

Time and the Earth-Moon-Sun Cycles

Lunar Distance Method:

- deduce local time by observing stars and at his home port
- time difference could be used to find longitude
- compare observations between distances between Moon and certain bright stars

Marine Chronometer:

- John Harrison invented it
- kept accurate time aboard sailing ships

Lunar Phases:



Sidereal Month - time for Moon to orbit the Earth
Once: 27.3 days

Solar/Synodic Month:

time the length of lunar phase cycle: 29.5 days

the Sun rises and sets at different times of the day during the year due to tilt of axis and orbit around the Sun

Close to equinoxes, day and night are around the same length

Equinoctial - "equal nights"

difference because during one orbit around Earth, the Earth-Moon System has moved through angle of 270 around the Sun

