

# Stellarium

<b>Grade Level:</b>	<b>3</b>	<b>Subject:</b>	<b>Science</b>	<b>Prepared By:</b>	<b>Ashley Bullock &amp; Ben Davis</b>
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<p><b>Standard Course of Study Goals &amp; Objectives</b></p> <p><b>3.02:</b> Observe that objects in the sky have patterns of movement including: Sun, Moon, and Stars.</p> <p><b>3.04:</b> Use appropriate tools to make observations of the moon.</p> <p><b>3.05:</b> Observe and record the change in the apparent shape of the moon from day to day over several months and describe the pattern of changes.</p> <p><b>3.06:</b> Observe that patterns of stars in the sky stay the same, although they appear to move across the sky nightly.</p>	<p><b>Technology Integration</b></p> <p>Use of a simulation to view the sun/moon/earth system, apparent shapes of the moon across time, and patterns of stars in the sky.</p>
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	<b>Description</b>	<b>Student Resources</b>
<b>Prior Knowledge/ Experience</b>	<ul style="list-style-type: none"> <li>Students should show proficiency with applicable terminology (vocabulary).</li> <li>Review/informally assess student knowledge.</li> </ul>	<p><b>Materials Needed</b></p> <ul style="list-style-type: none"> <li>Stellarium program</li> <li>“Setting Your Location” (video)</li> </ul>
<b>Guided Activity</b>	<p>Begin with a simple guided tour of the program for the kids. Keep it simple</p> <ul style="list-style-type: none"> <li>Moving the view around</li> <li>Advancing time</li> <li>Turning on constellations</li> <li>Searching for objects, selecting, hold on object</li> <li>Ground and Atmosphere</li> </ul>	

<b>Project</b>	<p>You are a member of a research team who is building a solar telescope to observe the SUN. Your job is to make observations of the sun to see:</p> <ul style="list-style-type: none"> <li>Is there a pattern to where the sun rises throughout the year?</li> <li>Is there a pattern to what constellations the sun passes in front of throughout the year?</li> </ul> <p>Your team is also building a lunar observatory as well. You will need to make observations of the MOON:</p> <ul style="list-style-type: none"> <li>How does the moon travel through the sky compared to the earth.</li> <li>Shape of the moon each day for one month</li> <li>Questions: Where is the sun during Full Moon? New Moon? 1/4 moon?</li> </ul> <p>Finally make observations of the constellations.</p> <ul style="list-style-type: none"> <li>How do the constellations move through the sky?</li> <li>Where did the constellation names and shapes come from? How do other cultures view the night sky?</li> </ul>	
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<b>Interdisciplinary Connections</b>	<ul style="list-style-type: none"><li>· Use myths, folktales and legends associated with constellations. (SS 7.02; ELA 2.02)</li><li>· Compare maps historically. Use graphic organizers to show influences of the known sun/moon/earth system on mapping and exploration (SS 3.02, 4.01; ELA 4.04)</li><li>· Chart the phases of the moon for a set period of time and compare the actual data with the simulation. Record the data using spreadsheets/databases (M 4.01)</li></ul>	
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