

## Sun, Moon, Planets – Study Guide

Sun	<ul style="list-style-type: none"> <li>- closest star to Earth</li> <li>- rises in the east, sets in the west</li> <li>- at its highest point in the sky at noon</li> <li>- appears to be moving from east to west, however, Earth is moving, not the sun.</li> <li>- planets and other bodies orbit around the sun</li> <li>- Earth rotates on its axis as it revolves around the sun, this causes day and night.</li> <li>- Earth's axis is tilted which causes seasons.</li> </ul>
Gravity	<ul style="list-style-type: none"> <li>- Gravitational forces affect all matter in the universe.</li> <li>- The force of gravity holds all the parts of the Solar System together</li> </ul>
In our solar system	<ul style="list-style-type: none"> <li>- sun, moons, planets, meteors, asteroids, comets, Milky Way galaxy</li> </ul>
not in our solar system	<ul style="list-style-type: none"> <li>- black holes, other galaxies, stars, etc., . . . .</li> </ul>
models	<ul style="list-style-type: none"> <li>- models are a way to represent concepts that cannot be easily observed (example: the orbit of planets in our solar system around the sun)</li> </ul>
examples of <b>indirect</b> evidence	<ul style="list-style-type: none"> <li>- reading a book, watching a video, listening to a story, etc., . . . .</li> </ul>
examples of <b>direct</b> evidence	<ul style="list-style-type: none"> <li>- observing the moon in its phases</li> <li>- drawing a shadow, performing an experiment, etc. . . .</li> </ul>
shadows	<ul style="list-style-type: none"> <li>- are a dark area where an object has blocked the light</li> <li>- are always on the opposite side from the sun and point away from the sun</li> <li>- are shorter in the summer and longer in the winter because the sun is higher in the sky in the summer and lower in the sky in the winter</li> <li>- to have a shadow you need a light source and an object to block the light</li> </ul>
shadows can give you information about:	<ul style="list-style-type: none"> <li>- the position of the sun</li> <li>- the time of day</li> <li>- where east and west are</li> </ul>
moon	<ul style="list-style-type: none"> <li>- waxing getting larger</li> <li>- waning getting smaller</li> <li>- new moon, crescent, <math>\frac{1}{4}</math>, half moon, <math>\frac{3}{4}</math>, full</li> <li>- takes about a month for the moon to orbit Earth</li> <li>- as the moon revolves around Earth, we see a different part of the side lit by the sun</li> </ul>

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