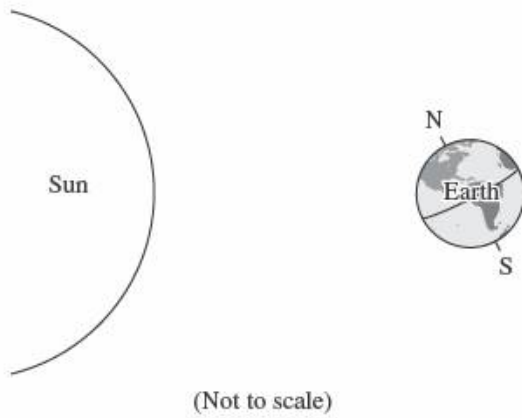


Name: _____

Date: _____

1. The illustration below shows Earth and the Sun.



What season does the Southern Hemisphere experience when Earth and the Sun are in the positions shown?

- A. fall
- B. spring
- C. summer
- D. winter

This online assessment item contains material that has been released to the public by the Massachusetts Department of Education.

2. About how many Earth days does it take the Moon to travel around Earth?

- A. 1
- B. 27
- C. 180
- D. 365

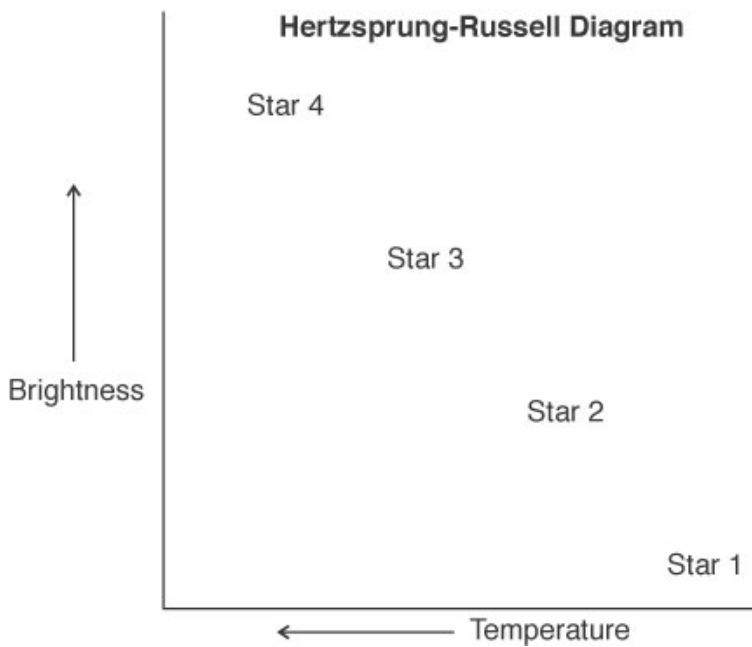
This online assessment item contains material that has been released to the public by the Massachusetts Department of Education.

3. Which of the following planets has the shortest orbit around the Sun?

- A. Earth
- B. Mars
- C. Mercury
- D. Venus

This online assessment item contains material that has been released to the public by the Massachusetts Department of Education.

4. Use the diagram below to answer this question.



In this diagram, as you move from Star 1 to Star 4, each star's

- A. brightness decreases and temperature decreases.
- B. brightness increases and temperature increases.
- C. brightness increases and temperature decreases.
- D. brightness decreases and temperature increases.

5. Which planet orbits the Sun in the least amount of time?

- A. Mercury
 - B. Mars
 - C. Neptune
 - D. Pluto
-

6. Earth's seasons are caused by the tilt of the

- A. equator.
 - B. axis.
 - C. latitudes.
 - D. longitudes.
-

7. The Moon revolves around Earth approximately every

- A. 15 days.
 - B. 28 days.
 - C. 10 days.
 - D. 7 days.
-

8. Use the table below to answer this question.

Planet	Diameter (km)
Earth	12,756
Mars	6,787
Saturn	120,660
Neptune	49,560

The table lists the diameters of some planets. Which planet of the four is the SMALLEST?

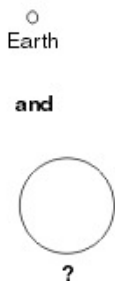
- A. Earth
 - B. Mars
 - C. Saturn
 - D. Neptune
-

9. The heating effect of the Sun is greatest when

- A. the Sun is near the horizon.
 - B. the Sun is directly overhead.
 - C. it is late in the afternoon.
 - D. there are about 12 hours of daylight.
-

10. Use the diagram below to answer this question.

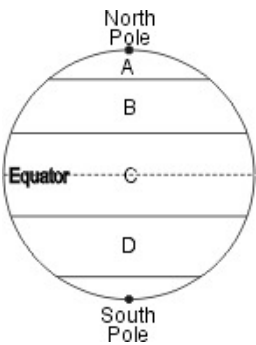
Planet Size Comparison



The diagram compares the size of two planets, Earth and

- A. Venus.
 - B. Mars.
 - C. Jupiter.
 - D. Pluto.
-

11. Use the diagram below to answer this question.



The sun is high in the sky all year long in zone

- A. A
 - B. B
 - C. C
 - D. D
-

12. Which object in the sky emits its own light?

- A. an asteroid
 - B. a star
 - C. a planet
 - D. a moon
-

13. It is necessary to add a day to the calendar every four years because

- A. the axis of Earth is tilted.
 - B. the revolution of Earth is not exactly 365 days.
 - C. the gravitational pull of the Sun affects Earth's revolution.
 - D. the Moon crosses the orbit of the Sun every 28 days.
-

14. Each year Earth revolves once around

- A. Mars.
 - B. Venus.
 - C. the Sun.
 - D. the Moon.
-

15. Twenty-four hours is the time it takes for one rotation of

- A. the Sun on its axis.
 - B. Earth on its axis.
 - C. the Moon on its axis.
 - D. the solar system.
-

16. Which of the following is the LARGEST object?

- A. Earth
 - B. Mars
 - C. the Sun
 - D. the Moon
-

17. Planets revolve around

- A. Earth.
 - B. the Sun.
 - C. the Moon.
 - D. Mars.
-

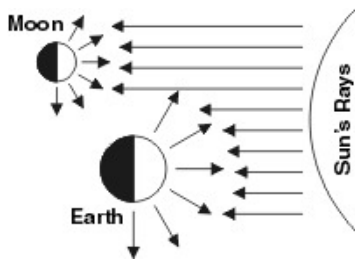
18. When the Northern Hemisphere is tilted toward the Sun, which season occurs in the Southern Hemisphere?

- A. fall
 - B. winter
 - C. spring
 - D. summer
-

19. An Earth year is the time it takes for one

- A. rotation of Earth on its axis.
 - B. revolution of the Moon around the Sun.
 - C. revolution of the Sun around Earth.
 - D. revolution of Earth around the Sun.
-

20. Use the diagram below to answer this question.



Which conclusion is supported by the diagram?

- A. The Moon does not produce its own light.
 - B. The Sun produces all of the energy in the solar system.
 - C. The Moon and the Sun are always lined up the same way.
 - D. Sunlight would not be possible without moonlight.
-

21. The seasons are caused by Earth revolving around the Sun and

- A. the Moon revolving around Earth.
 - B. the tilt of Earth's axis.
 - C. strong upper-atmosphere winds.
 - D. ocean currents.
-

22. What is Earth's main source of heat and light?

- A. electricity
 - B. coal
 - C. the Sun
 - D. the Moon
-

23. A year is the time it takes for

- A. the Moon to make one complete revolution around Earth.
 - B. Earth to make one complete revolution around the Sun.
 - C. Earth to make one complete spin on its axis.
 - D. the Sun to make one complete spin on its axis.
-

24. The Moon produces no light, and yet it shines at night. What is the BEST explanation for this fact?

- A. It has many craters.
 - B. It rotates at a very high speed.
 - C. It is covered with a fine layer of ice.
 - D. It reflects light from the Sun.
-

25. Which of these objects in our solar system provides Earth with heat and light energy?

- A. the Sun
 - B. the Moon
 - C. comets
 - D. other planets
-

26. How long does it take for Earth to rotate once on its axis?

- A. one minute
 - B. one day
 - C. one month
 - D. one year
-

27. Which group of instruments would be MOST helpful to a scientist who studies weather?

- A. computer, barometer, thermometer
 - B. thermometer, microscope, telescope
 - C. telescope, seismograph, barometer
 - D. computer, speedometer, satellite
-

28. When it is noon in Augusta, Georgia it is midnight on the opposite side of Earth. Why doesn't the Sun shine on both sides of Earth at the same time?

- A. The Sun is too small to light everything at once.
 - B. The Moon blocks some sunlight from hitting Earth.
 - C. One half of Earth is always in shadow.
 - D. The Sun is too far away.
-

29. How often can a full moon be seen?

- A. once each year
 - B. once each season of the year
 - C. about once each month
 - D. about once each week
-

30. What keeps the planets in orbit around the Sun?

- A. distance
 - B. gravity
 - C. shape
 - D. light
-

31. To make the Moon and the planets look nearer, one uses a

- A. barometer.
 - B. microscope.
 - C. speedometer.
 - D. telescope.
-

32. Which of the following is found on BOTH Earth and the Moon?

- A. air
 - B. plants
 - C. water
 - D. rocks
-

33. Man-made satellites move around Earth much like

- A. the Moon.
 - B. planets.
 - C. the Sun.
 - D. comets.
-

34. Planets orbit

- A. Earth.
 - B. the Moon.
 - C. the galaxy.
 - D. the Sun.
-

35. Which statement explains why day and night occur on Earth?

- A. Earth rotates on its axis.
 - B. Earth revolves around the Sun.
 - C. The Sun rotates on its axis.
 - D. The Sun revolves around the galaxy.
-

36. In the United States, the Sun appears to

- A. rise in the north and set in the south.
 - B. rise in the south and set in the north.
 - C. rise in the west and set in the east.
 - D. rise in the east and set in the west.
-

37. Each year Earth revolves once around

- A. Venus.
 - B. the Sun.
 - C. the Moon.
 - D. all of the other planets.
-

38. Earth is a

- A. star.
 - B. moon.
 - C. planet.
 - D. galaxy.
-

39. What causes moonlight?

- A. burning gases on the Moon
 - B. heat from Earth
 - C. ice on one side of the Moon
 - D. reflected light from the Sun
-

40. The center of our solar system is

- A. the Sun.
 - B. the North Star.
 - C. Earth.
 - D. the Moon.
-

41. In April, when it is springtime in the Northern Hemisphere, which season is it in the Southern Hemisphere?

- A. winter
 - B. spring
 - C. summer
 - D. fall
-

42. Rachel noticed that the level of water in a pan she left on her windowsill went down each day, and the water was totally gone after five days. What happened to the water?

- A. The molecules were slowly destroyed and no longer exist.
 - B. Insects or animals must have drunk the water.
 - C. The molecules were heated, and the water changed from a liquid to a gas.
 - D. The molecules condensed, and were now part of the pan.
-

43. An object that orbits a planet is called a

- A. star.
 - B. white dwarf.
 - C. moon.
 - D. black hole.
-

44. Which planet is closest to the Sun?

- A. Pluto
 - B. Neptune
 - C. Mercury
 - D. Mars
-

45. All of the planets in our solar system travel around

- A. the Sun.
 - B. the Moon.
 - C. Earth.
 - D. the galaxy.
-

46. The day during the year when the Northern Hemisphere receives the greatest amount of sunlight is called the

- A. fall equinox.
- B. spring equinox.
- C. winter solstice.
- D. summer solstice.

Answer Key

1. D) winter
2. B) 27
3. C) Mercury
4. B) brightness increases and temperature increases.
5. A) Mercury
6. B) axis.
7. B) 28 days.
8. B) Mars
9. B) the Sun is directly overhead.
10. C) Jupiter.
11. C) C
12. B) a star
13. B) the revolution of Earth is not exactly 365 days.
14. C) the Sun.
15. B) Earth on its axis.
16. C) the Sun
17. B) the Sun.
18. B) winter
19. D) revolution of Earth around the Sun.
20. A) The Moon does not produce its own light.
21. B) the tilt of Earth's axis.
22. C) the Sun
23. B) Earth to make one complete revolution around the Sun.
24. D) It reflects light from the Sun.
25. A) the Sun

- 26. B) one day
- 27. A) computer, barometer, thermometer
- 28. C) One half of Earth is always in shadow.
- 29. C) about once each month
- 30. B) gravity
- 31. D) telescope.
- 32. D) rocks
- 33. A) the Moon.
- 34. D) the Sun.
- 35. A) Earth rotates on its axis.
- 36. D) rise in the east and set in the west.
- 37. B) the Sun.
- 38. C) planet.
- 39. D) reflected light from the Sun
- 40. A) the Sun.
- 41. D) fall
- 42. C) The molecules were heated, and the water changed from a liquid to a gas.
- 43. C) moon.
- 44. C) Mercury
- 45. A) the Sun.
- 46. D) summer solstice.