

Name: _____ Date: _____ Group: _____

Earth & Space Exam Review Guide 2018

Topics to Review: Day/Night Cycle, Shadow movement, Sunrise/Sunset directions, Time zones (why we have them and the 4 in the mainland USA), Eclipses (Lunar & Solar), Reason for the seasons (tilt, direct/indirect sunlight, length of daylight), Moon phases, tides, Marking time.

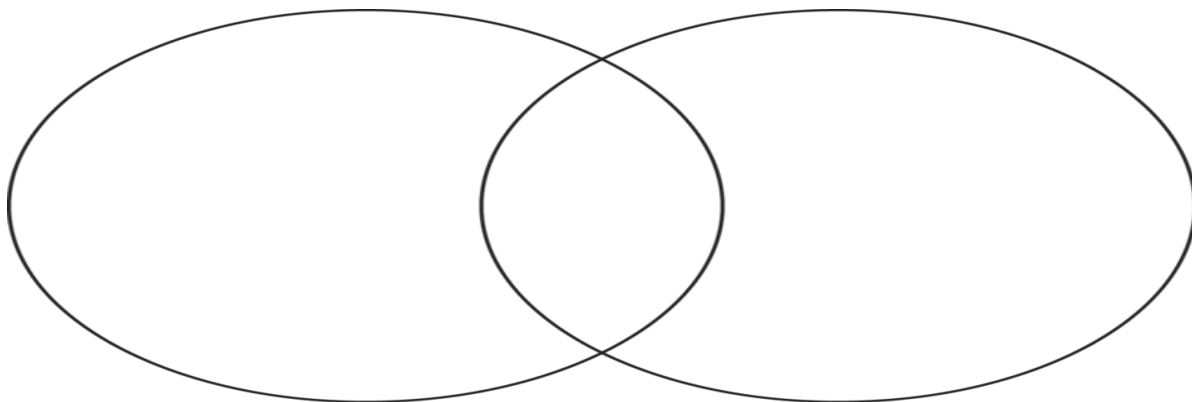
Vocabulary you should know:

| | | |
|-------------------------|------------------|-----------------------|
| Axis | Gibbous | Revolution |
| Crescent | Rotation | High tide |
| Orbit | Sundial | Low Tide |
| Equator | Tilt | Extreme Tide |
| Tropics | 23.5° | Gravity |
| Hemisphere | Seasons | Equinox |
| Leap Year | Counterclockwise | Equinox (3/21 & 9/21) |
| Solstice (6/21 & 12/21) | 365 | Lunar |
| Waxing | Solar | Waning |
| Time Zone | Eclipse | Shadow |
| 24 Hrs | Noon | |

Questions:

1. During the day, why do the shady spots of a tree keep moving? Be specific and detailed! (*Hint: you may draw a picture also to help you - check textbook page F-18):

2. Compare & Contrast: REVOLUTION and ROTATION



3. How many world time zones are there?
4. Why are there that many time zones?
5. List the 4 United States time zones and give an example of a state within each time zone!

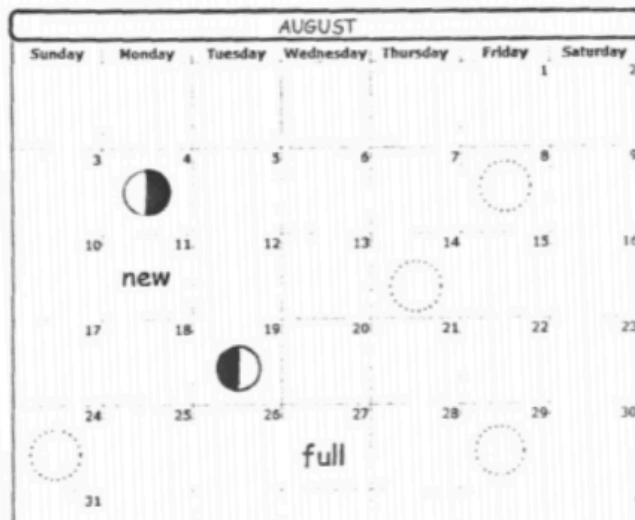
6. Which season has the shortest amount of daylight, the least direct sunlight and the lowest sun angle?
7. Which season has the longest amount of daylight, the most direct sunlight and the highest sun angle?
8. What causes the yearly cycle of the seasons on Earth?
9. In the space below, draw a quick model of the Sun-Earth system that explains why we have seasons:
10. Three parts: a. Draw a picture of a rotation b. define the word rotation c. label how long it takes for Earth to rotate one time
11. Three parts: a. Draw a picture of a revolution b. Define the word revolution c. label how long it takes for Earth to revolve around the Sun.
12. What causes the direction and length of shadow to change throughout the day?
13. If a shadow keeps getting smaller and smaller, what time of day is it? (Morning, noon, or afternoon). EXPLAIN WHY!
14. What happens to the LENGTH of daylight hours after June 21st (Think!).

15. Which directions does the Sun rise & Set?

16. What would happen if Earth was only tilted 5°

17.

Label the moon phase on every day of the August calendar below. If there is a dotted circle, DRAW the moon phase.



18. Fill in the table below by drawing the Earth VIEW and the SPACE VIEW for New & Full Moons

| MOON PHASE | SPACE VIEW DRAWING | EARTH VIEW DRAWING |
|------------|--------------------|--------------------|
| FULL MOON | | |
| NEW MOON | | |

19. How long does one complete LUNAR cycle take?

20. List the moon phases in order, starting with NEW MOON:

21. During which two moon phases do we have extreme tides?

22. What do you think would happen if Earth spun on its axis every 5 hours instead of every 24 hours? How would life change on our planet?

23. Label the moon phases in the diagram below (**Note where the sun is!)

