

Lesson Plan Template

Grade: Middle School		Subject: Science	
Materials: paper, drawing utensils, computers		Technology Needed: Computers	
Instructional Strategies: <input type="checkbox"/> Direct instruction <input type="checkbox"/> Peer teaching/collaboration/ <input type="checkbox"/> Guided practice cooperative learning <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> Learning Centers <input type="checkbox"/> PBL <input type="checkbox"/> Lecture <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Technology integration <input type="checkbox"/> Modeling <input type="checkbox"/> Other (list)		Guided Practices and Concrete Application: <input type="checkbox"/> Large group activity <input type="checkbox"/> Hands-on <input type="checkbox"/> Independent activity <input type="checkbox"/> Technology integration <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain:	
Standard(s) HS-PS1-1 <i>MS-ESS1-1 Develop and use a model of the earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.</i>		Differentiation Below Proficiency: Comparing pictures to definitions and they will only need to answer the main questions from the worksheets. Above Proficiency: Timeline should be completed and in depth and can answer more questions if time permits. They will also be looked to for helping their peers who have questions. Approaching/Emerging Proficiency: This is where most of the class should be. They will be tasked with completing the lesson as it is laid out below. Modalities/Learning Preferences: Visual- spatial and interpersonal intelligences will be heavily targeted during this lesson with all of the media and hands of learning we are doing.	
Objective(s) <i>TLW, at the end of the lesson, be able to show the lunar phases by creating a timeline of the different moons and answer interpretive questions about the lunar phases.</i> Bloom's Taxonomy Cognitive Level: apply and understand			
Classroom Management- (grouping(s), movement/transitions, etc.) Students will be grouped into groups of 3 when creating the timeline. These will be based on grouping students who are above proficiency with below and emerging. That way there is a leader in the group and if their peers have questions hopefully, they will be answered by student leaders.		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) Students should be working quietly with their partner or independently. This lesson is meant to be interactive, allowing the students to move freely throughout the classroom. If they need to be redirected, I will talk to the students individually, or remind the class as a whole that their volume level is getting to high.	
Minutes	Procedures		
	Set-up/Prep: Before I begin this lesson, the students will be collecting information about the moon 3 weeks prior to this lesson.		
5-7	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) To start the lesson the students will show their data collection about the moon. This should include a drawing of what the moon looks like at night and how many nights it stayed that way. We will find similarities among the students and proceed to watch a video in the explain portion.		
20	Explain: (concepts, procedures, vocabulary, etc.) I will show the students a Crash Course video. https://www.youtube.com/watch?v=AQ5vty8f9Xc Not all of it needs to be shown, use your own discretion. Have the students jot down definitions for the explain part of the lesson. I will define the terms axis, crescent, First Quarter, Full Moon, gibbous, illuminate, New Moon, orbit, revolve, rotate, Third Quarter, waning, waxing so the students are familiar with them. I will ask the students to give their input on the terms we learned from the video. Using the pictures of the moon the students drew will be very helpful in defining terms. <ul style="list-style-type: none"> • Axis • Crescent • First quarter • Full moon • Gibbous • Illuminate • New moon • Orbit • Revolve • Rotate • Third quarter 		

Lesson Plan Template

	<ul style="list-style-type: none"> • Waning • Waxing <p>Next, I will explain how long it takes to orbit earth and how often we get a new moon.</p> <ul style="list-style-type: none"> • It takes approximately 29.5 days or 1 month for the moon to orbit the earth. • We have 12 new moons each year • Each phase is 5-6 days long
20	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</p> <p>Some of the explore will have been done ahead of time with documenting the moon. The students will now create a proper timeline with their new information and answer questions from a worksheet.</p> <p>Define: Moon: _____</p> <p>What is a lunar cycle? _____</p> <p>How long is the lunar cycle for the Earth's moon? _____</p> <p>Describe the sequential appearance of a moon that is going through the waxing phase of the lunar cycle.</p> <p>_____</p> <p>How would the moon appear to change to an observer on Earth during the waning phase of the lunar cycle?</p> <p>_____</p> <p>Explain why the moon often appears to be illuminated in the night sky.</p> <p>_____</p> <p>In which direction does the moon orbit Earth? _____</p> <p>Explain why the moon appears to change shape.</p> <p>_____</p> <p>Technology Integration:</p> <p>In addition to the above activities the students will be creating their own timeline video using Videoscribe. https://www.videoscribe.co/en/education</p> <p>The students will be using their data to make a whiteboard video of their lunar timeline. In the video they will draw the moon for each day of the cycle, discuss the meaning behind each stage, and any other important information they feel would make the video more informational. We will take class time to complete this project.</p>
3-4	<p>Review (wrap up and transition to next activity):</p> <p>After learning what we did today how do you think the lunar cycle correlates with lunar eclipses?</p> <p>How has your knowledge changed about the lunar cycle from before the lesson to now?</p> <p>The next lesson will be looking at the eclipses of the sun and moon. As well as transitioning into the seasons. These are both continuations of the same standard.</p>
<p>Formative Assessment: (linked to objectives)</p> <p>Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc.</p> <p>Checking on the student's timeline and worksheets to make sure they have the concept grasped and answer any questions as they are working.</p> <p>Consideration for Back-up Plan:</p> <p>If there are too many cloudy nights and the students do not collect all of their data, we can use computer generated moon cycles.</p>	<p>Summative Assessment (linked back to objectives)</p> <p>End of lesson:</p> <p>The student's timeline and worksheet will be graded for correctness.</p> <p>If applicable- overall unit, chapter, concept, etc.:</p>
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</p> <p>Upon reviewing the comments made on my lesson plan I made corrections in the behavior expectations which includes strategies better suited for the activity that we will be doing. I think this lesson is a good integration of media and hands-on learning. It was also mentioned that I should include questions in the review part to wrap up the lesson.</p>	