

Skills Worksheet

Critical Thinking

Work-Alikes

In the space provided, write the letter of the term or phrase that best describes how each numbered item functions.

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|--|---|
| _____ 1. all of Earth's organisms | a. heat produced by an internal combustion engine |
| _____ 2. biodiversity | b. ammonia factory |
| _____ 3. energy lost at trophic levels | c. salad bar |
| _____ 4. ammonification | d. jigsaw puzzle pieces |

Cause and Effect

In the space provided, write the letter of the term or phrase that best matches each cause or effect given below.

Cause	Effect	
5. removal of every organism from an ecosystem	_____	a. Ecosystems lose energy at each trophic level.
6. _____	nutrients released back into the environment	b. Minerals, organic compounds, water, and sunlight remain.
7. _____	the number of trophic levels in an ecosystem is limited	c. organic molecules
8. photosynthesis	_____	d. decomposers

Critical Thinking *continued***Trade-Offs**

In the space provided, write the letter of the bad news item that best matches each numbered good news item below.

Good News

- _____ 9. Succession brings in new species of plants.
- _____ 10. 10 kg of grain eaten builds 1 kg of human tissue.
- _____ 11. Water, carbon, nitrogen, and phosphorus pass from nonliving things to living organisms.
- _____ 12. The atmosphere is 79 percent nitrogen.

Bad News

- a. 100 kg of consumed beef is required to build 1 kg of human tissue.
- b. Most organisms cannot use it in the form of a gas.
- c. Many of the old ones die due to the replacement.
- d. There is less of all these compounds in living things than in nonliving things.

Linkages

In the spaces provided, write the letters of the two terms or phrases that are linked together by the term or phrase in the middle. The choices can be placed in any order.

13. _____ community _____
14. _____ shrubs, grasses, small trees _____
15. _____ succession _____
16. _____ herbivores _____
17. _____ solar energy _____
- a. species
- b. producers
- c. pine trees
- d. pioneer plants
- e. equilibrium
- f. ecosystem
- g. biome latitude
- h. carnivores
- i. algae and fungi
- j. temperature range

Critical Thinking *continued***Analogies**

An analogy is a relationship between two pairs of terms or phrases written as $a : b :: c : d$. The symbol $:$ is read as “is to,” and the symbol $::$ is read as “as.” In the space provided, write the letter of the pair of terms or phrases that best completes the analogy shown.

- _____ 18. food web : food chains ::
a. ecosystem : a community
b. bacterium : plants
c. plant : communities
d. protist : animals
- _____ 19. hawk : biotic factor ::
a. spider : abiotic factor
b. water : abiotic factor
c. weather : biotic factor
d. soil : biotic factor
- _____ 20. pioneer plant : succession ::
a. forest fire : hemlock forest
b. glacier : spruce forest
c. volcano : bare rock
d. grass and weeds : soil formation
- _____ 21. climate : biome ::
a. vegetation : precipitation
b. high latitude : tropical
c. salinity : aquatic ecosystem
d. taiga : temperate forest
- _____ 22. plant : sunlight into chemical energy ::
a. animal : sunlight into chemical energy
b. plant : chemical energy into sunlight
c. chemical energy : sunlight into nitrogen
d. bacterium : ammonia into nitrates