

Name: _____ Date: _____

Topic 6 Lesson 1 & Topic 7 Study Guide**Make sure to study:**

- Packets/Notes from Topic 6.1 & 7
- All vocabulary in Topic 6.1 & 7
- This study guide

Topic 6.1/7 Vocabulary:

- | | | |
|------------|---------------|------------------|
| 1. star | 4. rotation | 7. constellation |
| 2. gravity | 5. revolution | |
| 3. axis | 6. shadow | |

8. What is the difference between apparent brightness and actual brightness?

Apparent Brightness is how bright a star appears to be and depends on its distance from Earth. Actual brightness is how bright a star actually is and depends on the star's temperature.

9. How long do each of the following take?

- a. The Earth's revolution: 365 days/1 year
- b. The Earth's rotation: 24 hours/1 day
- c. The moon's revolution: 29.5 days/about 1 month

10. Why does gravity keep your desk on the ground instead of floating around the room?

Earth's gravity pulls all objects towards its center.

11. Why do we have day and night?

The Earth is constantly rotating, or spinning, on its axis. Only half of the Earth is facing the sun at one time. The side that is facing the sun is experiencing day. The side that is facing away from the sun is experiencing night.

12. Why do we have time zones?

Only half of Earth is facing the sun. When your location rotates into that half, you experience a sunrise. This will be different for different places and will depend on when their locations rotate into the half of the Earth that is facing the sun.

13. What is the sequence of moon phases between a new moon and the next new moon?

New Moon > waxing crescent > first quarter > waxing gibbous >
full moon > waning gibbous > last quarter >
waning crescent > New Moon

14. Do we see the same constellations all year long? Explain.

No. The Earth revolves around the sun. The Earth
passes different stars on its trip around the sun, which
is why we see different constellations during different
months.

15. Around what time of the day is your shadow the shortest? noon

16. Around what time of the day is your shadow the longest? dawn, dusk

17. During which season is your shadow the shortest? winter

18. During which season is your shadow the longest? sun

19. When shadows are longer, the sun is high in the sky. (low or high)

20. When shadows are shorter, the sun is low in the sky. (low or high)

21. How does the revolution of the Earth around the sun affect the seasons?

The Earth rotates on a tilted axis. When your hemisphere is tilted towards the sun,
you experience more direct sunlight which results in longer days and warmer
temperatures. When your hemisphere is tilted away from the sun, you experience
less direct sunlight which results in shorter days and colder temperatures.