

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 	