

Skills Worksheet

Concept Review

In the space provided, write the letter of the description that best matches the term or phrase.

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| _____ 1. corona | a. a dark, cooler area of the photosphere of the sun, with a strong magnetic field |
| _____ 2. aurora | b. the most violent solar disturbance; an eruption of electrically charged particles |
| _____ 3. photosphere | c. the sun's visible surface |
| _____ 4. sunspot | d. the region of the sun's interior between the radiative zone and the photosphere |
| _____ 5. coronal mass ejection | e. a loop of relatively cool incandescent gas that extends above the photosphere |
| _____ 6. solar flare | f. the zone of the sun's interior between the core and the convective zone |
| _____ 7. radiative zone | g. the outermost layer of the sun's atmosphere |
| _____ 8. chromosphere | h. the thin layer of the sun's gases just above the photosphere |
| _____ 9. convective zone | i. colored light caused by the reaction of solar wind particles with Earth's upper atmosphere |
| _____ 10. prominence | j. a part of coronal gas thrown into space from the sun's corona |

In the space provided, write the letter of the answer choice that best completes each statement or best answers each question.

- _____ 11. One final product of the sun's energy-producing process is always
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| a. a helium nucleus. | c. an iron nucleus. |
| b. an oxygen nucleus. | d. a carbon nucleus. |
- _____ 12. The sun converts matter into energy in its core by
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| a. exposing matter to strong magnetic fields. |
| b. the fusion of nuclei, which gives off energy. |
| c. nuclear fission, which gives off energy. |
| d. crushing it with extreme pressure. |
- _____ 13. The most common nuclear reaction inside the sun is the
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| a. fission of uranium into hydrogen. |
| b. fusion of nuclei and electrons. |
| c. fission hydrogen into helium. |
| d. fusion of hydrogen nuclei into helium. |

Concept Review *continued*

- _____ 14. How do the temperatures of the radiative zone and the convective zone compare?
- The radiative zone is hotter.
 - The convective zone is hotter.
 - The convective zone is cooler.
 - The radiative zone is cooler.
- _____ 15. The convective zone of the sun
- surrounds the core and comprises the outer 50% of the sun.
 - surrounds the radiative zone and comprises the outer 30% of the sun.
 - surrounds the corona and comprises the outer 10% of the sun.
 - surrounds the photosphere and comprises the outer 30% of the sun.
- _____ 16. What is the approximate temperature of the sun's core?
- 15,000 °C
 - 200,000,000 °C
 - 15,000,000 °C
 - 20,000,000 °C
- _____ 17. What causes magnetic fields on the sun?
- coronal mass ejections
 - Earth's magnetic fields
 - the movement of gases and the sun's rotation
 - powerful magnetic poles on the sun
- _____ 18. What causes an aurora?
- the visible light given off by the sun
 - colored lights seen on the sun
 - interaction between the corona and a sunspot
 - interaction between the solar wind and Earth's magnetosphere
- _____ 19. The sun is composed mostly of
- hydrogen and carbon.
 - hydrogen and helium.
 - carbon and helium.
 - helium and oxygen.
- _____ 20. Where are auroras most commonly seen on Earth?
- close to Earth's magnetic poles
 - close to the equator
 - only in the Southern Hemisphere
 - only near the tropics