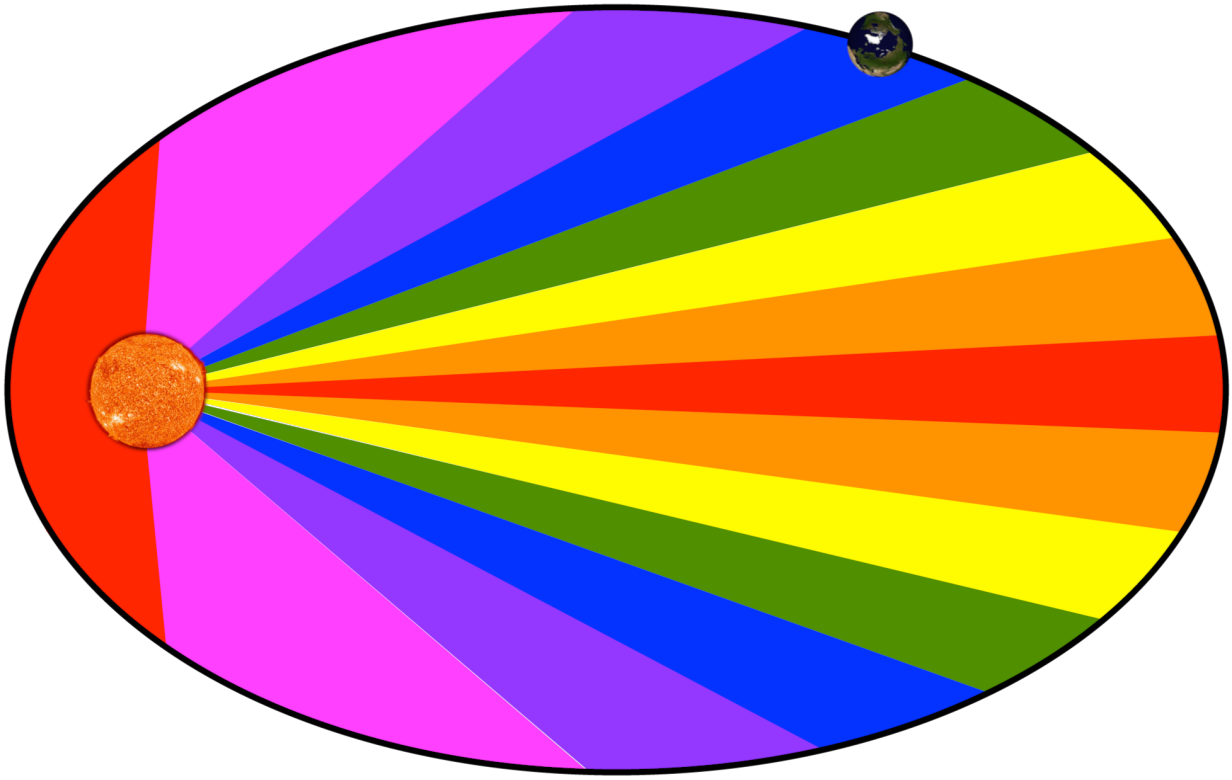
Flipping Physics Lecture Notes:

Kepler's Second Law of Planetary Motion
http://www.flippingphysics.com/kepler-second.html

Kepler's Second Law of Planetary Motion:
"Each planet moves such that an imaginary line drawn between the sun and the planet sweeps out equal areas in equal time periods."



In other words, during an equal time period, the area swept out at any point during an elliptical orbit will be the same, i.e., every area in the figure has the same value.[1]

The main point to understand here is that the speed of the satellite increases as it gets closer to the primary (the object it is orbiting), and the speed of the satellite decreases as it gets farther from the primary. However, it is not uniformly accelerated motion; the acceleration of a satellite is not constant.

Kepler's Law of Planetary Motion is derived from the fact that the angular momentum of a satellite in an elliptical orbit is constant. We have already proven this is a previous lesson.[2] We will derive Kepler's Second Law of Planetary Motion in a future lesson.[3]

Reminder: The orbit of each of the planets is nearly circular. The eccentricity of this ellipse has been greatly exaggerated to make Kepler's Second Law more clear.

[1] I understand my illustration is not perfect. It is close; however, all the areas are not exactly the same. Sorry. ☹
[2] "Are Linear and Angular Momentum Conserved for a Satellite?" https://www.flippingphysics.com/satellite-momentum.html
[3] "Kepler's Second Law Derivation" http://www.flippingphysics.com/kepler-second-derivation.html