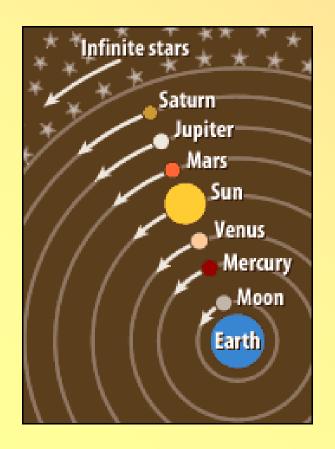
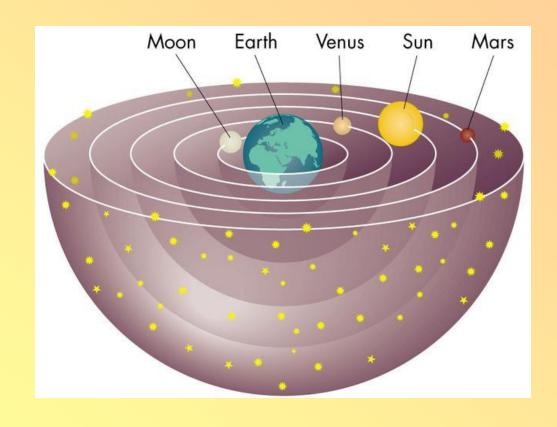
- I can describe the difference between Geocentric & Heliocentric model
- I can explain why apparent brightness
   & diameter change
- I can describe how fast we rotate & in what direction
- · I can state the evidence for rotation
- I can describe proof for revolution

#### GEOCENTRIC MODEL

### All the planets, the sun & the moon revolved around a stationary Earth

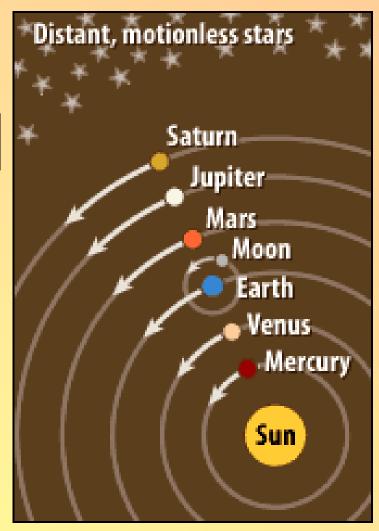




#### HELIOCENTRIC MODEL

## Helio = sun centric = centered

 Nicolaus Copernicus developed this new model in 1543



- I can describe the difference between Geocentric & Heliocentric model
- I can explain why apparent brightness
   & diameter change
- I can describe how fast we rotate & in what direction
- · I can state the evidence for rotation
- I can describe proof for revolution

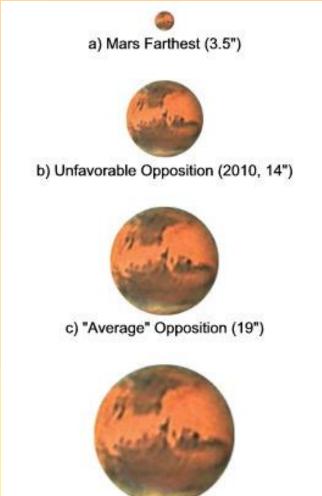
# A major evidence to support Heliocentric theory –

apparent brightness & apparent

angular diameter of planets.

#### THEREFORE:

- ·EARTH is closer brightness & diameter appear to increase
- ·EARTH is far away apparent brightness & diameter decreases.



**Apparent Diameter of Mars** 

d) Favorable Opposition, 2003 (25")

- I can describe the difference between Geocentric & Heliocentric model
- I can explain why apparent brightness
   & diameter change
- I can describe how fast we rotate & in what direction
- · I can state the evidence for rotation
- I can describe proof for revolution



· Rotation is the spinning of Earth on its axis

Rotation occurs at a speed of <u>15°/hour</u>

• The Earth rotates from <u>West to East</u> (counterclockwise)



- I can describe the difference between Geocentric & Heliocentric model
- I can explain why apparent brightness
   & diameter change
- I can describe how fast we rotate & in what direction
- · I can state the evidence for rotation
- I can describe proof for revolution

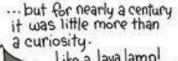
#### Indirect Evidence of Earth's Rotation

- 1. The Foucault Pendulum
- 2. The Coriolis Effect

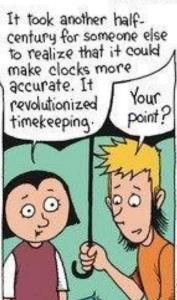
#### BARNEY & CLYDE

The mathematically precise motion of a pendulum was first observed by Galileo...

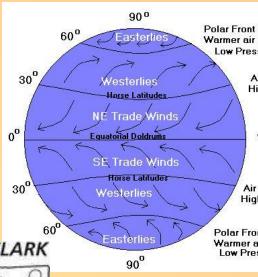




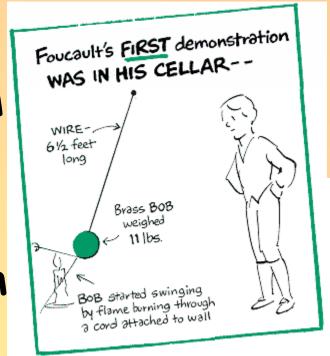




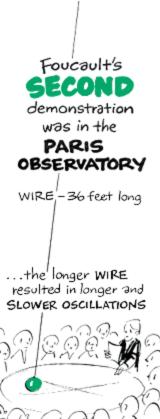




- ·Foucault hung a heavy, long pendulum from a dome.
- ·If the Earth didn't rotate, the pendulum would not rotate throughout the day.
- ·Foucault's pendulum turned 360° in one day, proving that the Earth rotates.

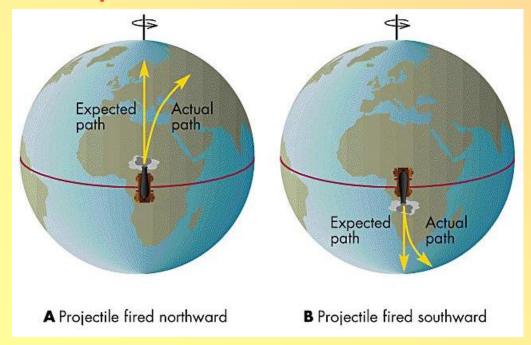


Don't Write

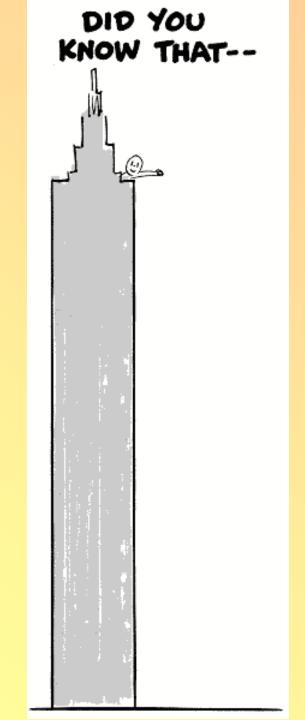


As the Earth rotates, the paths of the winds & ocean currents curve called the Coriolis Effect.

- ·N. Hemisphere curve to the right
- ·S. Hemisphere curve to the left



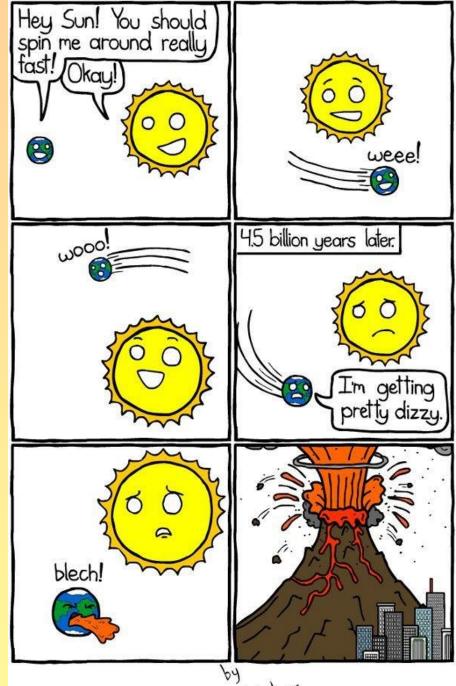




- I can describe the difference between Geocentric & Heliocentric model
- I can explain why apparent brightness
   & diameter change
- I can describe how fast we rotate & in what direction
- · I can state the evidence for rotation
- I can describe proof for revolution

Earth revolves around the sun once every 365.25 days in a counter clockwise direction.

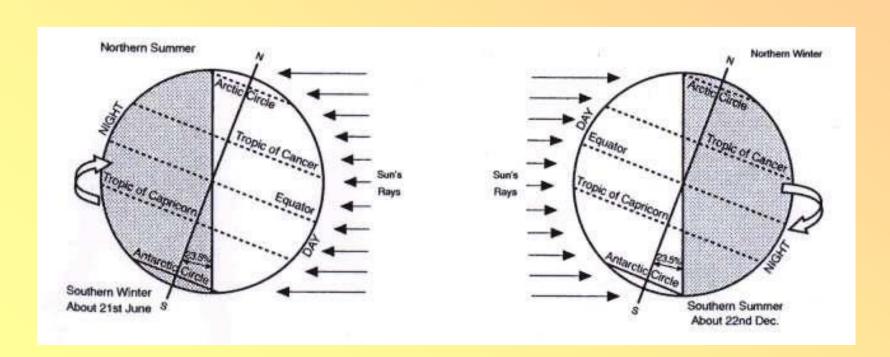
About 1° per day



). Westover www.mrlovenstein.com

#### Evidence of Earth's Revolution

- 1. Parallelism of Earths axis
  - Earth's axis always points towards Polaris

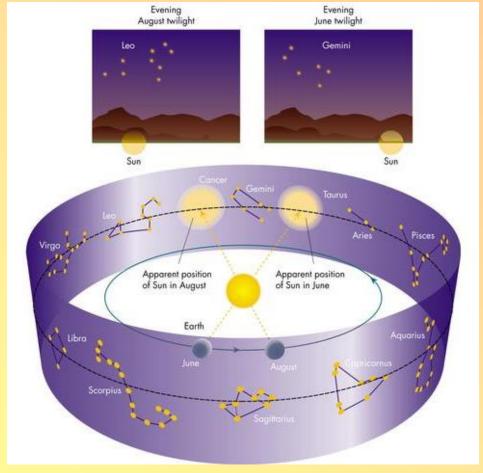




#### 2. Doppler Effect

 Apparent shift of colors of a star as we move closer & then farther away from the star

3. Changing of constellations with the seasons





- I can describe the difference between Geocentric & Heliocentric model
- I can explain why apparent brightness
   & diameter change
- I can describe how fast we rotate & in what direction
- · I can state the evidence for rotation
- I can describe proof for revolution