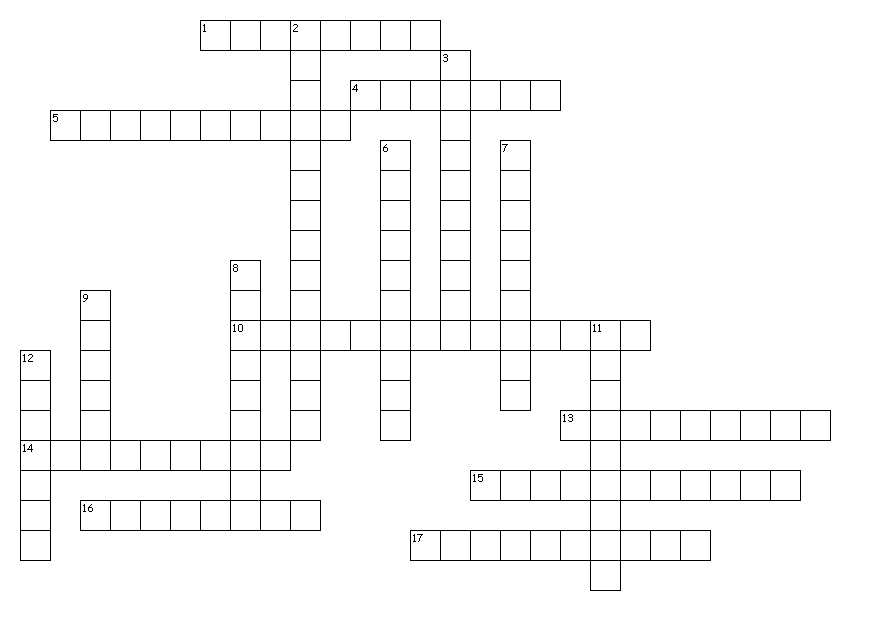
Chapter 8 Brain Freshener ☺

Name:

**Across**

1. organic molecule, helper for catalytic activity

4. is increased as spontaneous processes occur in the universe

5. totality of an organism's chemical reactions

10. study of energy transformations in a collection of matter

13. produce energy by breakdown pathways

14. energy outward

15. heat energy absorbed

16. consume energy to build molecules

17. heat energy is given off

**Down**

2. a process that cannot occur on its own

3. portion of a system's energy that can be used to do work

6. energy inward

7. a biological catalyst acts on

8. energy possessed by a motionless object

9. macromolecule that acts as a biological catalyst

11. nonprotein inorganic helper for catalytic activity

12. energy associated with motion of atoms, directly proportional to thermal energy