

Notes: History Of Orbiting Theories

Proof The Earth Is Round

Direct Evidence:

- earth's _____ on the moon during _____ (Aristotle)
- ships _____ as they sail away (Aristotle)
- southern and northern hemisphere have _____ (Aristotle)

Indirect Evidence:

- Everything else is _____: _____, _____, _____, _____, _____
- _____ pulls inward (Newton)
- the gods created a round world since they are perfect and a _____ is also perfect (Pythagoras, 500 B.C.)
- The _____: flat earth would mean equal directness of sunlight for all earth

What's the big deal?

- nearly everything is _____, repeating day after day, year after year
- which served as a way of _____
- past cultures could then predict when to _____, _____, _____, prepare for _____, and have _____
- The appearance of the "dog star", _____, meant there were 2 weeks until the _____
- Today we have _____ so we don't need the stars to tell us the season or anything else

The constellations

- humans must have _____
- Stars with unusual patterns were thought to resemble _____
- These constellations helped civilizations recognize _____ easier (the appearance of _____ and _____, 2 water constellations, foretold stormy weather too hard for sailing)

Major Events

- Aristotle (350 BC)- argued that the Earth was _____
- And that we had a _____ solar system, which translates “ _____ - _____ ”
 - Why can’t you blame them for thinking that everything revolves around earth?
- Fatal flaw (thank goodness!)- _____ and _____ did not appear to revolve around earth (_____ *motion*)

More contributions

- Eratosthenes (200 BC) used the sun’s _____ to calculate earth’s circumference (and was only _____ meters off)
- Hipparchus (150 BC)- successfully used a technique called “ _____ ” to accurately measure the distance between the earth and the _____
- The Arabs- gave us star names like Betelgeuse and _____
- The Chinese- kept incredibly detailed records
 - thanks to them we know when the _____ first novaed

Geocentric model in trouble

- 1543 Copernicus proposed the first _____ model of our solar system
 - translates “ _____ - _____ ”
- Galileo (1600)- observed the phases of _____
- Kepler uses Brahe’s (1600) data to figure that the planets orbit the sun not in perfect circles but in _____