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| **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:**   * Most of the cycles and patterns of motion between the Earth and sun are predictable. * Earth’s revolution around the sun takes approximately 365 days. Earth completes one rotation on its axis in a 24-hour period, producing day and night. This rotation makes the sun, stars and moon appear to change position in the sky. Earth’s axis is tilted at an angle of 23.5°. This tilt, along with Earth’s revolution around the sun, affects the amount of direct sunlight that the Earth receives in a single day and throughout the year. The average daily temperature is related to the amount of direct sunlight received. Changes in average temperature throughout the year are identified as seasons. | | | | | | | |
| **PRINT RESOURCES** | | | | | | **DIGITAL RESOURCES** | |
| *ScienceFusion*   * Grade 5 Ohio Test Prep Book pages 1-11 * Unit 3, Lesson 1 * Unit 3, TE pages 107A-120A * Unit 3, Inquiry Flip Chart page 17 * 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 | |
| **SCIENCE AND ACADEMIC VOCABULARY** | |
| Axis, Orbit, Revolve, Rotate, | |
| **DIFFERENTIATION** | | | | **FIELD EXPERIENCE CONNECTIONS** | | | |
| Basic (Extra Support)   * Unit 3 Response to Intervention - TE page 105K * Unit 3 TE pages 108, 111, 113, 114, 117   Advanced (Enrichment)   * Unit 3 TE pages 108, 111, 113, 114, 117 * Unit 3 STEM - Flipchart page 21, TE pages 105H, 153-154B   English Language Learners   * Unit 3 TE pages 105L-105M, 109, 112, 116 | | | | Cleveland Metroparks Zoo: Connections to Africa Program.  ***Program Details***: Students will explore African Elephant Crossing, focusing on how living things, including people, must share resources around them. The Zoo provides scientific tools that students can use during this inquiry-driven program. To prepare in advance please locate the Metroparks Zoo Trunk and Biomimicry Kits that are present in each CMSD K-8 building. Then attend the professional development session and complete teacher and student pre- and post-visit surveys.  For information contact: Sandy Hadgis 216-635-3379 or email: [sjh2@clevelandmetroparks.com](mailto:sjh2@clevelandmetroparks.com) | | | |
| **INQUIRY SKILLS** | | | | | | | |
| * Communicate | * Draw Conclusions | | * 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) | | | | | | | |
| **ASSESSMENTS/PROGRESS MONITORING** | | | | | **ASSESSMENT GUIDE** | | |
| * Sum it Up   + Unit 3, Lesson 1 - SE page 118, TE page 118 * Brain Check and Apply Concepts   + Unit 3, Lesson 1 - SE pages 119-120, TE pages 119-120 * Unit 3 Review - TE pages 155A-158 * Unit 3 Short Option Performance Assessment - TE page 157 | | | | | Lesson Quiz   * Unit 3, Lesson 1 - page AG 25 * Unit 3 Test and Performance Task with Long Option Rubric - pages AG-AG | | |
| **ACADEMIC CONNECTIONS TO OTHER DISCIPLINES** | | | | | | | |
| ELA: Journeys   * Writing Connection - TE page 115 * Make Connections - TE page 120A   + Writing Connection - Sun, Earth, Moon Booklet (Average) | | MATH: Math Expressions   * Math Connection - TE page 110 * Math Expressions Connections:   + Unit 2 Lesson 9: Graph with Decimal Numbers MX TE page 173   + Unit 7 Lesson 6: Graph Ordered Pairs MX TE pages 595-596   + 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:   + Unit 7 Lesson 4: Patterns and Relationships MX TE page 579   + Unit 7 Lesson 6: Graph Ordered Pairs MX TE pages 595-596   + Unit 8 Lesson 7: Read and Make Line Plots MX TE pages 648-650 | | | | | |