

Lab: The Reasons for the Seasons

Name _____

Purpose: to become familiar with the revolution of the Earth around the Sun, and to understand why Earth has predictable, cyclic seasons.

Vocabulary:

Rotation—	Orbit -	Ellipse -
Constellation -	Parallelism -	Solstice -
Equinox -	Tropic of Cancer -	Tropic of Capricorn -

Materials: Earth orbit diagram (see back), paper Earth-on-a-stick, paper Sun-on-a-stick, clay bases, data table

Procedure:

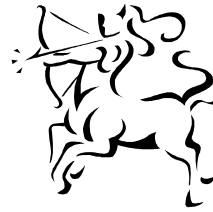
1. Place Sun off-center in Earth's orbit
2. Label longest distance from Sun to Earth (at C) 151 Million km
3. Label shorter distance from Sun to Earth (at A) 146 million km
4. Place your Earth at A, tilted 23.5 degrees AWAY from Sun
5. Fill out Data Chart for Position A
6. Repeat steps 4 and 5 for positions B, C and D. ALWAYS TILT EARTH TOWARD THE NORTH!
7. Draw arrows around the ellipse showing the direction of Earth orbit as viewed from above the North Pole
8. Mark the approximate location of your birthday on the ellipse by labeling it "B-DAY" and writing in the date.
9. From your birthday, draw a straight line directly across the orbit / ellipse to the other side and label this point Q. How many months later does "Q" represent? _____

CONCLUSION: Explain the four reasons for the seasons.

EARTH ORBIT -	TILT OF EARTH'S AXIS -
PARALLELISM OF EARTH'S AXIS -	EARTH ROTATION -



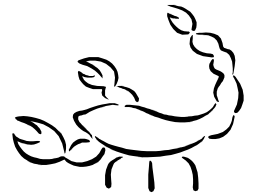
CAPRICORN
(12/22 - 1/19)



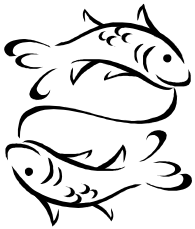
SAGITTARIUS
11/22 - 12/21



AQUARIUS
(1/20 - 2/17)



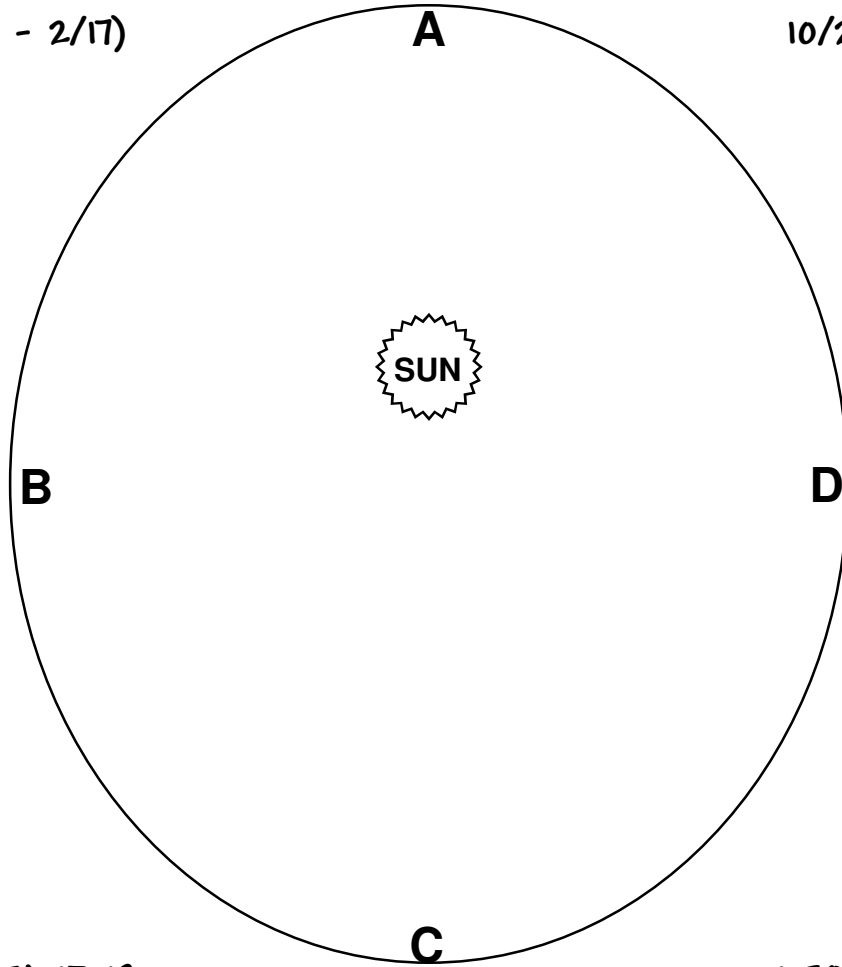
SCORPIO
10/23 - 11/21



PISCES
(2/18 - 3/19)

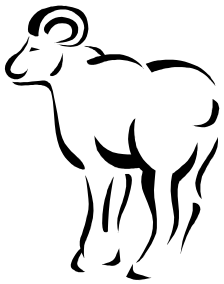


LIBRA
9/23 - 10/22



ARIES
3/20 - 4/19

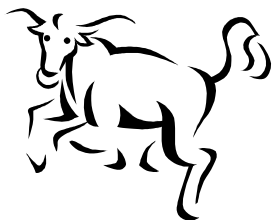
VIRGO
8/23 - 9/22



TAURUS
4/20 - 5/20



LEO
7/23 - 8/22



GEMINI
5/21 - 6/20

CANCER
6/21 - 7/22

