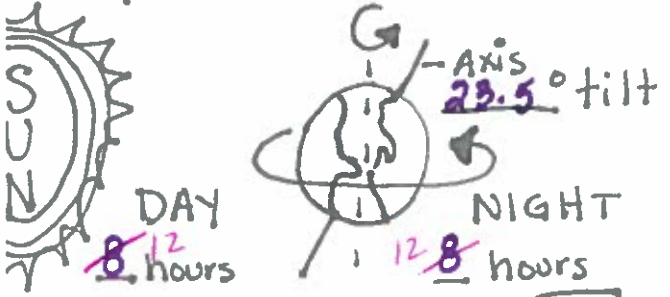


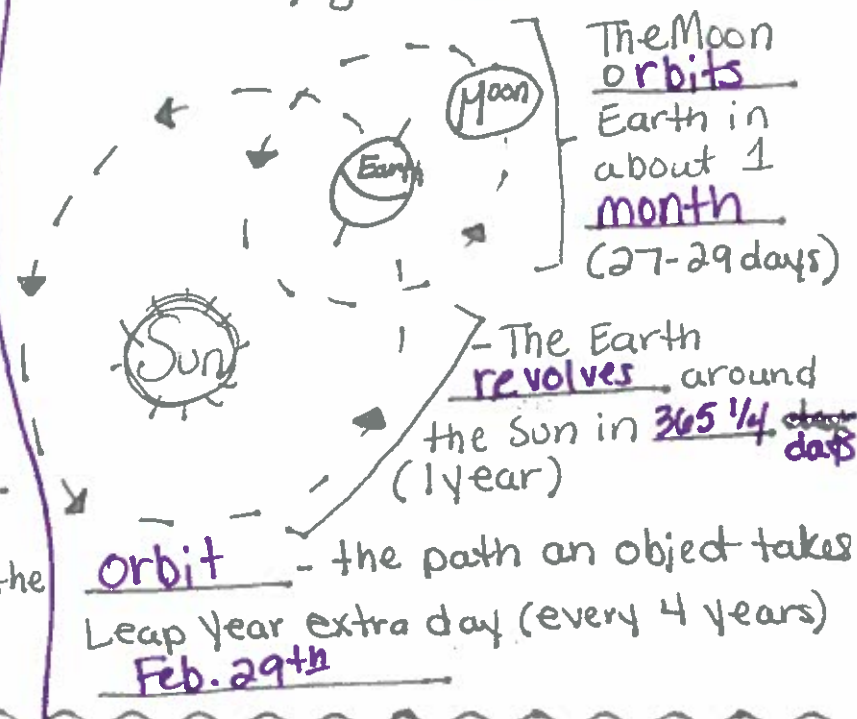
ROTATE (Rotation)
Spin on an axis



causes: Day + Night Cycle = 24 hours

The Moon and Sun rotate on an axis too. The Moon spins like a car tire. We never see the other side from Earth. It takes the Moon about 1 month to rotate on its axis once. (27-29 days)

Revolve (Revolution)
orbit; goes around



SUN FACTS

- * Rotates on an axis
- * Only Star in our Solar system.
- * Its gravity holds all the planets in their orbit.
- * Source of heat and light for our solar system.
- * Medium sized star
- * Sphere of burning gases Hydrogen and Helium.
- * No real surface.
- * Outer temperatures are 5,600 °C
- * A million times bigger than Earth
- * Emits light because of nuclear explosions

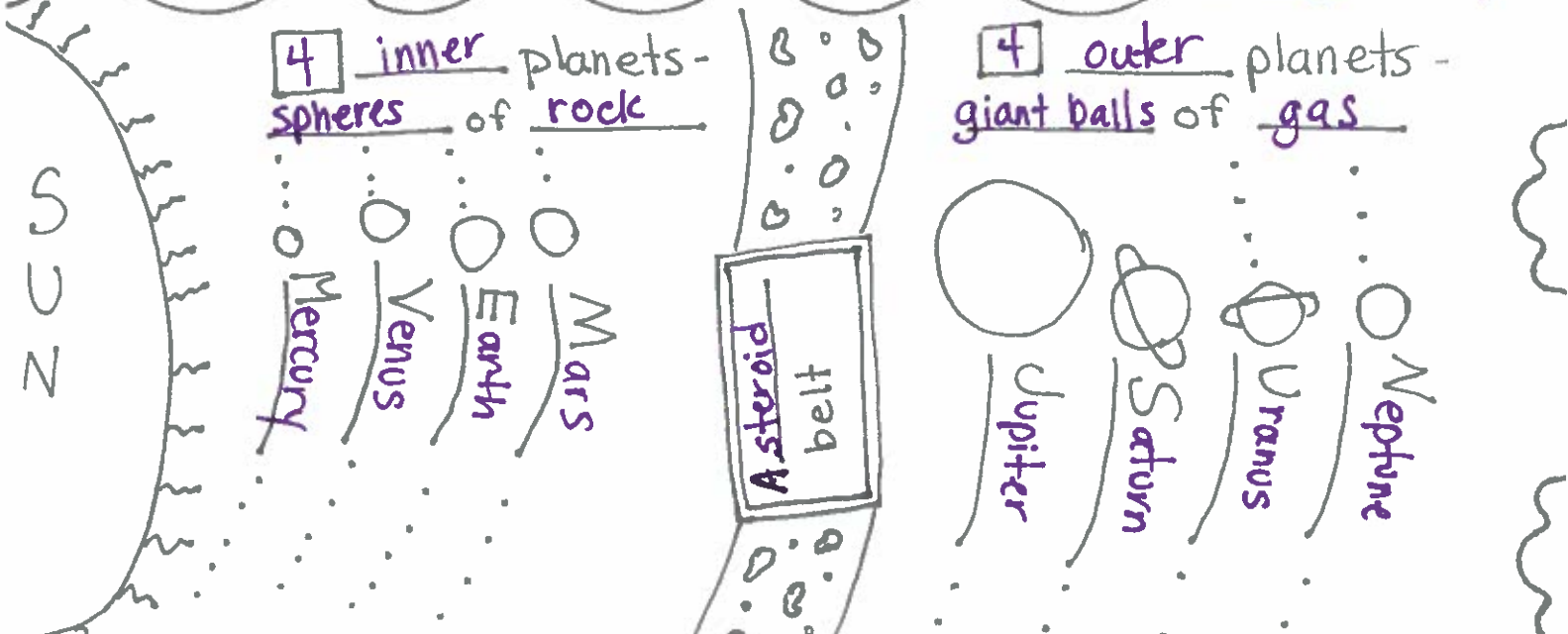
EARTH FACTS

- 3rd planet from Sun
- Four times larger than the moon
- Rotates every 24 hours on an axis
- 23.5° tilt on axis
- Has weather and an atmosphere
- Life: plants and animals; living things
- ONLY planet to support life!
- Sphere of rock
- Northern Hemisphere and Southern Hemispheres are separated by the equator
- Texas is in the northern hemisphere

MOON FACTS

- Sphere of rock
- Rotates on an axis like a tire on a car
- No real atmosphere
- No life or water
- Surface is cratered and unchanging because no Weathering Erosion Deposits
- Natural Satellite of Earth
- orbits Earth
- 1/5 gravity of Earth
- Revolves Earth in about one month (27-29 days)
- We see 8 phases of the moon from Earth
- Reflects light - like a mirror

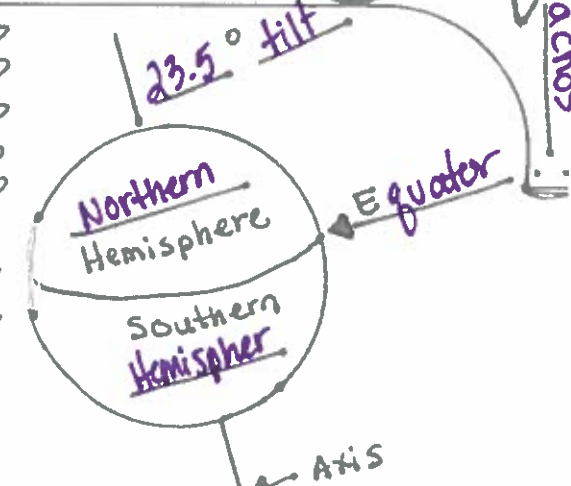
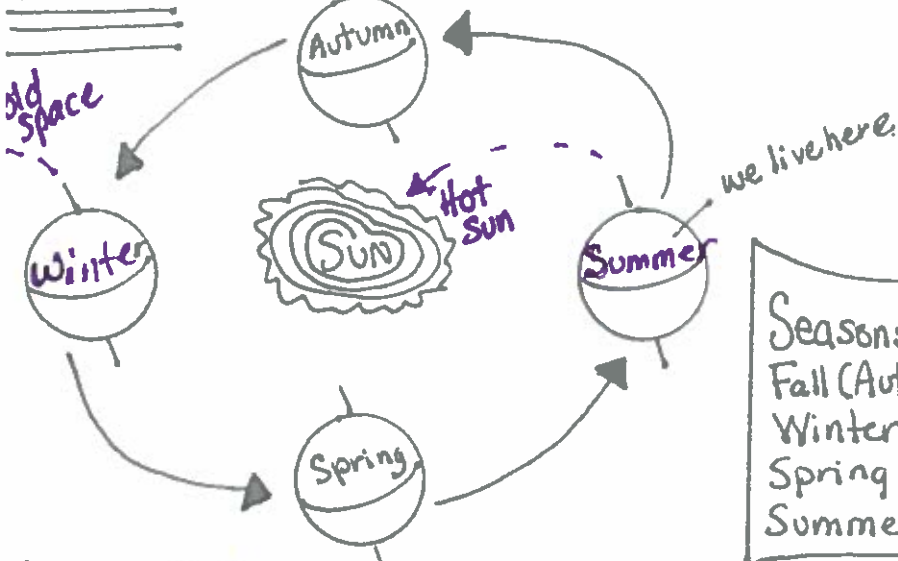
Our solar system - Held together by the Sun's gravity.



Each planet orbits or revolves around the Sun in an elliptical or egg-shaped orbit.
 All rotation and revolution lengths are different on each planet.

M y V e r y E a g e r M o t h e r J u s t S e r v e d U s

Seasons In the Northern Hemisphere



It is winter in the northern hemisphere when the north pole is tilted away from the Sun.

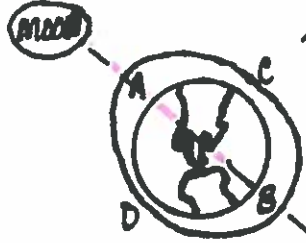
It is Summer in the northern hemisphere when the north pole is tilted towards the Sun.

We can divide the Earth into 2 hemispheres: the Northern and the Southern. Texas is in the Northern hemisphere

REASON FOR THE SEASONS:

1. tilt on axis
2. Revolution around the Sun

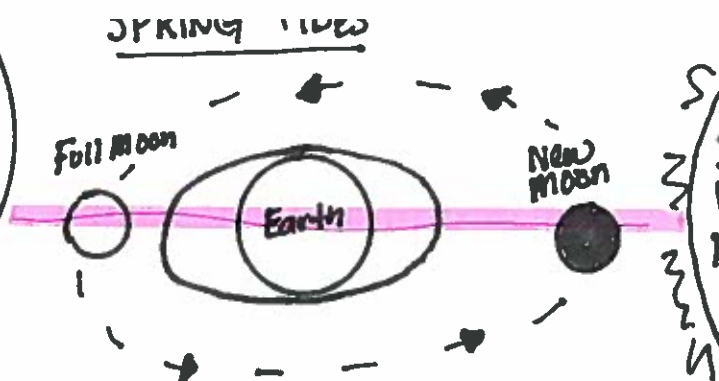
TIDES



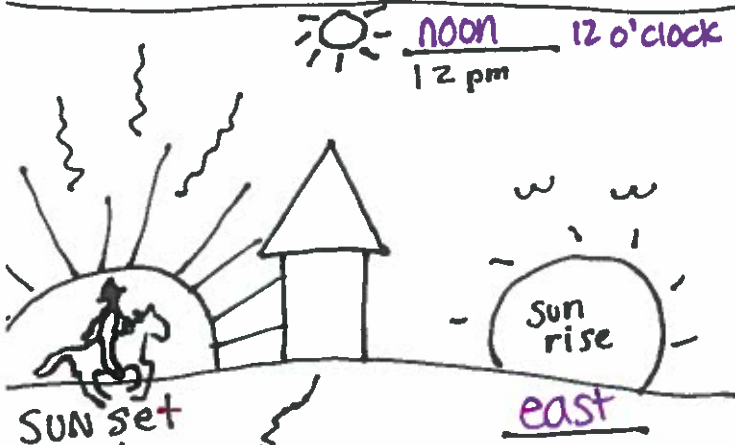
AB
The Moon's gravity causes high tide on the side closest to the moon

CD
Low tides occur between 2 high tides.

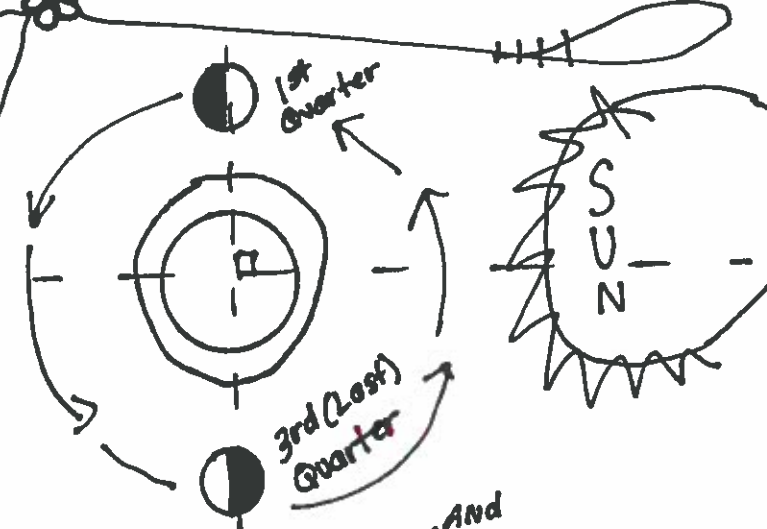
and The force of the Moon's gravity pulls Earth toward the moon, leaving a bulge of water behind.



The Sun and New Moon or Full Moon are aligned. Their forces of gravity combine to form Spring tides (really high and really low tides.)

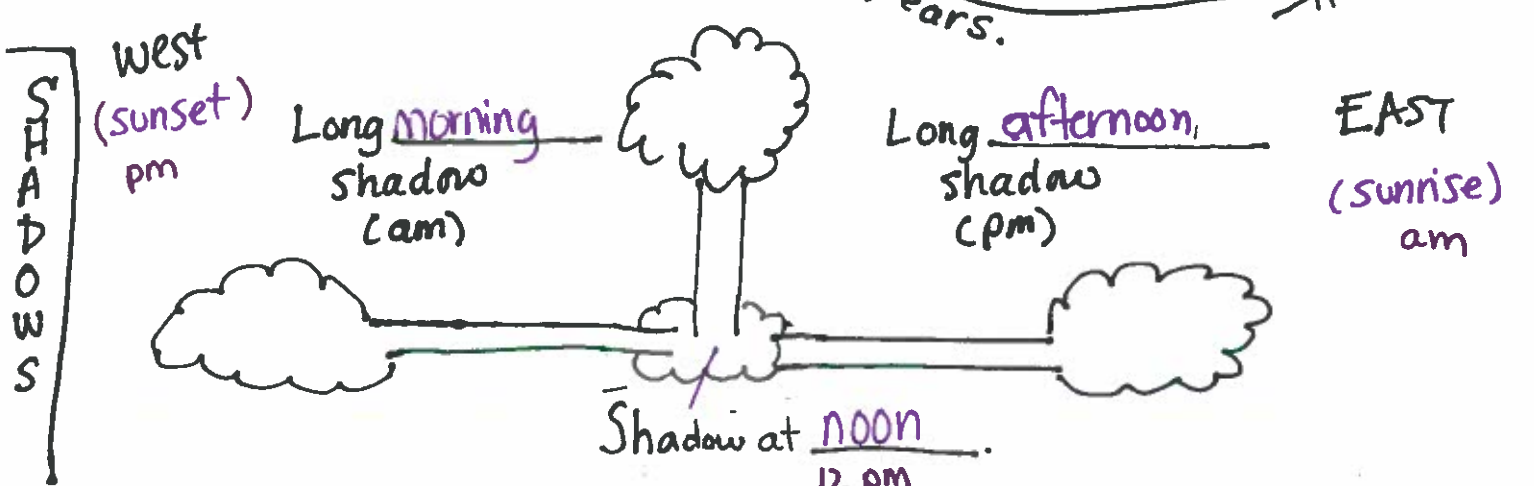


SUN set in the wild west. The Sun appears to move from east to west because Earth rotates on its axis every 24 hours. Shadows are longest in the early morning and late afternoon. At noon your shadow almost disappears.



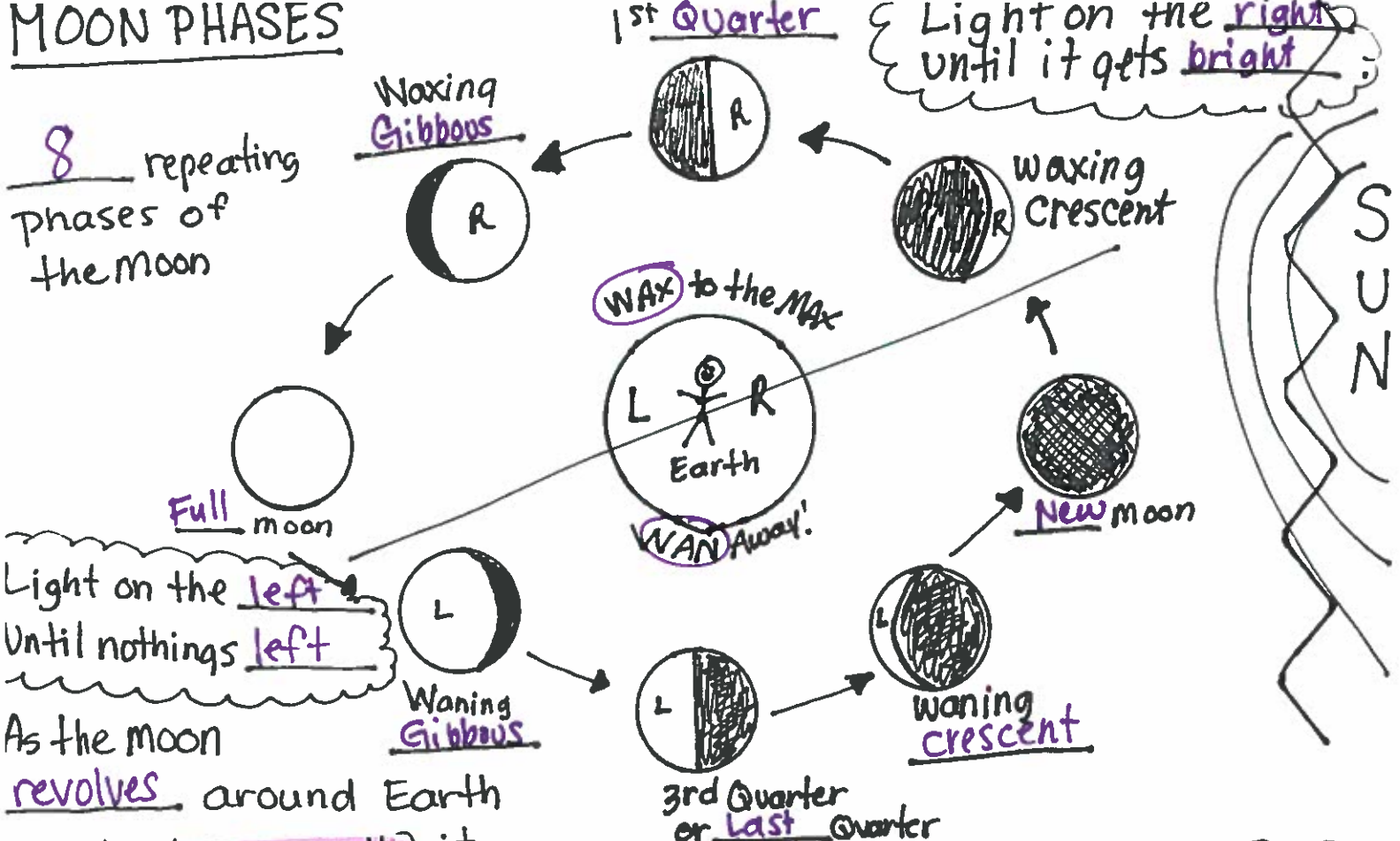
The Sun and 1st or 3rd Quarter moon form a right angle \perp . The Sun and moon's gravitational force work in different directions, and cancel each other out. At this time, all tides are almost even.

↑ NEAP Tides ↑



MOON PHASES

8 repeating phases of the moon



Light on the left until nothings left

As the moon revolves around Earth in about one month it appears to change. The moon DOES NOT emit light like the Sun. The moon reflects light like a mirror. From Earth, we see 8 different phases of the Moon reflecting sunlight towards us.

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