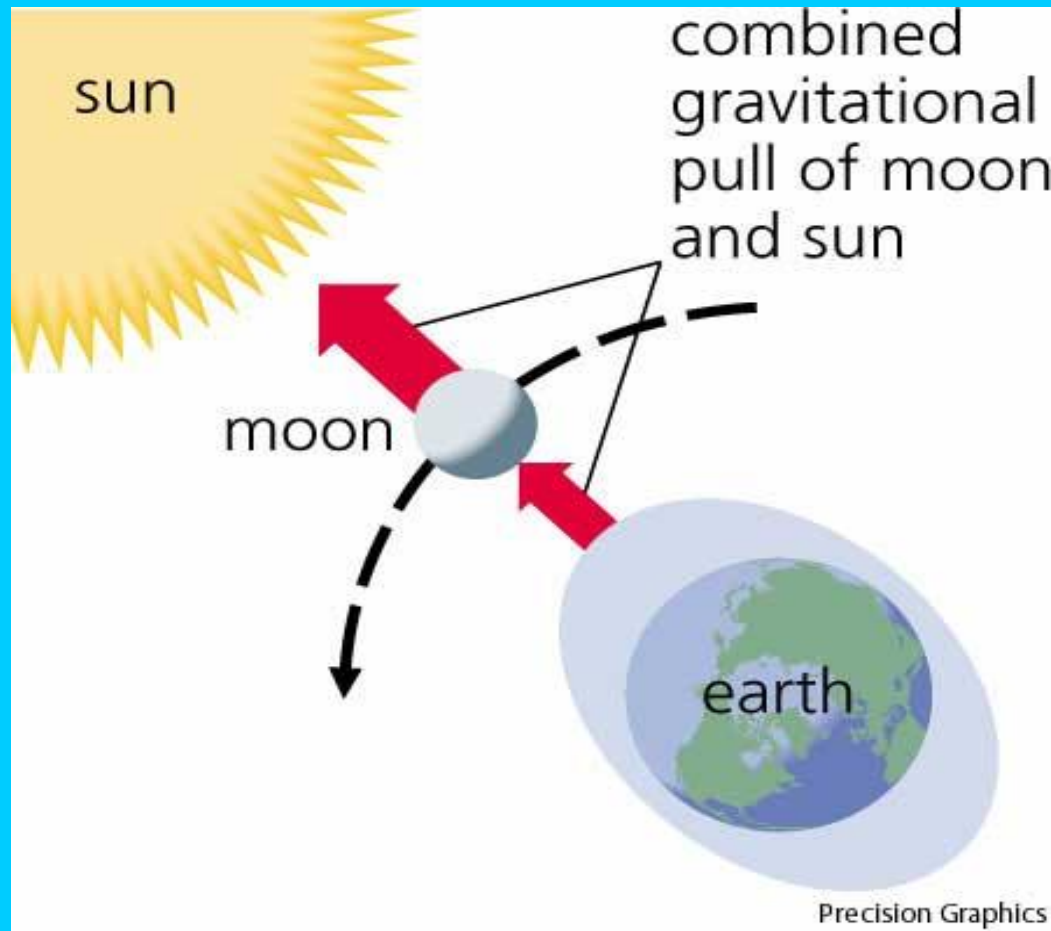


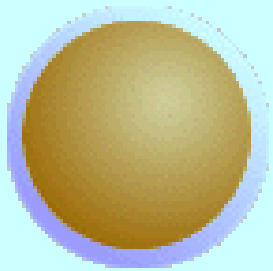
Tides

Daily changes in the elevation of the ocean surface

Brain Pop:
Tides



Result from gravitational attraction between...
Earth, Moon, & Sun

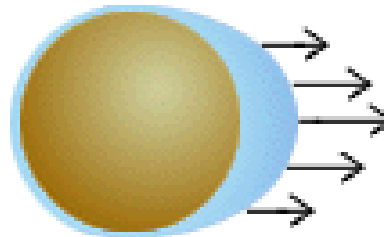


Earth

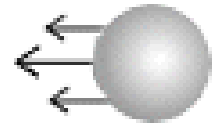
The earth has a uniform level of water all around it.

2 forces act on the water to produce tides...

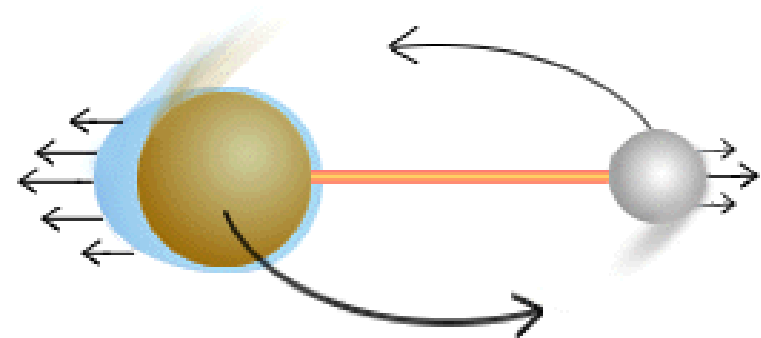
The moon's *GRAVITY* pulls on the earth, and the water bulges toward the moon.



Earth

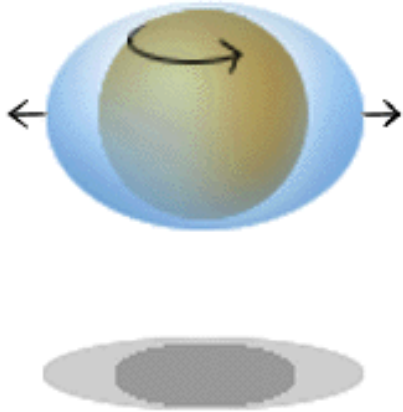


Moon



Because the earth is spinning, there is a force pulling water in the opposite direction → **INERTIA**

The Result...



As the earth turns upon its own axis in about 24 hours, a point on the earth moves through areas with these different forces acting on it.



FLOOD CURRENT

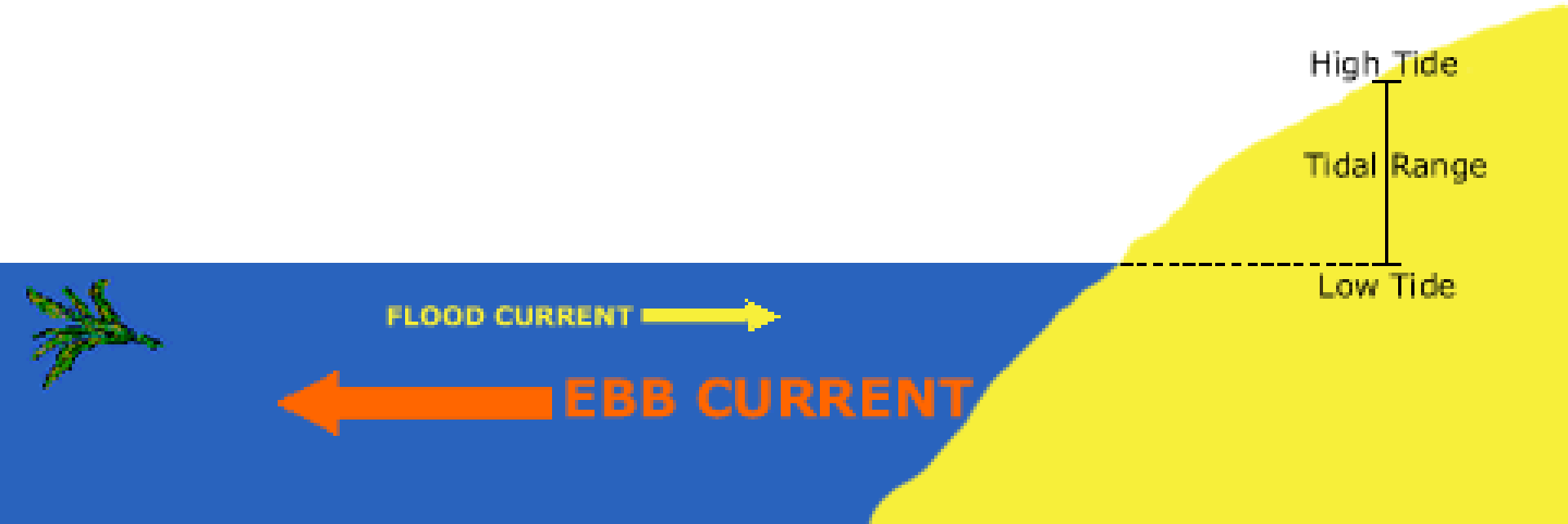


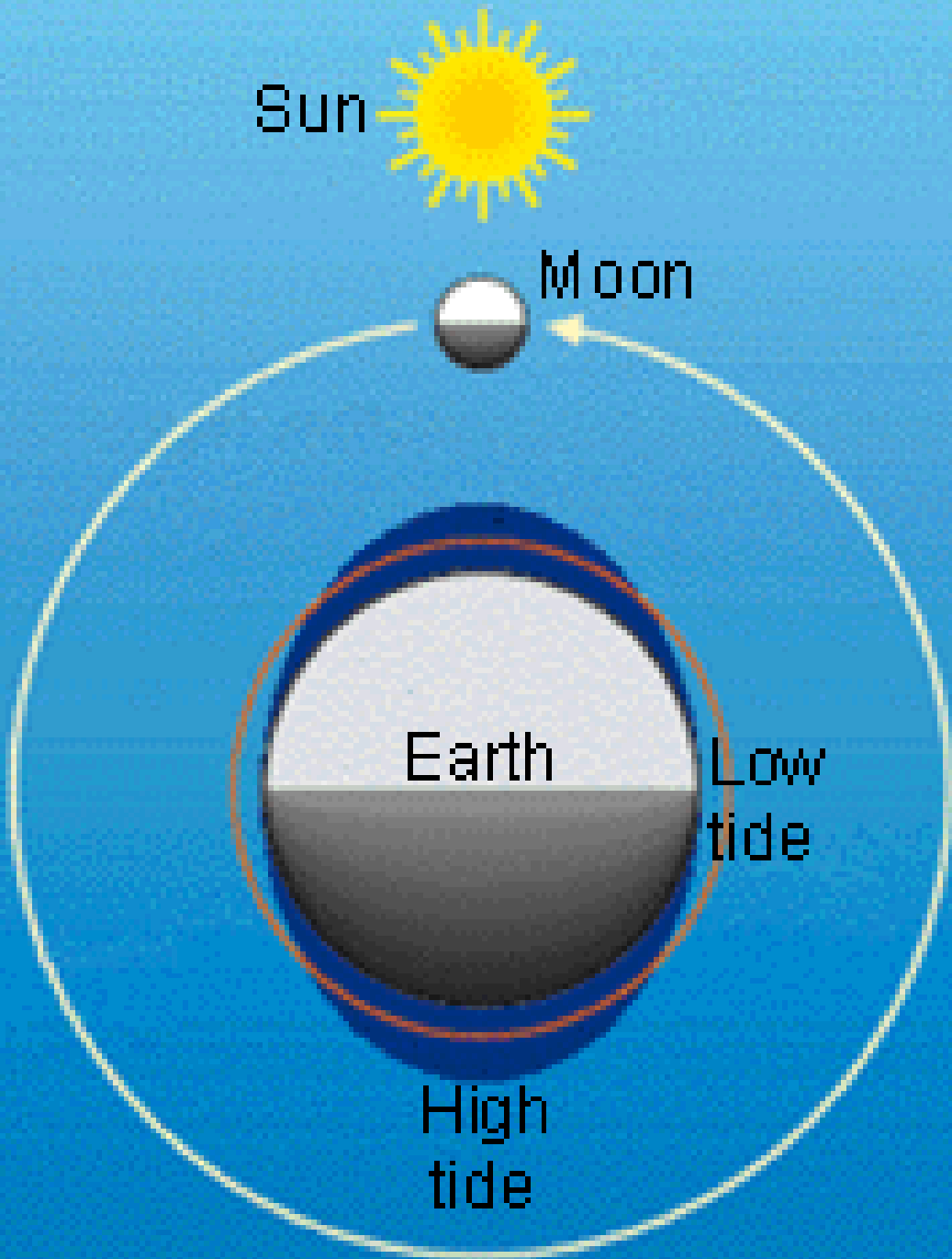
EBB CURRENT

High Tide

Tidal Range

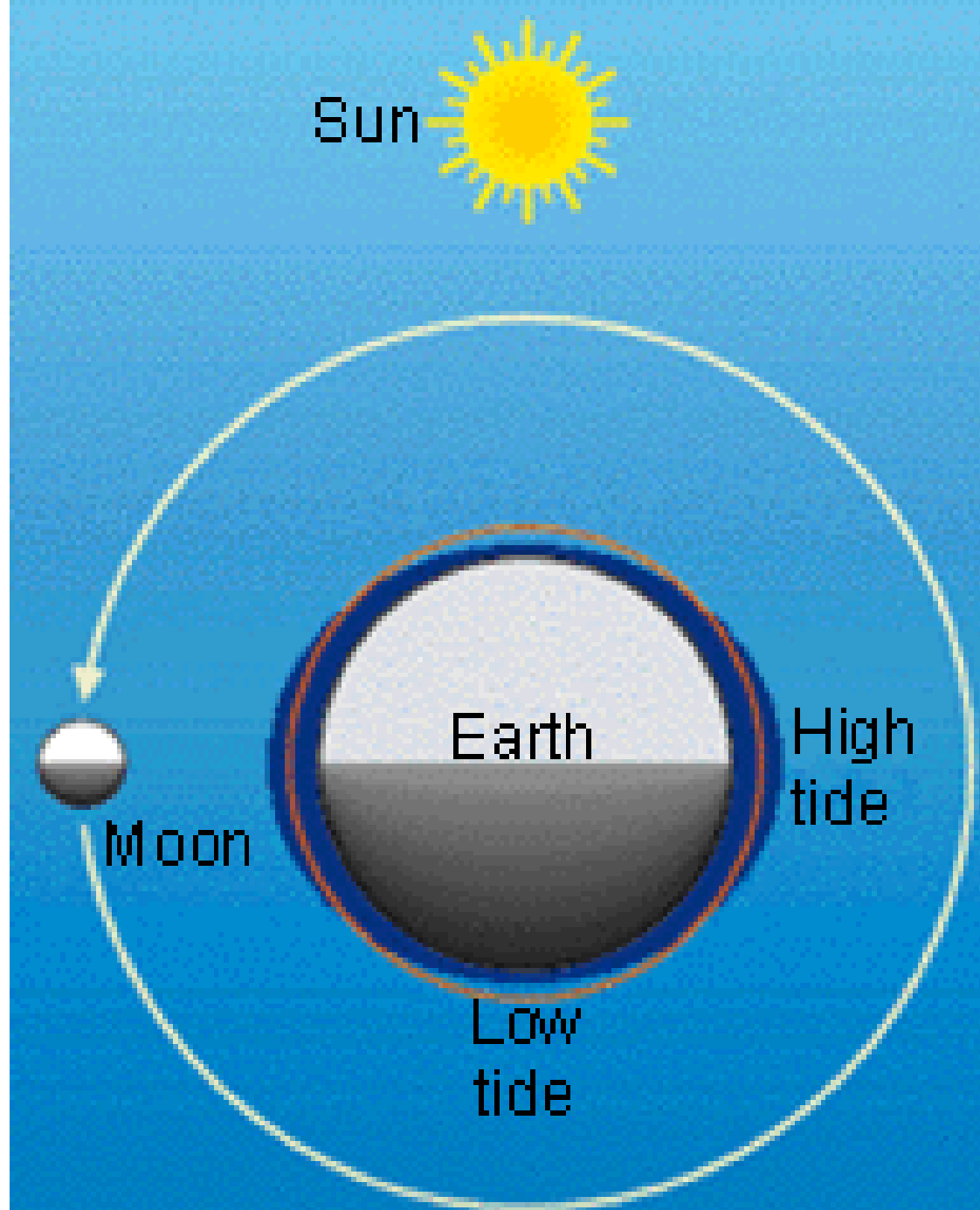
Low Tide



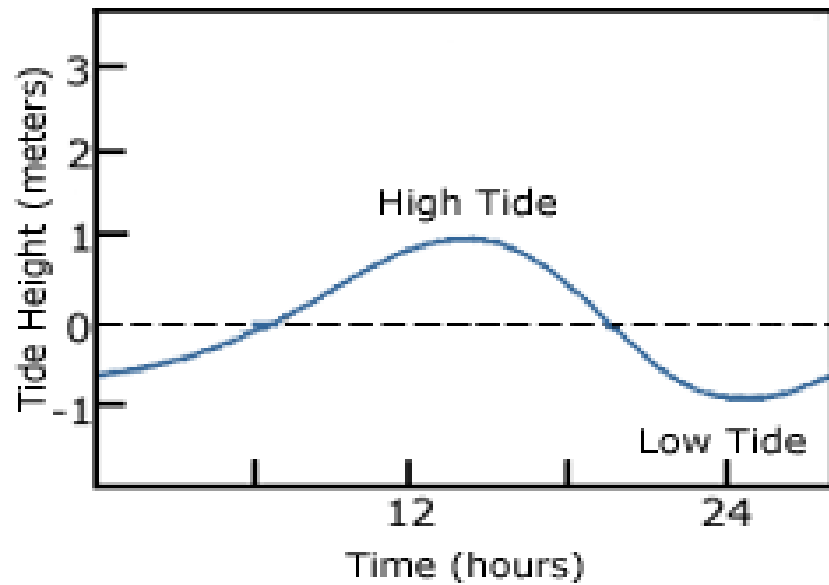


Spring Tide -
tides have
greatest tidal
range because
the gravity of
the sun & moon
are combined

Neap Tide -
daily tidal range is lower than average because the gravity of the sun & moon counteract each other



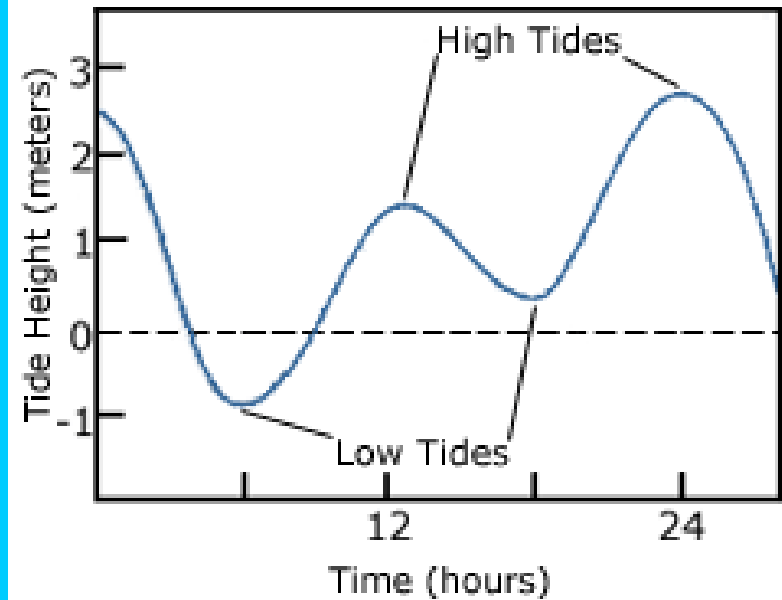
Diurnal



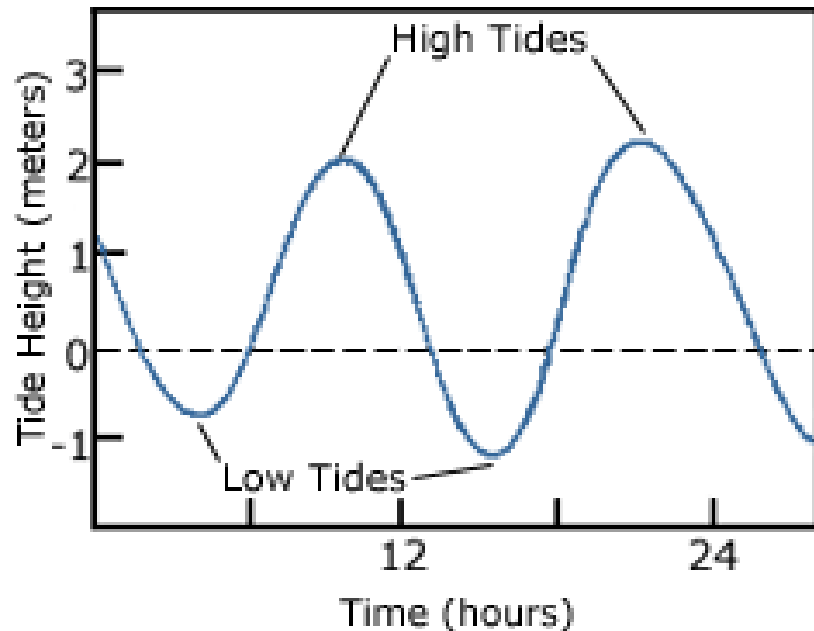
Tidal Patterns

Diurnal - One high tide & one low tide each day

Mixed Semidiurnal



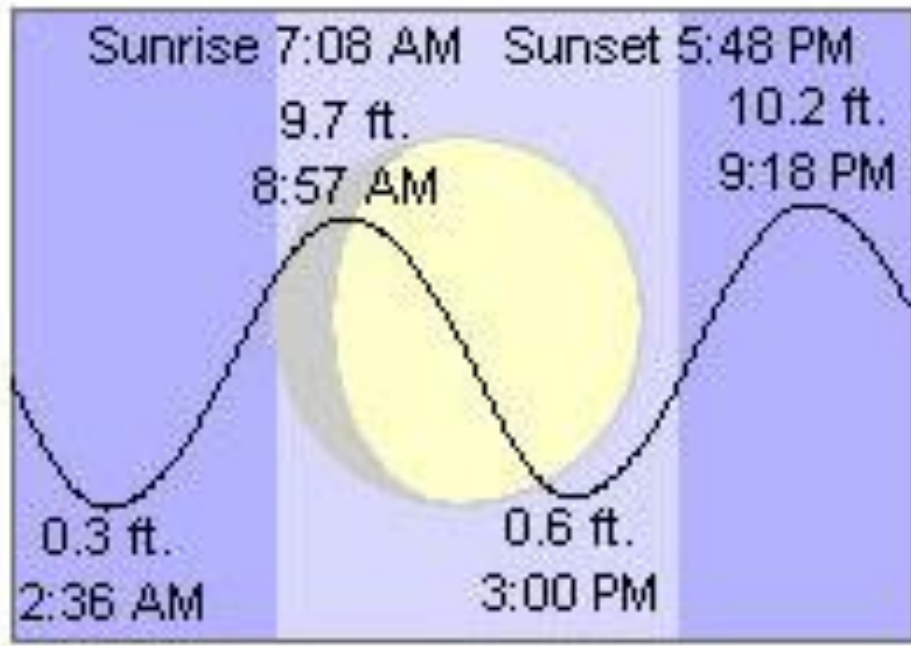
Semidiurnal



Semidiurnal - Two high tides & Two low tides each day

Tidal Graphing

← One Day



Multiple Days →

