

Chemical vs. Physical Change

In a **physical change**, the original substance still exists; it has only changed in form. Energy changes usually only accompany physical changes in phase changes and when substances dissolve. In a **chemical change**, a new substance is produced. Energy changes always accompany chemical changes. Physical changes usually accompany chemical changes.

Classify each situation as a *chemical* or a *physical* change.

1. Sodium chloride dissolves in water. _____
2. Hydrochloric acid reacts with sodium hydroxide to produce a salt, water, and heat. _____
3. A pellet of sodium is sliced in half. _____
4. Water is heated and changes to steam. _____
5. Food is digested. _____
6. Starch molecules are formed from smaller glucose molecules. _____
7. Ice melts. _____
8. Plant leaves lose water through evaporation. _____
9. A red blood cell placed in distilled water swells and bursts. _____
10. The energy in food molecules is transferred into molecules of ATP. _____
11. The roots of a plant absorb water. _____
12. Iron rusts. _____
13. Oxygen is incorporated into hemoglobin to bring it to the cells. _____
14. A person gets cooler by perspiring. _____
15. Proteins are made from amino acids. _____
16. A match burns. _____
17. A toothpick is broken in half. _____