2.18 Autotrophs and Heterotrophs Practice

1. What do plants do with sunlight?

2. What is the definition of food?

3. What is an autotroph?

1. An organisms that eats parts of itself
2. An organism that eats plants
3. An organism that eats animals
4. An organism that makes its own food

4. Which classification of organisms does NOT include members that are autotrophs?

1. Plants
2. Protists (Algae)
3. Bacteria
4. Animals

5. Autotrophs are fundamental to the food chains of \_\_\_\_\_\_ecosystems in the world.

1. a few
2. some
3. most
4. all

6. A heterotroph is an organism that produces complex organic compounds from simple inorganic molecules using energy from light by photosynthesis. ( True / False )

7. \_\_\_\_\_ build “food” (chemical energy in the bonds of organic molecules) by using the chemical energy stored in inorganic compounds as the source of energy.

1. Photoautotrophs
2. Chemoautotrophs
3. Heterotrophs
4. None of the above

8. Compare autotrophs to heterotrophs, and describe the relationship between these two groups of organisms.

9. Photosynthesis provides over \_\_\_\_ percent of the energy for life on earth.

1. 50%
2. 75%
3. 99%
4. 100%

10. **Where** have we found chemosynthetic organisms on Earth?

1. According to the text, how do we classify the chemosynthetic organisms we have discovered? (circle all that apply)

|  |  |  |
| --- | --- | --- |
| * 1. animals   2. plants   3. bacteria | * 1. eukaryotes   2. prokaryotes | * 1. autotrophs   2. heterotrophs |

11. Name and briefly describe the two methods of “food making” among autotrophs. Which is quantitatively more important to life on earth?

12. Trace the flow of energy through a typical food chain (describing "what eats what"), including the original source of that energy.

13. Does energy “flow” or “cycle”? What about matter?

14. Can you use the following terms in context? Circle the terms you think you are likely to struggle with at this point:

Autotroph

Photoautotroph

Chemoautotroph

Heterotroph

Producer

Consumer

Decomposer

Food chain

Food web

Trophic level

Energy

Chemical energy

Sunlight energy

Mechanical energy

Heat (thermal) energy

Conversion (flow) of energy

Matter

Biogeochemical cycles

Carbon cycle

Water cycle

Nitrogen cycle