

# Physical and Chemical Changes

## Pre Test Questions

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

- Which of the following is an example of physical change?
  - Mixing baking soda and vinegar together, and this causes bubbles and foam.
  - A glass cup falls from the counter and shatters on the ground.
  - Lighting a piece of paper on fire and the paper burns up and leaves ashes.
  - Baking a birthday cake for your mother.
- Which of the following is an example of chemical change?
  - Filling up a balloon with hot air.
  - Taking a glass of water and freezing it by placing it in the freezer.
  - A plant collecting sunlight and turning it into food.
  - Your dog ripping up your homework.
- Which change can be easily be reversed?
  - Chemical Change
  - Physical Change
  - Both a physical and chemical change
  - Neither a physical or chemical change
- When a new substance is formed with different properties than the original substance it is called a
  - Chemical change
  - Physical change
  - Freezing
  - boiling
- If the chemical properties of a substance remain unchanged and the appearance or shape of an substance changes it is called a
  - Chemical change
  - Physical change
  - Both a physical and chemical change
  - Neither a physical or chemical change

6. Which is an example of a physical change?
- a. Metal rusting
  - b. Silver tarnishing
  - c. Water boiling
  - d. Paper burning
7. What characteristic best describes what happens during a physical change?
- a. Composition changes
  - b. Composition stays the same
  - c. Form stays the same
  - d. Mass is lost
8. Which is an example of chemical change?
- a. Water freezes
  - b. Wood is cut
  - c. Bread is baked
  - d. Wire is bent
9. Which is not a clue that could indicate a chemical change?
- a. Change in color
  - b. Change in shape
  - c. Change in energy
  - d. Change in odor
10. What property stays the same during physical and chemical changes?
- a. Density
  - b. Shape
  - c. Mass
  - d. Arrangement of particles

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## Pre-Test Answers

1. B
2. C
3. B
4. A
5. B
6. C
7. B
8. C
9. B
10. C

# Physical and Chemical Changes

## Post-Test Questions

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

1. A chemical change

- a) changes matter from one form to another.
- b) destroys matter.
- c) creates matter.
- d) does not change matter in any way.

2) Which of the following is a physical change?

- a) Iron is oxidized to iron oxide
- b) Aluminum meal is pounded into thin sheets
- c) Copper reacts with a strong acid
- d) Sodium metal explodes on contact with water

3) Which of the following is an example of a chemical change?

- a) melting solid gold
- b) burning hydrogen gas
- c) dissolving sugar in water
- d) breaking a sheet of glass

4) Which of the following is a common sign that a chemical change has occurred?

- a) A chemical has changed size.
- b) A chemical has changed to a different state (solid, liquid or gas)
- c) A chemical has become a different shape.
- d) A chemical has turned a different color.

- 5) When silver metal comes in contact with sulfur, silver sulfide forms and the silver appears darker. This is a
- change of form
  - chemical change
  - change of state
  - physical change
- 6) Two solutions are added together and the new solution becomes hot. This tells you that
- a gas is being produced.
  - the solutions are not soluble.
  - the physical properties are the same.
  - a chemical change is taking place.
- 7) A solid brown metal is added to a clear acidic solution. A white powder appears and the acid solution becomes cloudy. Which type(s) of change have/has occurred?
- both chemical and physical
  - only physical
  - neither chemical nor physical
  - only chemical
- 8) Jolene wants to experiment with sugar cubes. Which of the following causes a sugar cube to only change physically, not chemically?
- burning the sugar cube with a match
  - crushing the sugar cube and dissolving it in water
  - dehydrating the sugar cube with sulfuric acid
  - chewing the sugar cube and digesting it
- 9) A physical change occurs when...
- both the appearance of a substance and its identity change.
  - the appearance of a substance changes but its identity does not.
  - the identity of a substance changes but its appearance does not.
  - neither the appearance of a substance nor its identity changes.

**10) Diane draws a picture on a piece of paper and then folds it into a paper airplane. She throws it at her little brother, and it hits him in the head. He responds by ripping up the paper. Which of the following is an example of a physical change?**

- a) ripping up the paper**
- b) folding the paper into an airplane**
- c) drawing on the paper**
- d) all of these**

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## Post Test Answers

1. A
2. B
3. B
4. D
5. B
6. D
7. D
8. B
9. B
10. D