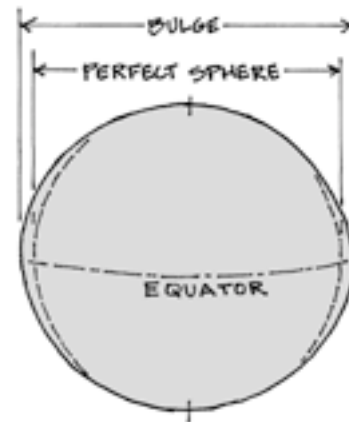


PLANET EARTH REVIEW #1

- A) The shape of the Earth:
- An oblate spheroid (flattened sphere)
 - Flattened at poles
 - polar circumference 40,008 km
 - Bulging at the equator
 - equatorial circumference 40,076 km
 - From space the Earth appears to be a perfect sphere so the best model would be something spherical (ie. ping-pong ball)
- B) Evidence for Earth's shape (ROUND vs FLAT)
- Photographs of the Earth from space or the moon (this is the best evidence because it's a direct observation).
 - Earth's shadow seen on moon during eclipse.
 - Ships disappear over horizon bottom first.
 - Altitude of polaris varies with latitude.
 - Equal pull of gravity at locations on Earth's surface
- D) Hydrosphere
- Water (salt and fresh) covering 70% of the Earth
- E) Atmosphere
- Gas envelope surrounding Earth
 - 78% nitrogen, 21% oxygen, 1% other
 - Layers: Troposphere, Stratosphere, Mesosphere, Thermosphere
- F) Lithosphere
- Solid, rocky, outer shell of the Earth. (Covered by loose rock & soil)



POSITIONS ON THE EARTH

- A) Coordinate system (grid)
- Latitude (aka parallels)
 - Measured in degrees/minutes
 - 60 minutes = 1°
 - Run east-west, tells you position north-south
 - Maximum latitude = 90° (N or S poles), minimum latitude = 0° (equator)
 - Altitude of Polaris = latitude (Northern Hemisphere only)
 - To determine latitude...
 - Draw line to horizon and to Polaris (found using the Big Dipper)
 - Angle formed by these lines is equal to your latitude (use an astrolabe)
 - Applies to Northern hemisphere only
 - As you travel north from the equator, Polaris appears higher in the sky
 - As you travel east/west in the northern hemisphere, alt. of polaris stays the same
 - Longitude (aka meridians)
 - Measured in degrees/minutes
 - Run North-south connecting pole, tells you position east-west of Prime Meridian
 - Prime meridian (0°) through Greenwich England
 - To determine longitude
 - Time changes 1 hour per 15° longitude change (15°/hr.)
 - Multiply number of hours between your time and Prime Meridian time by 15°/hr.
 - "If time does increase, you are EAST. If time is less, you are WEST"

