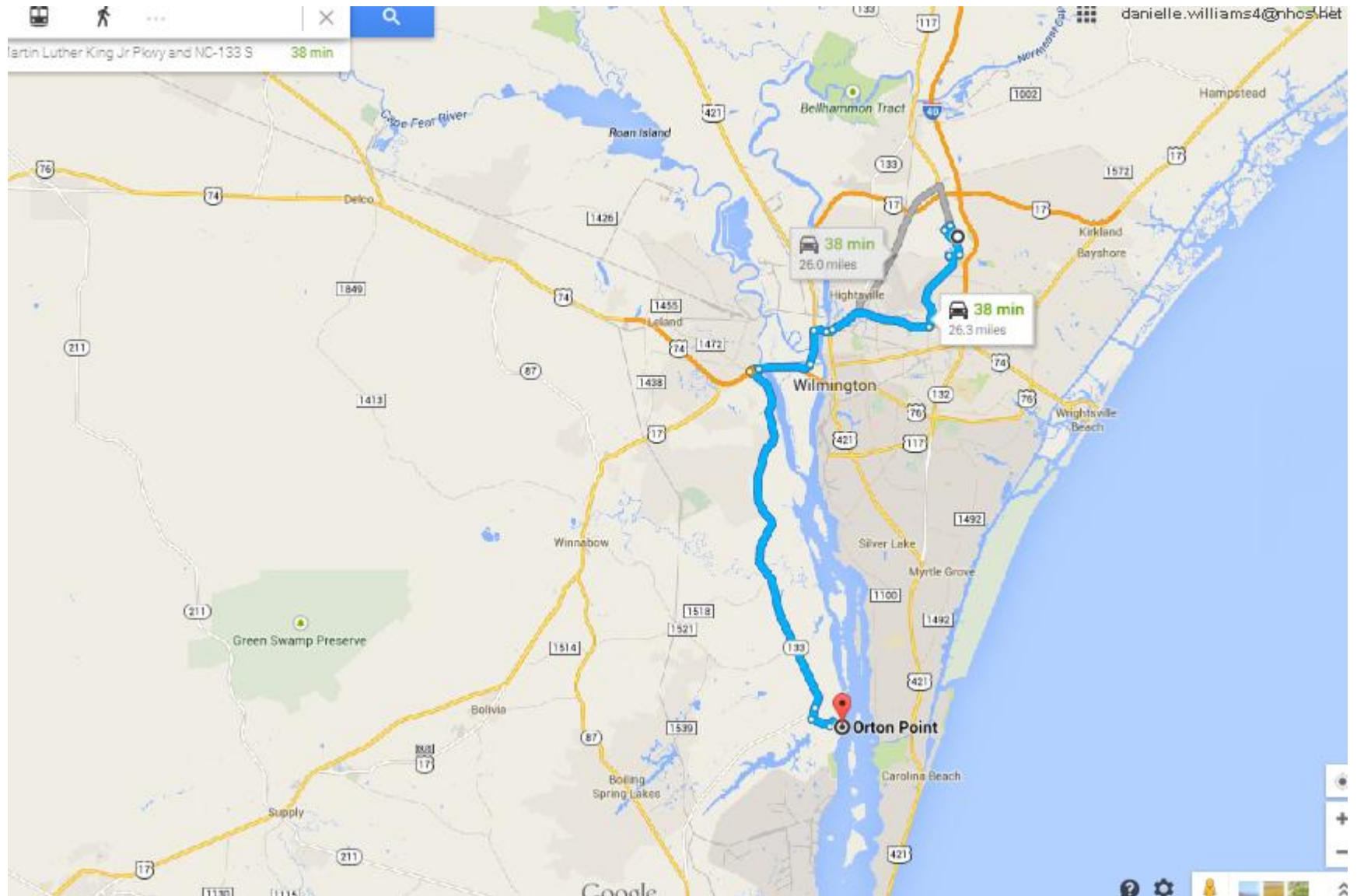
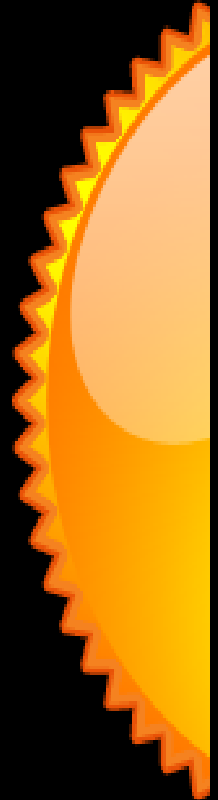
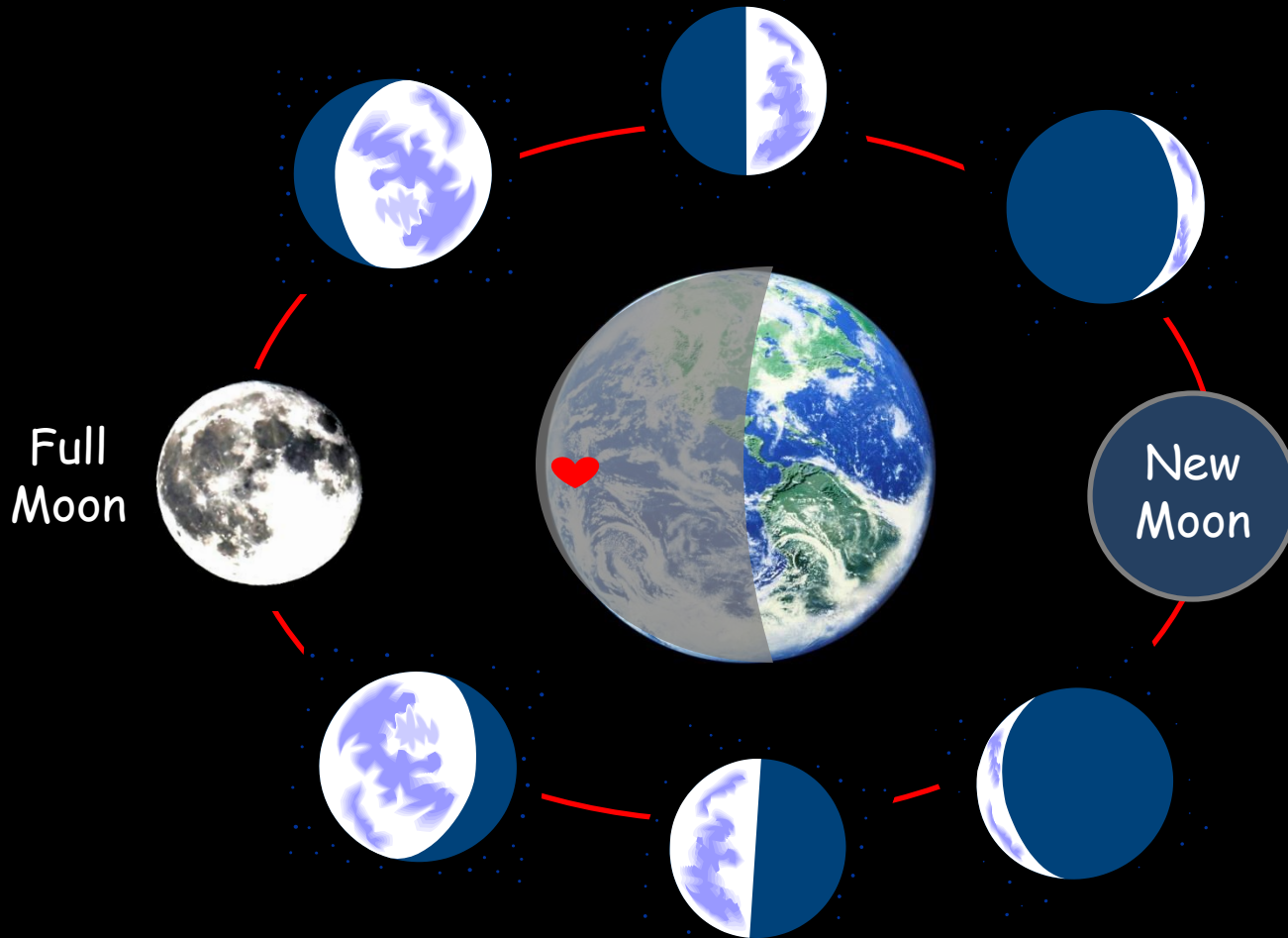


# Laney High School to Orton Point



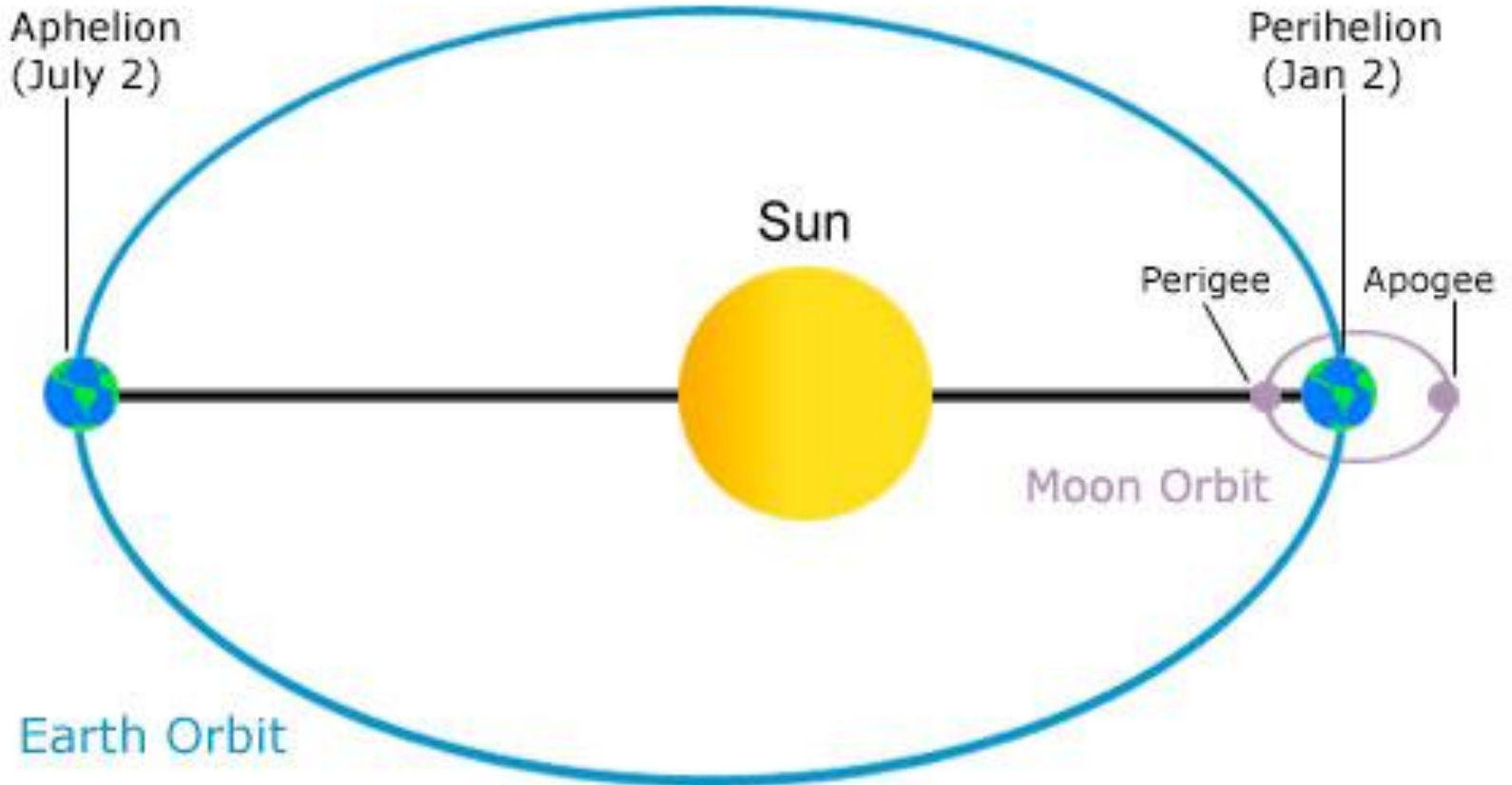
# It's Just a Phase!



How does the Earth's rotation and revolution about the Sun relate to seasons and tides?

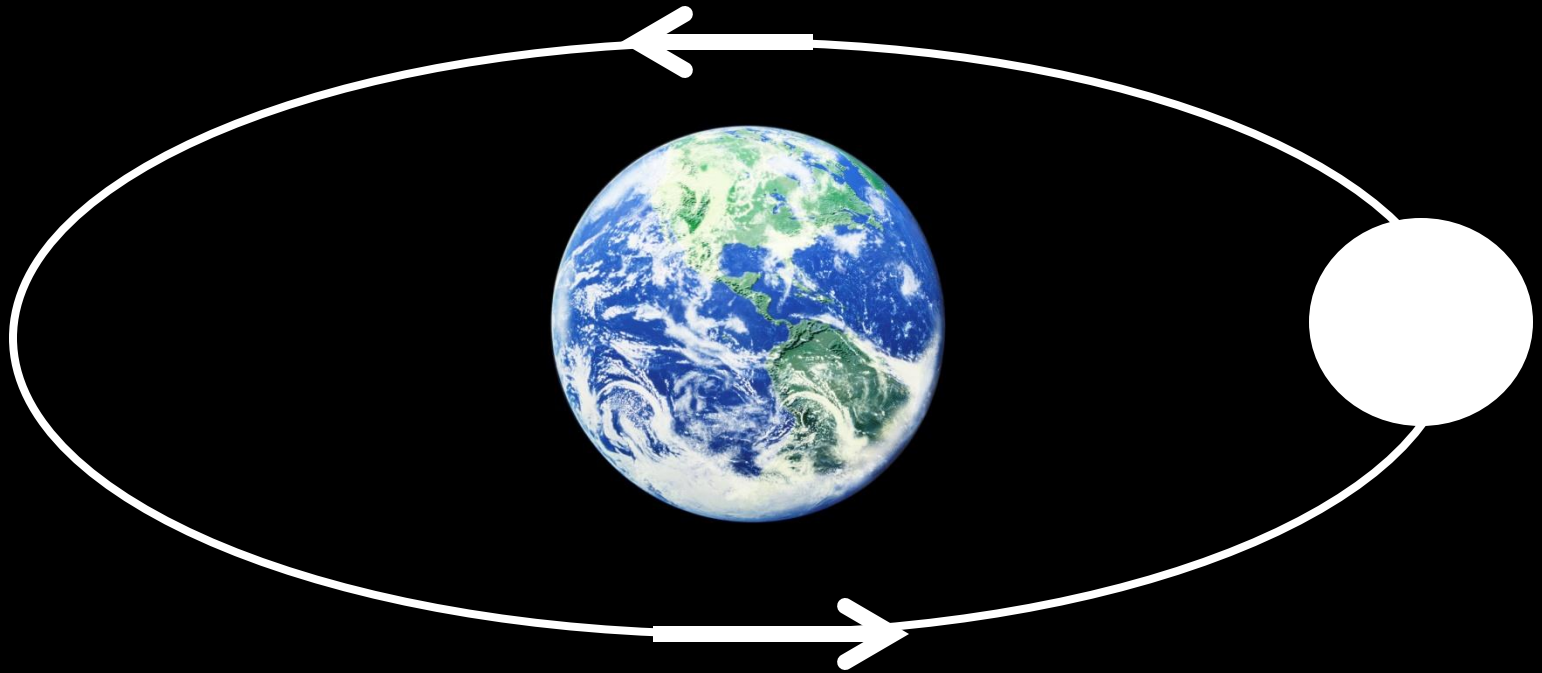
Orbital Shape

[Action](#)



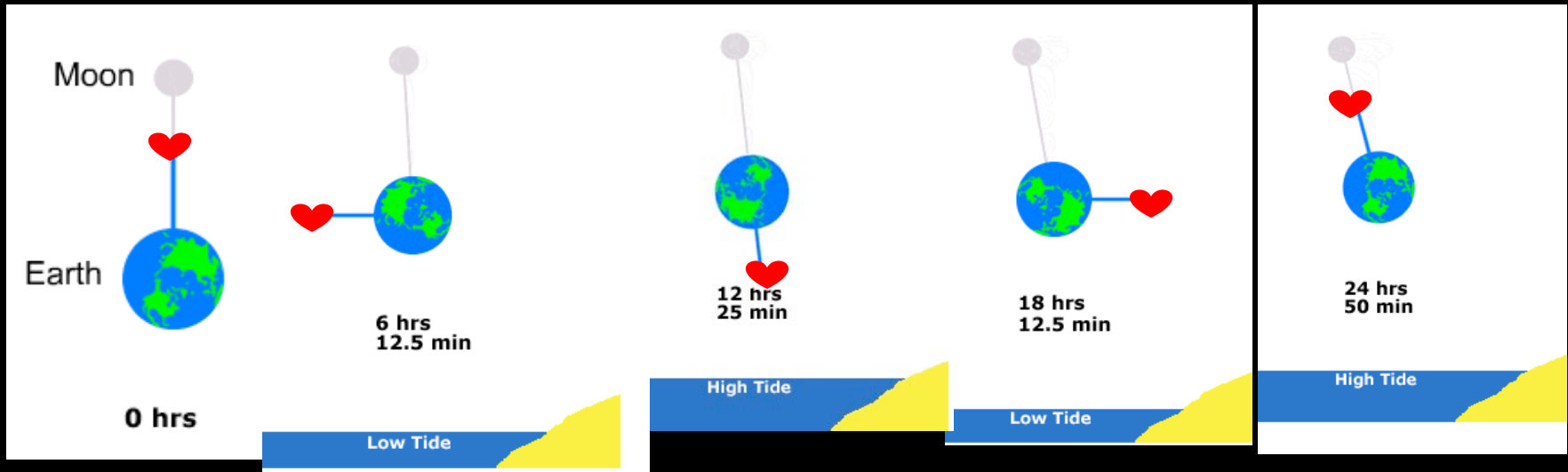
<http://www.schoolobservatory.org.uk/astro/esm/tidesim>

It takes the moon  $27 \frac{1}{3}$  days to revolve around  
the Earth!

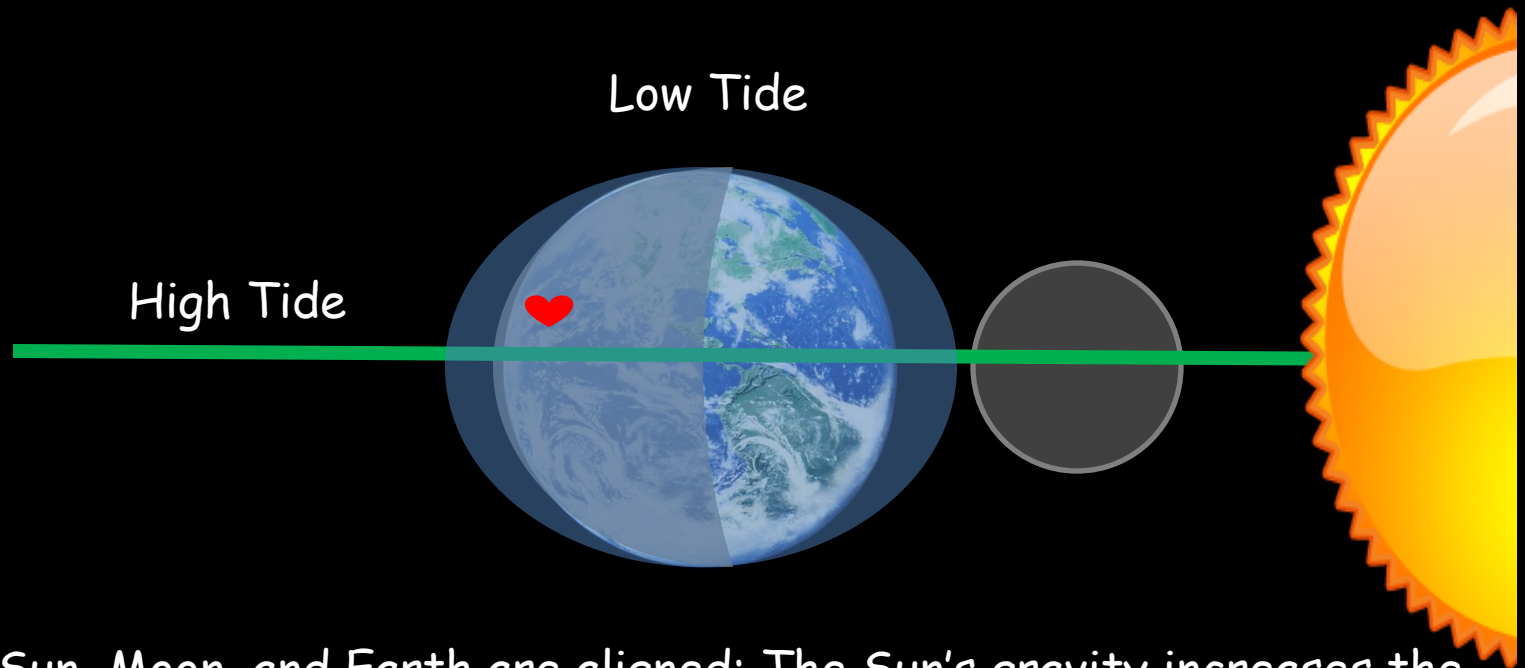


# Gravity of the Moon, Sun, and Earth causes Earth's oceans to rise and fall





# New Moon = Spring Tide



When the Sun, Moon, and Earth are aligned: The Sun's gravity increases the Moon's gravity!

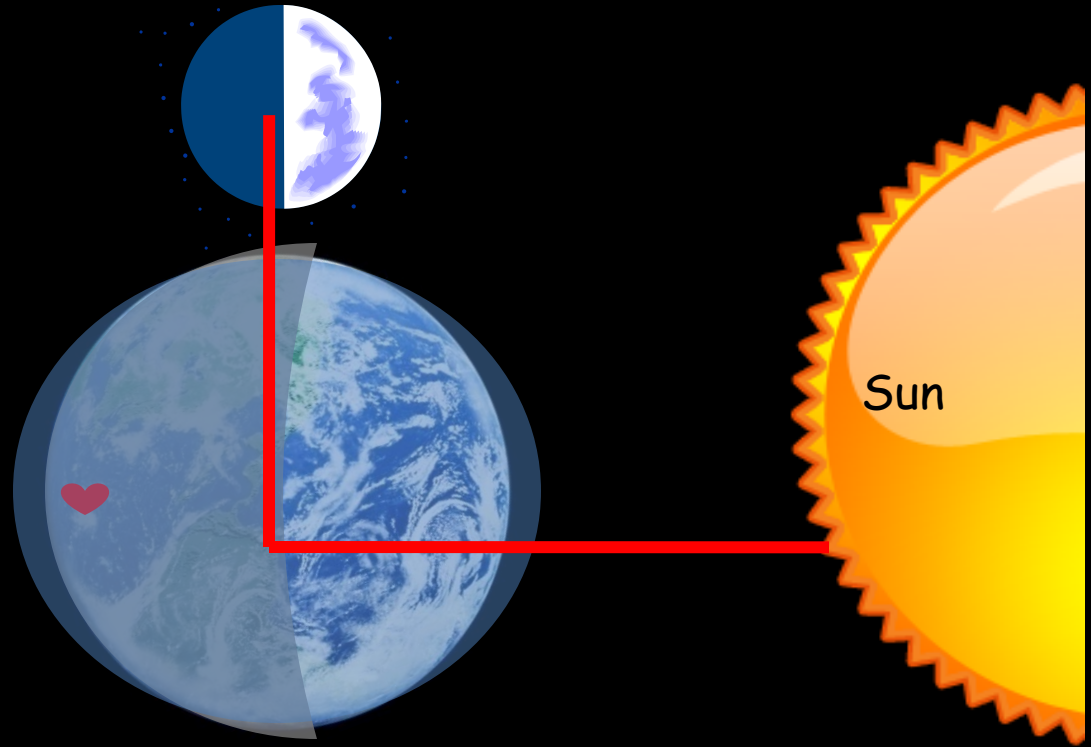
This causes the Earth's oceans to be pulled towards the Moon = High tide  
Then the side not facing the moon also bulges out= Also high tide

# Crescent Waxing



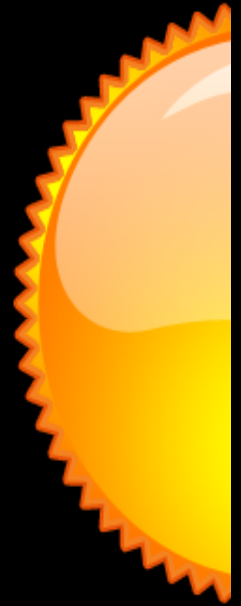


# 1<sup>st</sup> Quarter Moon = Neap Tide

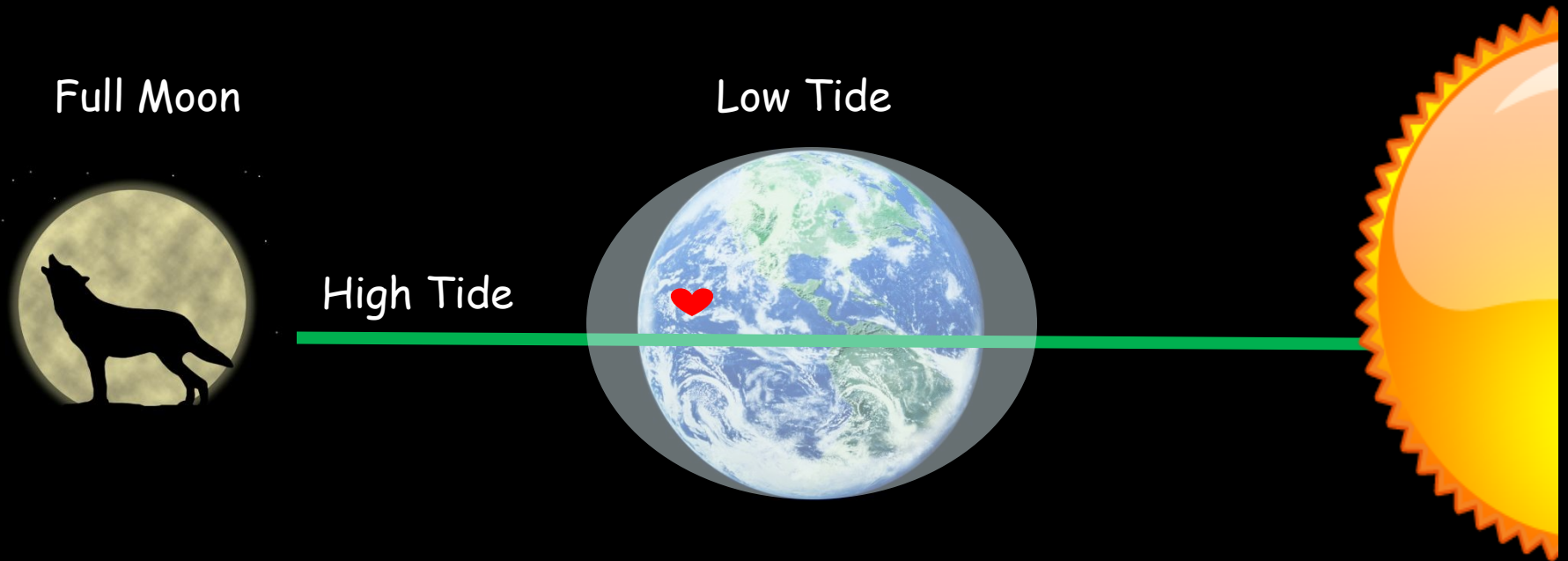


Gravity from the Sun and Moon acts on the Earth at a right angle causing one force to offset the other. This results in a lower tidal range called.

# Gibbous Waxing



# Full Moon = Spring Tide

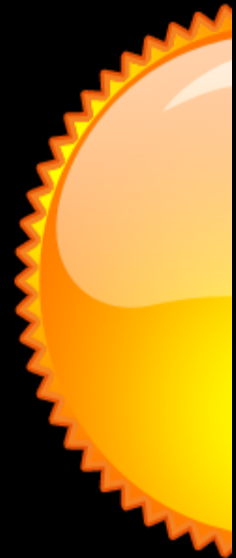


When the Sun, Moon, and Earth are aligned: The Sun's gravity increases the Moon's gravity!

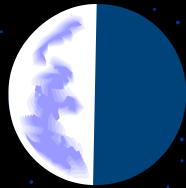
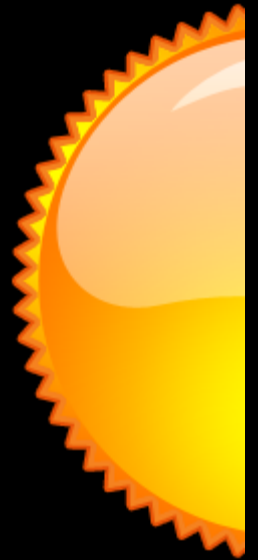
This causes the Earth's oceans to be pulled towards the Moon = High tide  
Then the side not facing the moon also bulges out= Also high tide

# Gibbous Waning

Tonight's  
Moon!



3<sup>rd</sup> Quarter Moon = Neap Tide



# Waning Crescent Moon

