum specimens and live native Ohio animals to illustrate key scientific elements.</p> <p>To prepare In advance, each teacher receives: Teacher Guide Teacher pre-visit video, Student pre-visit video and a pre-visit interactive lesson.</p> <p>For information contact: Heather Lee 216-231-4600 x3405 or hlee@cmnh.org</p>
INQUIRY SKILLS	
<ul style="list-style-type: none"> • Communicate • Draw Conclusions 	<ul style="list-style-type: none"> • Formulate and Use Models • Observe
	<ul style="list-style-type: none"> • Plan and Conduct a Simple Investigation
HANDS-ON INQUIRY AND APPLICATION	
<ul style="list-style-type: none"> • "Fossil Dig" (Flipchart page 16, TE pages 77H, 119A) • "Model Fossils" (Flipchart 16, TE pages 77H, 119A) • "How Can We Model Fossils?" (Flipchart page 17, TE pages 77I, 129A-130) 	<p><i>Differentiated Inquiry</i></p> <ul style="list-style-type: none"> • Unit 3, TE page 130A <ul style="list-style-type: none"> ○ Match Fossil Impressions and Objects (Easy) ○ Compare Plant and Animal Fossils (Average) ○ Make Other Types of Fossil Models (Average) ○ Dinosaur Skeletons (Challenging)
ASSESSMENTS/PROGRESS MONITORING	ASSESSMENT GUIDE
<ul style="list-style-type: none"> • Sum it Up <ul style="list-style-type: none"> ○ Unit 3, Lesson 5 - SE page 126, TE page 126 • Brain Check and Apply Concepts <ul style="list-style-type: none"> ○ Unit 3, Lesson 5 - SE pages 127-128, TE pages 127-128 	<ul style="list-style-type: none"> • Lesson Quiz <ul style="list-style-type: none"> ○ Unit 3, Lesson 5 - page AG 28 ○ Unit 3, Lesson 6 - page AG 29
ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: ELA	
<p>Journeys</p> <ul style="list-style-type: none"> • Writing Connection - TE page 124 • Make Connections - TE page 128A <ul style="list-style-type: none"> ○ Writing Connection - Research Recent Dinosaur Finds (Average) ○ Writing Connection - Draw and Describe an Event (Average) 	<p><i>Journeys Connections</i> Lesson 27</p> <ul style="list-style-type: none"> • Whole Group - Anchor Text - The Dog That Dug for Dinosaurs (T124) • Whole Group - Informational Text - La Brea Tar Pits (T64) • Small Group - Vocabulary Reader - Dinosaur Fossils (T186) • Small Group - Struggling Reader - The Mysterious Bone (T192) • Small Group - On Level Reader - Sue Hendrickson (T193)

SUGGESTED PACING	
<p>STRAND: LIFE SCIENCE (LS) Topic: Interactions within Habitats This topic focuses on how ecosystems work by observations of simple interactions between the biotic/living and abiotic/nonliving parts of an ecosystem. Just as living things impact the environment in which they live, the environment impacts living things. Content Statements:</p> <ul style="list-style-type: none"> • Living things cause changes on Earth. • Living things function and interact with their physical environments. Living things cause changes in the environments where they live; the changes can be very noticeable or slightly noticeable, fast or slow. 	
PRINT RESOURCES	DIGITAL RESOURCES
<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 5, Lesson 4 • Unit 5, TE pages 209A-218A • Unit 5, Inquiry Flip Chart page 28 	<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> • Unit 5, Lesson 4 Digital Lesson
SCIENCE AND ACADEMIC VOCABULARY	
Resource	
DIFFERENTIATION	FIELD EXPERIENCE CONNECTIONS
<p>Basic (Extra Support)</p> <ul style="list-style-type: none"> • Unit 5 Response to Intervention: TE page 179I • Unit 5 TE pages 211, 212 <p>Advanced (Enrichment)</p> <ul style="list-style-type: none"> • Unit 5 TE pages 211, 212 <p>English Language Learners</p> <ul style="list-style-type: none"> • Unit 5 TE pages 179J-179K, 210, 215 	<p>Cleveland Museum of Natural History's INSPIRE: Reach Every Child Program. Program details: Standards-based experience focusing on interactions within habitats. Students engage in hands-on learning activities that utilize real museum specimens and live native Ohio animals to illustrate key scientific elements. To prepare In advance, each teacher receives: Teacher Guide Teacher pre-visit video, Student pre-visit video and a pre-visit interactive lesson. For information contact: Heather Lee 216-231-4600 x3405 or hlee@cmnh.org</p>
INQUIRY SKILLS	
<ul style="list-style-type: none"> • Communicate • Draw Conclusions 	<ul style="list-style-type: none"> • Formulate or Use Models • Observe
<ul style="list-style-type: none"> • Plan and Conduct a Simple Investigation 	
HANDS-ON INQUIRY AND APPLICATION	
<ul style="list-style-type: none"> • "Flood!" (Flipchart page 28, TE pages 179G, 209A) 	<ul style="list-style-type: none"> • "Plan to Help" (Flipchart page 28, TE pages 179G, 209A)
ASSESSMENTS/PROGRESS MONITORING	ASSESSMENT GUIDE
<ul style="list-style-type: none"> • Sum it Up <ul style="list-style-type: none"> ○ Unit 5, Lesson 4 - SE page 216, TE page 216 • Brain Check and Apply Concepts <ul style="list-style-type: none"> ○ Unit 5, Lesson 4 - SE pages 217-218, TE pages 217-218 	<ul style="list-style-type: none"> • Lesson Quiz <ul style="list-style-type: none"> ○ Unit 5, Lesson 4 - page AG 52
ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: ELA	
<p>Journeys</p> <ul style="list-style-type: none"> • Writing Connection - TE page 213 • Make Connections - TE page 406A <ul style="list-style-type: none"> ○ Language Arts Connection - Identify Environmental Changes in Books (Challenging) ○ Writing Connection - Write and Perform a Skit about Environmental Changes (Challenging) <p><i>Journeys Connections</i></p> <p>Lesson 4</p> <ul style="list-style-type: none"> • Whole Group: Teacher Read Aloud: Bats: Beastly or Beautiful? (T306) <p>Lesson 6</p> <ul style="list-style-type: none"> • Whole Group: Teacher Read Aloud: City Life is for the Birds (T14) • Whole Group: Anchor Text: Animals Building Homes (T24) • Whole Group: Informational Text: Whose Home is This? (T60) 	<p><i>Journeys Connections cont.</i></p> <p>Lesson 6 <i>cont.</i></p> <ul style="list-style-type: none"> • Small Group: Vocabulary Reader: Amazing Nests (T84) • Small Group: Struggling Reader: A Busy Beaver (T90) • Small Group: On-Level Reader: Busy Bees (T91) • Small Group: Advanced Reader: The Lives of Ants (T92) <p>Lesson 7</p> <ul style="list-style-type: none"> • Whole Group: Teacher Read Aloud: Trouble in the Lily Garden (T112) • Whole Group: Anchor Text: The Ugly Vegetables (T122) <p>Lesson 10</p> <ul style="list-style-type: none"> • Small Group: Vocabulary Reader: Coral Reefs (T488) <p>Lesson 24</p> <ul style="list-style-type: none"> • Whole Group: Anchor Text: From Seed to Plant (T424) • Small Group: Struggling Reader: Plant and Animal Partners (T492)

ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: MATH

Math Expressions

- Math Connection - TE page 214
- *Math Expressions Connections:*
 - Unit 5 Lesson 5: Introduce Bar Graphs MX TE pages 535-542
 - Unit 5 Lesson 6: Read Bar Graphs MX TE pages 543-550
 - Unit 5 Lesson 7: Solve Problems Using a Bar Graph MX TE pages 551-558
 - Unit 5 Lesson 8: Collect and Graph Data MX TE pages 559-564
 - Unit 5 Lesson 9: Make Graphs and Interpret Data MX TE pages 565-570
 - Unit 5 Lesson 10: Focus on Mathematical Practices MX TE pages 571-576

SUGGESTED PACING	
<p>STRAND: PHYSICAL SCIENCE (PS) Topic: Changes in Motion This topic focuses on observing the relationship between forces and motion. Content Statements:</p> <ul style="list-style-type: none"> Forces change the motion of an object. Motion can increase, change direction or stop depending on the force applied. The change in motion of an object is related to the size of the force. Some forces act without touching, such as using a magnet to move an object or objects falling to the ground. 	
PRINT RESOURCES	DIGITAL RESOURCES
<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> Unit 10, Lessons 2-3 Unit 10, TE pages 397A-406A, 409A-410A Unit 10, Inquiry Flip Chart pages 50, 52 Unit 10, Science and Engineering Leveled Readers: <ul style="list-style-type: none"> On-Level/Below Level: <i>How Do We Use Energy, Motion, and Magnets in Our Lives?</i> Above Level: <i>Magnificent Magnets</i> Unit 10, ScienceSaurus (Red Level): <ul style="list-style-type: none"> Physical Science, Energy, pp. 260-265, 280-285 	<p><i>ScienceFusion</i></p> <ul style="list-style-type: none"> Unit 10, Lesson 2 Digital Lesson Unit 10, Lesson 3 Digital Lesson with Virtual Lab
SCIENCE AND ACADEMIC VOCABULARY	
Attract, Magnet, Pole, Repel	
DIFFERENTIATION	FIELD EXPERIENCE CONNECTIONS
<p>Basic (Extra Support)</p> <ul style="list-style-type: none"> Unit 10 Response to Intervention - TE page 381I Unit 10 TE pages 399, 400 <p>Advanced (Enrichment)</p> <ul style="list-style-type: none"> Unit 10 TE pages 399, 400 <p>English Language Learners</p> <ul style="list-style-type: none"> Unit 10 TE pages 381J-381K, 398, 401 	<p>Cleveland Museum of Natural History's INSPIRE: Reach Every Child Program.</p> <p>Program details: Standards-based experience focusing on interactions within habitats. Students engage in hands-on learning activities that utilize real museum specimens and live native Ohio animals to illustrate key scientific elements.</p> <p>To prepare In advance, each teacher receives: Teacher Guide Teacher pre-visit video, Student pre-visit video and a pre-visit interactive lesson.</p> <p>For information contact: Heather Lee 216-231-4600 x3405 or hlee@cmnh.org</p>
INQUIRY SKILLS	
<ul style="list-style-type: none"> Classify Draw Conclusions 	<ul style="list-style-type: none"> Experiment Measure
<ul style="list-style-type: none"> Observe Plan and Conduct a Simple Investigation 	
HANDS-ON INQUIRY AND APPLICATION	
<ul style="list-style-type: none"> "Action at a Distance" (Flipchart page 50, TE pages 381E, 397A) "Magnetic Attraction" (Flipchart page 50, TE pages 381E, 397A) "How Strong is a Magnet?" (Flipchart page 52, TE pages 381G, 409A-410) 	<p><i>Differentiated Inquiry</i></p> <ul style="list-style-type: none"> Unit 10, TE page 410A <ul style="list-style-type: none"> Attract Through Paper (Easy) Find the Strongest Magnet (Average) Test a Magnet's Strength (Average) Ask Questions About Magnets (Challenging)
ASSESSMENTS/PROGRESS MONITORING	ASSESSMENT GUIDE
<ul style="list-style-type: none"> Sum it Up <ul style="list-style-type: none"> Unit 10, Lesson 2 - SE page 404, TE page 404 Brain Check and Apply Concepts <ul style="list-style-type: none"> Unit 10, Lesson 2 - SE pages 405-406, TE pages 405-406 	<ul style="list-style-type: none"> Lesson Quiz <ul style="list-style-type: none"> Unit 10, Lesson 2 - page AG 105 Unit 10, Lesson 3 - page AG 106

ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: ELA

Journeys

- Writing Connection - TE page 402
- Make Connections - TE page 406A
 - Language Arts Connection - List Magnet Words (Challenging)

Journeys Connections

Lesson 15

- Whole Group - Read Aloud Book - Adventures at Scout Camp (T403)

Lesson 17

- Whole Group - Anchor Text - Luke Goes to Bat (T135)
- Small Group - Struggling Reader - The Winning Hit (T192)
- Small Group - Advanced Reader - The New Field (T194)

ACADEMIC CONNECTIONS TO OTHER DISCIPLINES: MATH

Math Expressions

- Math Connection - TE page 403
- *Math Expressions Connections:*
 - Unit 1 Lesson 10: Add To and Take From Word Problems MX TE pages 71-76
 - Unit 1 Lesson 11: Add To and Take From Problems—Unknown All Positions MX TE pages 77-84
 - Unit 1 Lesson 12: Put Together/Take Apart Problems MX TE pages 85-90
 - Unit 1 Lesson 13: Special Put Together/Take Apart Problems MX TE pages 91-98
 - Unit 1 Lesson 16: Mixed Word Problems MX TE pages 111-116
 - Unit 1 Lesson 20: Mixed Word Problems MX TE pages 141-146
 - Unit 1 Lesson 21: Focus on Mathematical Practices MX TE pages 147-152
 - Unit 4 Lesson 4: Subtraction Word Problems MX TE pages 373-378
 - Unit 4 Lesson 12: Word Problems with Addition and Subtraction MX TE pages 427-432
 - Unit 4 Lesson 14: Practice Addition and Subtraction MX TE pages 439-444
 - Unit 4 Lesson 16: Word Problems with Unknown Addends MX TE pages 451-456
 - Unit 4 Lesson 17: More Word Problems with Unknown Addends MX TE pages 457-462
- Make Connections - TE page 406A
- Math Connection - Do Paper Clip Math (Average)