SUGGESTED PACING

STRAND: EARTH AND SPACE SCIENCE (ESS)

Topic: Cycles and Patterns in the Solar System

This topic focuses on the characteristics, cycles and patterns in the solar system and within the universe.

Content Statements:

- The sun is one of many stars that exist in the universe.
- The sun appears to be the largest star in the sky because it is the closest star to Earth. Some stars are larger than the sun and some stars are smaller than the sun.

PRINT RESOURCES	DIGITAL RESOURCES
 ScienceFusion Unit 1, TE pages 1A-1M; 1-62 Grade 5 Ohio Test Prep Book pages 1-11 Unit 3, Lessons 1 and 4 Unit 3, TE pages 107A-120A, 143A-152A Unit 3, Inquiry Flip Chart pages 17, 20 Unit 3, Science and Engineering Leveled Readers: On-Level/Below Level: How Do the Sun, Earth, and Moon Move In Space? Above Level: To the Moon 	 ScienceFusion Unit 3, Lesson 1 Digital Lesson Unit 3, Lesson 4 Digital Lesson

SCIENCE AND ACADEMIC VOCABULARY

Astronomy, Axis, Galaxy, Orbit, Revolve, Rotate, Star, Universe

DIFFERENTIATION FIELD EXPERIENCE CONNECTIONS Cleveland Metroparks Zoo: Connections to Africa Program. Basic (Extra Support) • Unit 3 Response to Intervention - TE page 105K **Program Details:** Students will explore African Elephant Crossing, • Unit 3 TE pages 123, 124, 129, 131, 133 focusing on how living things, including people, must share resources around them. The Zoo provides scientific tools that students can use Advanced (Enrichment) during this inquiry-driven program. To prepare in advance please locate • Unit 3 TE pages 108, 111, 113, 114, 117, 145, 146 the Metroparks Zoo Trunk and Biomimicry Kits that are present in each Unit 3 STEM - Flipchart page 21, TE pages 105H, 153-CMSD K-8 building. Then attend the professional development session and complete teacher and student pre- and post-visit surveys. **English Language Learners** For information contact: Sandy Hadgis 216-635-3379 or email: Unit 3 TE pages 105L-105M, 109, 112, 116, 144, 148 sjh2@clevelandmetroparks.com

INQUIRY SKILLS

- Classify/Order
- Draw Conclusions
- Communicate
- Compare
- Formulate or Use Models
- Gather, Record, Display, or Interpret Data
- Observe

HANDS-ON INQUIRY AND APPLICATION

- "Arching Paths" (Flipchart page 17, TE pages 105D, 107A)
- "Our Shadowy Moon" (Flipchart page 17, TE pages 105D, 107A)
- "Colorful Stars" (Flipchart page 20, TE pages 105G, 143A)
- "A Small Slice of the Universe" (Flipchart page 20, TE pages 105G, 143A)

ASSESSMENTS/PROGRESS MONITORING ASSESSMENT GUIDE Lesson Ouiz • Sum it Up o Unit 3, Lesson 1 - SE page 118, TE page 118 Unit 3, Lesson 1 - page AG 25 o Unit 3, Lesson 4 - SE page 150, TE page 150 • Unit 3, Lesson 4 - page AG 28 Brain Check and Apply Concepts o Unit 3, Lesson 1 - SE pages 119-120, TE pages 119-120 o Unit 3, Lesson 4 - SE pages 151-152, TE pages 151-152

ACADEMIC CONNECTIONS TO OTHER DISCIPLINES

ELA: Journeys

- Writing Connection TE page 115
- Make Connections TE page 120A
 - Writing Connection Sun, Earth, Moon Booklet (Average)
- Writing Connection TE page 149
- Make Connections TE page 152A
 - Language Arts Connection Name the Brightest Stars (Challenging)

MATH: Math Expressions

- Math Connection TE page 110
- Math Expressions Connections:
 - o Unit 2 Lesson 9: Graph with Decimal Numbers MX TE page 173
 - o Unit 7 Lesson 6: Graph Ordered Pairs MX TE pages 595-596
 - o Unit 8 Lesson 7: Read and Make Line Plots MX TE pages 648-650
- Make Connections TE page 120A
- Math Connection Predict Tides (Average)
- Math Expressions Connections:
 - o Unit 7 Lesson 4: Patterns and Relationships MX TE page 579
 - o Unit 7 Lesson 6: Graph Ordered Pairs MX TE pages 595-596
 - o Unit 8 Lesson 7: Read and Make Line Plots MX TE pages 648-650
- Math Connection TE page 147
- Math Expressions Connections:
 - o Unit 4 Lesson 1: Shift Patterns in Multiplication MX TE pages 294-302
 - o Unit 4 Lesson 2: Patterns with Fives and Zeros MX TE pages 306-308
 - o Unit 4 Lesson 3: Sharing Methods for Multiplication MX TE pages 312-314
 - o Unit 4 Lesson 4: Multiply Two-Digit Numbers MX TE pages 318-322
 - o Unit 4 Lesson 5: Practice Multiplication MX TE page 326
 - Unit 6 Lesson 2: Situation and Solution Equations for Multiplication and Division MX TE pages 482-486
- Make Connections TE page 152A
- Math Connection Compare Light-Years (Average)
- Math Expressions Connections:
 - o Unit 7 Lesson 5: The Coordinate Plane MX TE pages 584-590
 - o Unit 7 Lesson 6: Graph Ordered Pairs MX TE pages 594-596