Answer Key

Directed Reading A

SECTION: WATER IN THE AIR

1. weather
2. C
3. C
4. C
5. runoff
6. The water cycle is the continuous movement of water from Earth's surface into the air, onto and over the land, into the ground, and back to the surface.
7. D
8. B
9. C
10. A
11. It increases.
12. 100%
13. It increases.
14. Take a reading on the wet-bulb thermometer and on the dry-bulb thermometer. The larger the difference between the two readings, the lower the humidity. Use a table that shows the differences between wet-bulb and dry-bulb readings to find the relative humidity.
15. B
16. C
17. The air next to the glass becomes saturated, then cools to below its dew point, so the water vapor condenses on the glass.
18. When water vapor is added to air through evaporation and when it cools to its dew point.
19. a collection of small drops of water or ice crystals suspended in the air
20. by form and by altitude
21. E
22. A
23. D
24. C
25. B
26. B
27. A
28. A
29. D
30. Sleet falls when rain falls through a layer of freezing air.
31. Snow forms in temperatures so cold that water vapor changes directly to a solid.
32. Hail collects water drops as it falls. An updraft can send the hail back up, where the water drops freeze to form another layer of ice. This process can be repeated many times, adding many layers.

SECTION: AIR MASSES AND FRONTS

1. the movement and interaction of air masses
2. air mass
3. C
4. m—maritime, forms over water, wet; c—continental, forms over land, dry; P—polar, forms over the polar regions, cold; T—tropical, forms over the Tropics, warm
5. over northern Canada, over the North Atlantic Ocean, over the North Pacific Ocean
6. continental tropical
7. maritime tropical
8. B
9. front
10. B
11. C
12. D
13. A
14. cold front: thunderstorms, heavy rain, or snow; warm front: drizzly rain and then clear, warm weather; occluded front: cool temperatures and large amounts of rain and snow; stationary front: many days of cloudy, wet weather
15. cyclone
16. anticyclone
17. A cyclone can occur when colder, denser air spirals out of the anticyclone and moves toward an area of low pressure.
18. It causes stormy weather.
19. It causes dry, clear weather.

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