

Name: \_\_\_\_\_ CORE: \_\_\_\_\_

Start Date: \_\_\_\_\_

## CYCLES OF EARTH AND MOON - LEARNING MASTERY GRID

**STANDARD FOCUS:** The relative patterns of motion and positions of the Earth, moon and sun cause solar and lunar eclipses, tides and phases of the moon.

**VOCABULARY TERMS:** Orbit, Revolution, Rotation, High Tide, Low Tide, Solar Eclipse, Lunar Eclipse, Neap Tides, Spring Tides, New Moon, Quarter Moon, Full Moon, Waxing Gibbous, Waxing Crescent, Waning Gibbous, Waning Crescent. Waxing, Waning.

<p><b>LEVEL 5: Predict &amp; Infer</b></p> <p><b>TARGET: I CAN: predict and infer what the affects and ramifications would be if the moon was destroyed or its' orbit or pattern changed or stopped, citing accurate evidence and support for predictions.</b></p>	<p><b>E&amp;M 5A:</b> Create and produce a movie trailer for a movie that would showcase what would happen if the moon stopped revolving around the earth or was destroyed. What would the impact be on the oceans, wildlife, people...etc. This will require some extra research and in depth knowledge of other ways the moon affects our planet.</p> <p>Another option may be chosen by student if they have another creative idea or way to demonstrate extended knowledge of the moon and its interactions with our planet.</p>				
<p><b>LEVEL 4: Construct &amp; Design</b></p> <p><b>TARGET: I CAN Construct and design a model or demonstration (physical or digital) of how the moon's position compared to earth creates phenomenon of phases, eclipses, and tides.</b></p>	<p><b>E&amp;M-4A: Create a children's story / explanation about the moon and its cycles, phases, and tides.</b></p> <p>For this task, you must fully understand the processes we have discussed (Moon position, phases, tides, eclipses) in order to explain them in simple terms to a child through writing and creating a story. The story should be original but can be adapted from already created stories. If you would like to complete another task (e.g. comic strip, video, movie etc.) please ask your coach.</p> <p><b>NEED:</b> All previous assignments / Learning Targets Mastered  <b>ASSESSMENT:</b> Product created, Graded based on rubric.</p>				
<p><b>LEVEL 3: Compare &amp; Contrast</b></p> <p><b>TARGET: Compare and contrast the patterns of the moon's position and phases with its visual appearance, eclipses and tides.</b></p>	<p><b>E&amp;M-3A: Phases Simulation</b>            Complete moon phase simulation activity using link on EDMODO.</p> <p><b>Need:</b> Device, Edmodo, simulation activity sheet.</p> <p><b>ASSESSMENT:</b> lab responses and student responses.</p>	<p><b>E&amp;M 3B: Position Challenge</b></p> <p>Show full understanding of cycles and phases of moon as well as their affects on phenomenon of Tides and eclipses through completion of the Position challenge. Model each phenomenon accurately to show mastery.</p> <p><b>NEED:</b> Position challenge sheet.  <b>ASSESSMENT:</b> Student responses.</p>	<p><b>E&amp;M 3C – SUMMATIVE ASSESSMENT</b></p> <p>Complete summative assessment. You will have 3 chances to complete this assessment</p> <p><b>SCORE:</b> _____</p> <p><b>*85% Mastery must be achieved. If it is not achieved after 3 tries, additional review activities must be completed.</b></p>		
<p><b>LEVEL 2: Apply &amp; Demonstrate.</b></p> <p><b>TARGET: I CAN apply and demonstrate knowledge of how the moon's change in position and phases around earth leads to high and low as well as NEAP and SPRING tides on earth due to its gravitational pull.</b></p>	<p><b>E&amp;M-2A: Class Notes (Tides):</b></p> <p>Complete all notes on moon position and tides. Complete activity sheet and exit slip.</p> <p><b>NEED:</b> Notes sheet, materials.</p> <p><b>ASSESSMENT:</b> exit slip / notes</p>	<p><b>E&amp;M-2B: (Class) Zaption Video Tides:</b></p> <p>Complete the zaption video and all required responses.</p> <p><b>Need:</b> Device, video</p> <p><b>ASSESSMENT:</b> student responses and end questions.</p>	<p><b>E&amp;M: 2C Brain-pop TIDES</b></p> <p>View and complete activity from brain pop using the video and worksheet. Search Complete all questions and quiz at end of video. Send results to <a href="mailto:grademecoach@gmail.com">grademecoach@gmail.com</a>.</p> <p><b>SCORE:</b> _____ / 10</p> <p><b>NEED:</b> Tech Device  <b>ASSESSMENT:</b> Quiz / Sheet</p>	<p><b>E&amp;M-2D: Tides Data Lab</b></p> <p>Complete the Tides Data activity. Be able to explain and demonstrate what causes the changes in the tides and why the time interval is the length it is.</p> <p><b>NEED:</b> Tides data table and activity sheet.</p> <p><b>ASSESSMENT:</b> Student responses and explanations.</p>	
<p><b>LEVEL 1: Define &amp; Explain:</b></p> <p><b>TARGET: I CAN define and explain how the moon's change in position around earth leads to changes in its appearance (phases) as well as LUNAR and SOLAR eclipses.</b></p> <p>+ Define all Vocabulary</p>	<p><b>E&amp;M -1A: Class Notes (Phases and Eclipses)</b>            Complete all notes and activities from lesson.</p> <p><b>NEED:</b> Device, Nearpod APP, Notes sheet.</p> <p><b>ASSESSMENT:</b> Formative responses and exit quiz from notes.</p>	<p><b>E&amp;M 1B: Quizlet : Vocab Review</b>            Sign into your Quizlet Account and complete the <b>Earth and Moon</b> Card Set. Complete ALL activities and take "TEST" at end.</p> <p><b>SCORE:</b> _____  <b>+ KIM Sheets if not mastered.</b></p> <p><b>NEED:</b> Tech Device, <a href="http://www.quizlet.com">www.quizlet.com</a></p> <p><b>ASSESSMENT:</b> Practice and Test data from quizlet</p>	<p><b>E&amp;M 1C: Moon Phases Inquiry Lab</b></p> <p>Complete inquiry lab using handouts and directions.</p> <p><b>NEED:</b> Lamp, Ping pong Balls, Activity</p> <p><b>ASSESSMENT:</b> Student responses, lab sheet answers, participation.</p>	<p><b>E&amp;M: 1D: Brain POP</b></p> <p>Complete activity from brain pop using the video and worksheet. Complete quiz at end of the video and send to <a href="mailto:grademecoach@gmail.com">grademecoach@gmail.com</a>.</p> <p><b>SCORE:</b> ___/10</p> <p><b>NEED:</b> tech, worksheet</p>	<p><b>PROVE MASTERY</b></p> <p>Successful completion of socrative <b>Earth and Moon Level 1</b> quiz to show knowledge.</p> <p>85% passing</p> <p><b>TEACHER CHECK:</b> _____</p> <p>Create an <b>Action Plan</b> if you do not pass.</p>

