Answer Key

Directed Reading A

SECTION: OUR SOLAR SYSTEM

1. B
2. C
3. D
4. C
5. solar system
6. The Saturn system is made up of the planet Saturn and the moons that orbit it.
7. B
8. D
9. 1 second
10. light minute
11. There are 8.3 light minutes in one astronomical unit.
12. D
13. B
14. the sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, and the moon
15. C
16. B
17. the inner solar system
18. terrestrial planets
19. Mercury, Mars, Earth, Venus
20. Jupiter, Saturn, Uranus, Neptune
21. They are large planets that are composed mostly of gases.
22. They are made of different materials.

SECTION: THE INNER PLANETS

1. B
2. The inner planets are smaller, denser, and rockier than the outer planets.
3. C
4. period of rotation
5. because its period of rotation is so slow
6. C
7. D
8. A
9. B
10. A
11. D
12. B
13. C
14. C
15. D
16. because Venus is only slightly smaller, less massive, and less dense than Earth
17. prograde
18. retrograde
19. Earth is located at just the right distance from the sun to keep its water from freezing and cool enough to keep its water from boiling away.
20. Answers may vary. Sample answer: the atmosphere, land, ice, the oceans, and life
21. C
22. B
23. C
24. Mars is a cold planet because it has a thin atmosphere that cannot trap heat, and it is located much farther out from the sun.
25. Olympus Mons
26. The difference in the chemical composition of Mars has kept the Martian crust from shifting like Earth's so the Martian volcanic system keeps building up in the same spots.
27. The Twin Rovers mission was designed to help determine whether life ever existed on Mars and to help prepare for human exploration missions to Mars.

SECTION: THE OUTER PLANETS

1. gas giant
2. A
3. B
4. C
5. B
6. C
7. As depth and pressure increase, hydrogen gas turns into liquid form. Deeper still, the liquid hydrogen changes into a liquid, metallic state.
8. C
9. Saturn's rings, moons, and atmosphere
10. C
11. B
12. B
13. Early in its history, Uranus may have been struck by a massive object that tipped it over on its side.
14. D

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