

Name _____

Reviews

Study Guide: Sun, Earth and Moon Relationship Assessment

A
Movements

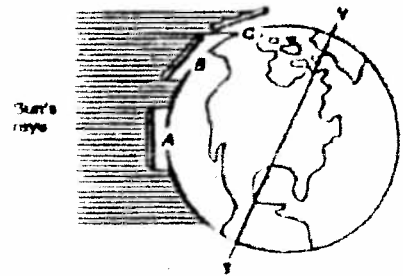
Indicator — I can describe why we experience days and years due to the rotation and revolution of the Earth around the sun.

1. What is an axis?
2. What is rotation?
3. What is a day and how long is it?
4. What is revolution?
5. What is a year and how long is it?

B
Seasons

Indicator — I can recognize that the tilt of the Earth is responsible for the seasons due to direct and indirect sunlight.

6. What is the tilt of the Earth's axis?
7. How does the angle of the sun's rays make the solar ^{radiation} more intense?
8. Rank the letter for the amount of solar ^{radiation} that hits a square centimeter of the earth's surface. Use the diagram to the right.



9. Where do the direct sun's rays hit during the summer solstice?
10. Where do the direct sun's rays hit during the winter solstice?
11. Where do the direct sun's rays hit during the spring and fall equinox?
12. What season has the shortest day in the Northern Hemisphere?
13. What season has the longest day in the Northern Hemisphere?
14. What seasons have equal days and nights in the Northern Hemisphere?
15. What season and what is the term when Earth is the farthest from the Sun?
16. What season and what is the term when Earth is the closest from the Sun?

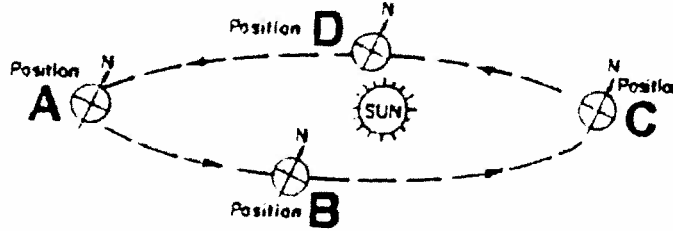
* Aphelion ☺

Name _____

Review

Study Guide: Sun, Earth and Moon Relationship Assessment

17. Label and date the diagram below for each of the Earth's positions in the Northern Hemisphere.



18. Using the diagram above, write the letter and date for each of the seasons in the Southern Hemisphere:

Summer solstice

Winter solstice

Fall equinox

Spring equinox

19. Why do we have seasons?

20. If the tilt of the Earth's axis increased, how would that effect seasons?

Indicator - I can identify the eight phases of the moon as it revolves around the Earth.

21. Why can we see the moon at night even though it does not produce any light?

22. What is a moon phase?

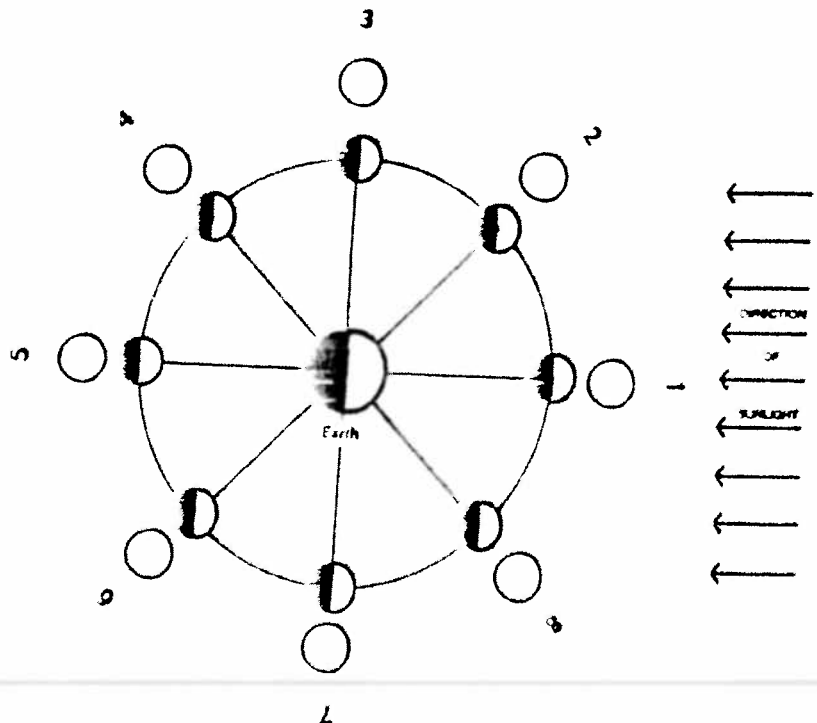
23. What is a month?

24. How many days is a complete moon cycle?

25. What does a waxing moon phase mean?

26. What does a waning moon phase mean?

27. Label the diagram with the correct moon phase name and shade each phase correctly as seen from earth.



C
Moon
phases

D
Eclipses

Study Guide: Sun, Earth and Moon Relationship Assessment

Indicator - I can diagram the positions of the Earth, sun and moon during a solar and lunar eclipse.

28. What is a shadow?
29. What is an eclipse?
30. What is an umbra?
31. What is a penumbra?
32. What moon phase does a lunar eclipse occur in?
33. What moon phase does a solar eclipse occur in?
34. What occurs when the moon blocks the earth from the sun?
35. What occurs when the earth casts a shadow on the moon?
32. Sketch the correct position of the earth, sun and moon during a lunar eclipse.

33. Sketch the correct position of the earth, sun and moon during a solar eclipse.

34. Why don't we have an eclipse every full or new moon?

E
Tides

Indicator - I can describe how neap and spring tides are the result of the moon's gravitational pull on the surface of the Earth

34. How many high and low tides occur in one day?
35. How many hours are between each high tide and low tide?
36. What is a high tide?
37. What is a low tide?
38. What type of tide occurs when the sun and moon's gravity are working together?
39. What type of tide occurs when the sun and moon's gravity are working against each other?
40. What is a spring tide?
41. What moon phase(s) occurs during a spring tide?

Study Guide: Sun, Earth and Moon Relationship Assessment

42. What is a neap tide?

43. What moon phase(s) occurs during a neap tide?

44. Sketch the correct position of the sun, earth and moon during a neap tide.

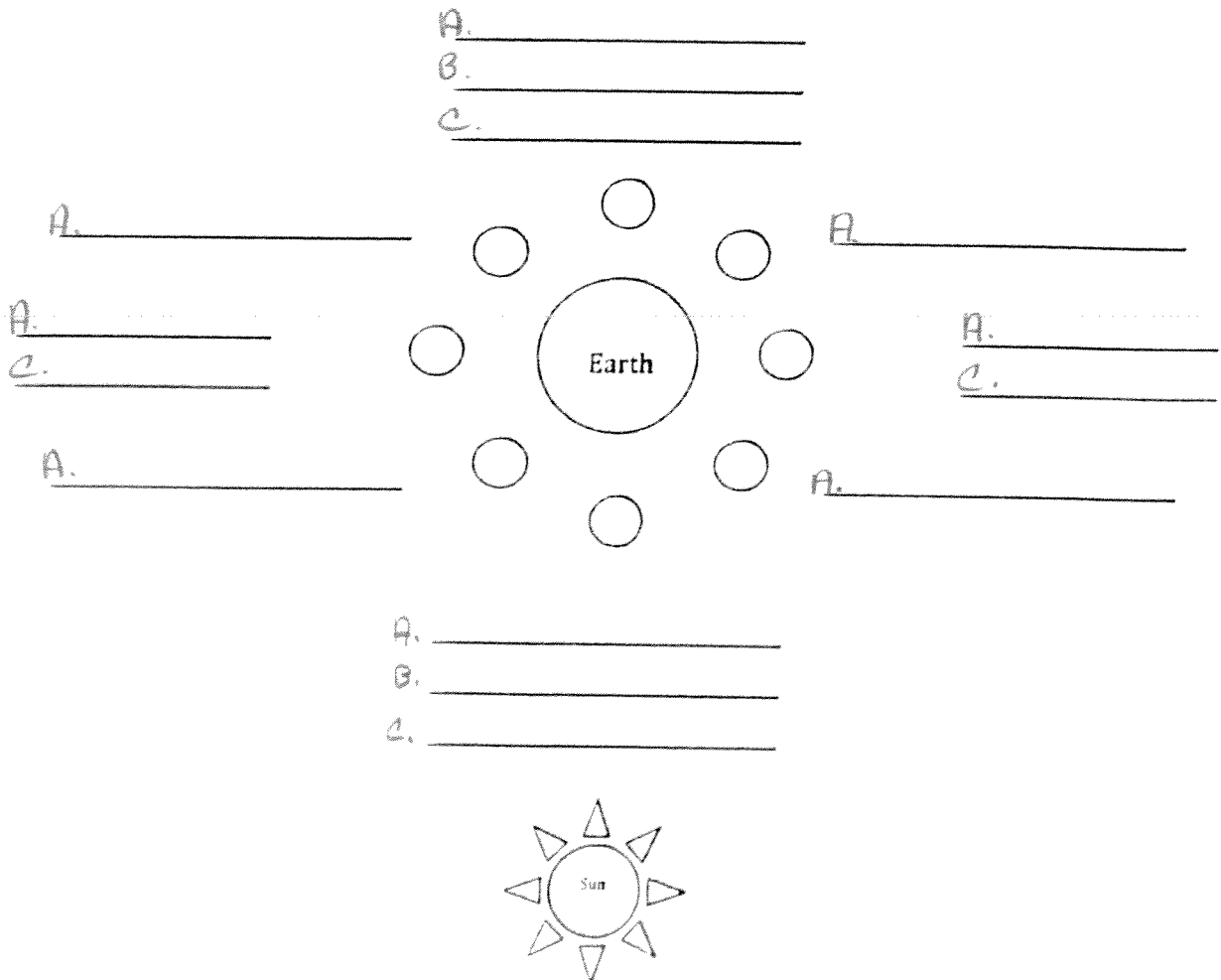
45. Sketch the correct position of the sun, earth and moon during a spring tide.

46. **Put it all together.** Fill in the following steps correctly on the diagram below.

A. Label and shade the appropriate moon phases as seen from earth.

B. Lunar and Solar Eclipses

C. Spring and Neap Tides



F
Mise

47. What is a sundial?

48. We can see many of the Moon's surface features with our eyes or simple telescope. What are the darker areas of the moon? What are the lighter areas of the moon?

49. Name the planets in order out from the Sun?

Vocabulary- If you are missing any of the definitions of the vocabulary listed below, refer to the Glossary on page 24 of the "Earth, Moon and Sun" booklet.

1. Rotation
2. Axis
3. Revolution
4. Orbit
5. Atmosphere
6. Lunar
7. Moon phase
8. Gravity
9. Tides
10. Spring tide
11. Neap tide
12. Eclipse
13. Lunar eclipse
14. Solar eclipse
15. Partial eclipse
16. Total eclipse
17. Umbra
18. Penumbra
19. Direct sunlight
20. Indirect sunlight
21. Equinox
22. Solstice
23. Planet
24. Solar system
25. Star
26. Natural satellite
27. Artificial satellite
28. Mare/Maria
29. Sundial
30. Gnomon

