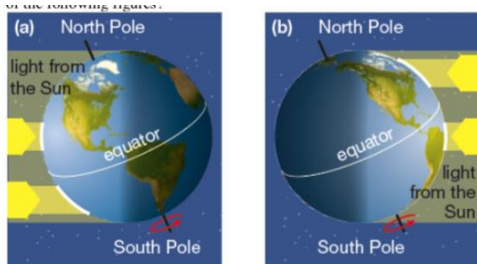


Terms that you should know. - choose from the list below to assist you

1. Study of space beyond Earth _____
2. Stars that can be seen all year, never set and are seen directly over head _____
3. Brightness of stars as they appear from Earth at their distance _____
4. Movement of one object around another object _____
5. The birth place of all stars _____
6. The day(s) of the year with equal day and night and the sun is directly overhead at noon _____
7. Groups of stars that form patterns _____
8. Explosion at the end of a stars life _____

Astronomy	Equinox	Ecliptic	Solstice	Nuclear Fusion
Universe	Revolution	Nebula	Circumpolar	Absolute Magnitude
Constellation	Rotation	Supernova	Luminous	Apparent Magnitude

1. Describe how Earth’s tilt determines the four seasons in Canada. What season is Canada experiencing in each of the following figures?



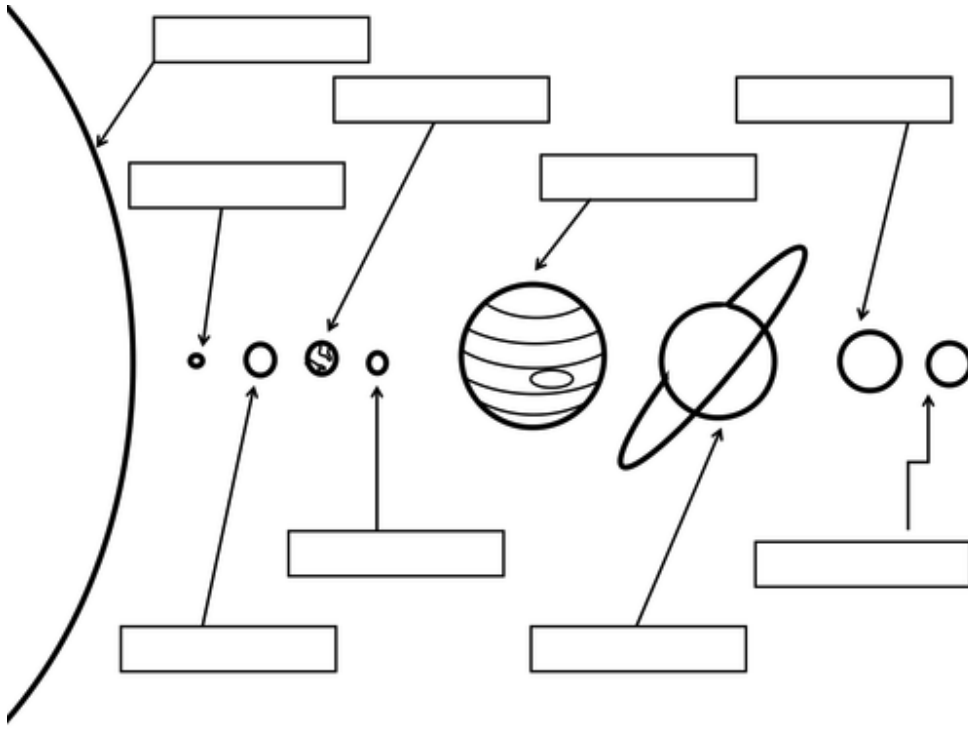
2. a) Why do we have a day and night cycle? B) How long is a cycle? _____

b) State the differences between stars and planets.

	Stars	Planets
Reasons we see		
Distance measure in space use these units of measurement		
Relative Size		

Planets

3. We are part of a solar system.
a. Name the 8 planets in order from the Sun.



- b. Classify which 4 planets are terrestrial planets and which 4 are the gas planets.

4. Also identify the planet by the clue given:

- a) Which planet is known as the Red planet? _____
- b) Which planet is the largest? _____
- c) Which planet has 1000's of rings? _____
- d) Which planet is the brightest at night? _____
- e) Which star is closest star to Earth? _____
- f) Which two planets is the asteroid belt between? _____ and _____

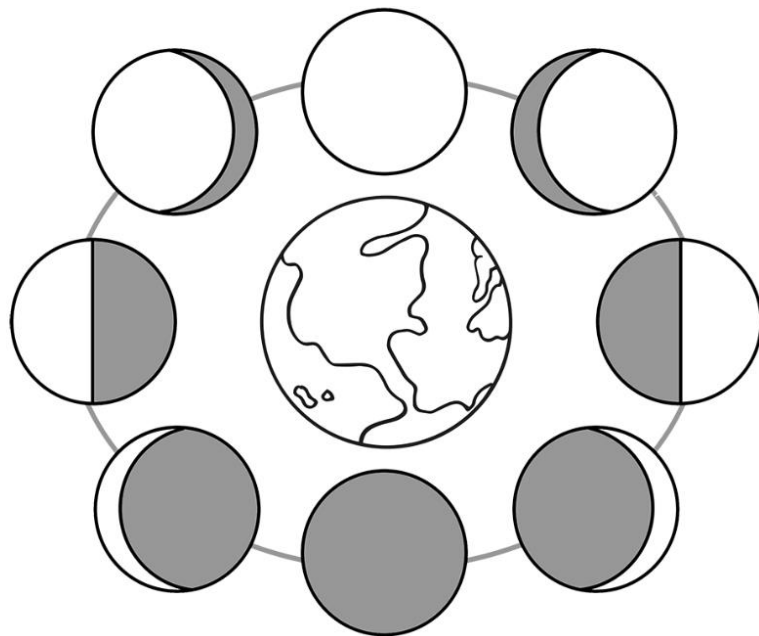


Moon

5. Complete the chart below for the Moon

Surface Features and gravity	
Soil / Rock Composition	
Atmosphere / Weather	
Temperature	
Rotational and Revolution (these are the same)	

6. Label these moon phases.



Define:

Waxing:

Waning:

New Moon:

Gibbous:

7. Why do we only ever see one side of the moon?

8. Explain the differences between a **solar** and **lunar eclipses**. Use the picture below to help you.

	Position of sun earth and moon	Where shadow is cast
Solar Eclipse		
Lunar Eclipse		

Distances in Space

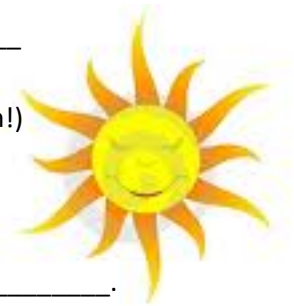
9. What is 1 **astronomical unit equal to in kilometers?** (This is the distance from Earth to the Sun)
10. Light travels about 9.5 trillion kilometres (approx. 10 trillion km) in a year, and this distance that light travels in a year is called a _____.
11. The force that exists between the Earth and the Sun that keeps us in orbit is _____. This force is dependent on two things mass and _____. Which planet could you jump the farther on and why?

19. If a star located 65 light years away from Earth stops giving off light energy at this very moment, how long will it be before we can know it? Explain.

20. Procyon is a star in our galaxy it is $(1.08 \times 10^{14} \text{ km} = 108\,000\,000\,000\,000 \text{ km})$ from Earth. Calculate how far this is in light years.

SUN

1. Where does the Sun set? _____ Where does the Sun rise? _____
2. What is the imaginary path that all objects follow in the sky called? _____
3. What two elements are the most abundant in and around the sun? (you must know % of each!)
_____ % _____ %



4. The sun produces energy [heat and light energy] through a process called _____.
In two sentences explain what happens.

5. Name 3 reasons why the sun is important.

- 1.
- 2.
- 3.

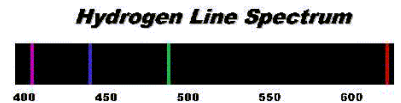
6. How are the Northern lights formed {Aurora Borealis}?

Galaxy

- 7. The Milky Way is an example of a _____.
- a. What are the three components of a galaxy? _____, _____, _____
- b. What are the three types of galaxies?
- c. What is the **explosion** called at the end of a large star's life?
- d. What is the distance in light years across our galaxy?
- e. How many stars are in our galaxy?
- f. How many galaxies are in our observable universe?

Characteristic of Stars

a. What information does a **line spectrum** (spectrograph) give us?



b. Rank the **star's temperature** from hot to cool based on its colour (red, yellow, blue, white)

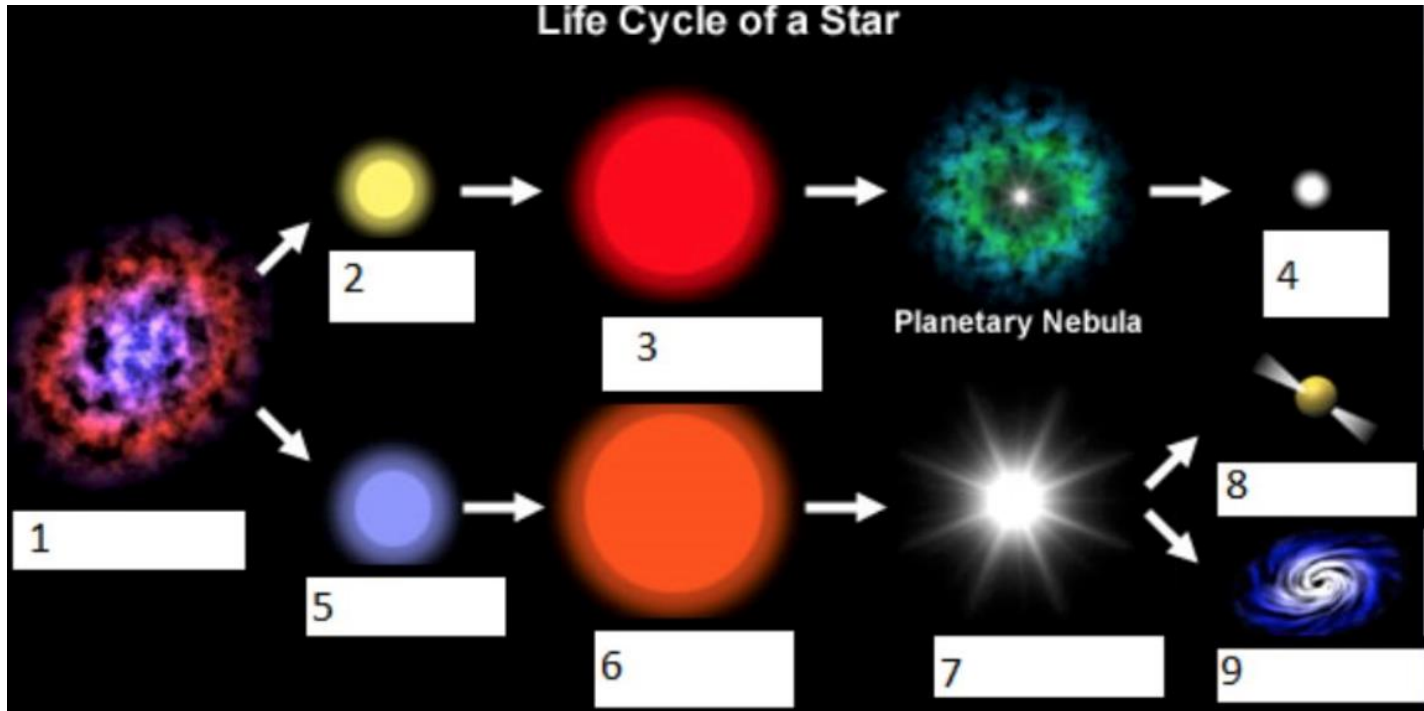
c. What two words are used to define the **brightness of stars as we see them from Earth**?

d. What two words are used to define the **brightness of stars if they were all lined up at the same distance**?

e. Which would be the brighter star based on the magnitude value Star A (-14.5) or Star B (-25.2)?

Life and Death of A Star

a. Label the various stages below



- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

b. What is the definition for a **Blackhole**?

Other Objects in Solar System

Distinguish between comets, asteroids, meteors and meteorites.

Comets	
Asteroids	
Meteors Meteorites and meteoroid	

Space Travel

Identify five effects of that space travel will have on the human body. Explain

