## observations

Foucault's pendulum

circumpolar start trails

where and when the planets turn up

the existence of day and night

eclipses and phases

annual variations in temperature

careful observations of the motions and brightnesses of the astronomical objects provided data in need of organising by means of theories

lighting

rays and beams

illumination, power and brightness

nearly all of the information humans

a theory of motion and gravity

gravitational force

orbits and orbiting

falling

how things move is not obvious when humans are seated on a spinning, orbiting constructed explanations

an explanation for phases

an explanation for eclipses

an explanation for the