

Year 7 Science - Lesson Plan

Date: Thur 21th May 2014

Topic: Astronomy; Lesson: Moon Phases

Text Reference: PS7 Chapter 9, Earth in Space

Learning objectives:

- Review orbit, day/night, seasons
- Model and investigate lunar orbit, cycles, moon phases.
- Investigate the theories behind the origins of the Moon.

STUDENT ACTIVITY			TEACHER ACTIVITY	HOMEWORK / COMMENT
<p>1. Students self correct homework (I will still collect)</p>		15 min	<p>1. Review day/night, seasons What does one orbit around the sun mean? What causes day and night? What causes seasons?</p> <p>http://astro.unl.edu/classaction/animations/coordsmotion/eclipticsimulator.html</p> <ul style="list-style-type: none"> • self correct with a coloured pen 	<p>Ask Sandra to put up the luminous moon model (it will change phases with the clicker)</p>
		1:30 min	<p>2. Engage: Video (1:30) https://www.youtube.com/watch?v=i235Y2HRksA</p>	<p>Torch or projector light/head/storof foam ball on a stick (sqewer)</p>
		3min	<p>3. Intro lesson: Moon What do we know about the moon? What keeps the moon in the orbit around the Earth? Gravity.</p>	<p>These links to go on wiki: Origins of the Moon http://www.fossweb.com/delegate/ssi-foss-ucm/ContributionFolders/FOSS/multimedia/Planetary_Science/binders/moon/origin_of_the_moon_1.html</p>
		10 min	<p>4. Explain theory and Demo practical experiment – moon orbit/phases of the moon</p> <ul style="list-style-type: none"> • Explain and demonstrate the moon orbit and phases of the moon as we see them from the Earth 	

<p>4. Working with others: practical experiment – students model phases of the moon (students working in pairs or 4) (at the prac stations)</p> <p>Fill out worksheet Section 1 while doing the experiment</p> <hr/>	10min		<p>(use various animation software as visual help)</p> <p>1. Moon orbit around Earth, sun: http://astro.unl.edu/classaction/loader.html?filename=animations/lunarcycles/moonphases.swf&movieid=moonphases&width=900&height=600&version=6.0.0</p> <p>2. Moon orbit around Earth with phases: http://astro.unl.edu/classaction/loader.html?filename=animations/lunarcycles/lunarapplet.swf&movieid=lunar_applet&width=840&height=680&version=6.0.0</p> <p>3. Moon phases: http://astro.unl.edu/classaction/loader.html?filename=animations/lunarcycles/lunar_phaser.swf&movieid=lunar_phaser&width=300&height=450&version=6.0.0</p>	<p>Homework: (put on wiki)</p> <p>1. Finish worksheet</p> <p>2. Phases of the Moon flicker book</p> <p>Q: research the following:</p> <p>1. Why can we sometimes see the moon during the day?</p> <p>2. Does the northern hemisphere see the moon differently from us here in Australia</p>
<p>4.Solo: Complete rest of worksheet (research activity)</p> <p>part 1: Origins of the moon (teacher assist if needed, link to animation on WIKI)</p> <p>part2: Fill in the missing words by searching online</p> <hr/>	20min	3min	<p>Video: Phases of the moon song https://www.youtube.com/watch?v=AQRNzep4wILesson wrap up</p>	<p>Q: research the following:</p> <p>1. Why can we sometimes see the moon during the day?</p> <p>2. Does the northern hemisphere see the moon differently from us here in Australia</p>
		5min	<p>5. Wrap up –</p> <ul style="list-style-type: none"> • Hand out planet grid (put in folders) • Homework reminder 	<p>If we have spare time: (2:32)</p> <p>Video: the big impact theory https://www.youtube.com/watch?v=dw_Y_gujBwU</p>