

## Physical and Chemical Change Worksheet

### Multiple Choice

For # 1 and 2, write a P for physical change, and a C for chemical change.

\_\_\_\_\_ 1. A ( Physical or Chemical ) change is a change of matter from one form to another without a change in chemical properties.

\_\_\_\_\_ 2. A ( Physical or Chemical ) change is a change that occurs when a substance changes composition by forming one or more new substances.

For # 3-8, write a T for true and an F for false.

\_\_\_\_\_ 3. Color change is evidence that a chemical change may have occurred.

\_\_\_\_\_ 4. Fizzing or foaming is evidence that a chemical change may have occurred.

\_\_\_\_\_ 5. Production of sound is evidence that a chemical change may have occurred.

\_\_\_\_\_ 6. Production of heat or light is evidence that a chemical change may have occurred.

\_\_\_\_\_ 7. Production of an odor is evidence that a chemical change may have occurred.

\_\_\_\_\_ 8. Chemical changes cannot be reversed by physical changes.

For # 9-22, write a C for chemical change, and a P for physical change.

\_\_\_\_\_ 9. You cut your hair

\_\_\_\_\_ 16. Copper turns green when exposed to the environment

\_\_\_\_\_ 10. Mixing sugar and water

\_\_\_\_\_ 17. Two clear liquids are mixed and a yellow color forms

\_\_\_\_\_ 11. Making a peanut, pretzel and cereal mixture

\_\_\_\_\_ 18. Baking cookies

\_\_\_\_\_ 12. Baking soda reacts with vinegar and forms a gas

\_\_\_\_\_ 19. Diamonds are used to scratch glass

\_\_\_\_\_ 13. A piece of metal is bent in half.

\_\_\_\_\_ 20. A tree burns to form ashes

\_\_\_\_\_ 14. Methanol is burned and leaves a residue

\_\_\_\_\_ 21. A piece of paper is crumpled up

\_\_\_\_\_ 15. An aspirin is crushed into fine powder

\_\_\_\_\_ 22. Water freezes to form ice

**Part B**

Read each scenario. Decide whether a physical or chemical change has occurred and give evidence for your decision. The first one has been done for you to use as an example.

	Scenario	Physical or Chemical Change?	Evidence...
1.	Umm! A student removes a loaf of bread hot from the oven. The student cuts a slice off the loaf and spreads butter on it.	Physical	No change in substances. No unexpected color change, temperature change or gas given off.
2.	Your friend decides to toast a piece of bread, but leaves it in the toaster too long. The bread is black and the kitchen is full of smoke.		
3.	You forgot to dry the bread knife when you washed it and reddish brown spots appeared on it.		
4.	You blow dry your wet hair.		
5.	In baking biscuits and other quick breads, the baking powder reacts to release carbon dioxide bubbles. The carbon dioxide bubbles cause the dough to rise.		
6.	You take out your best silver spoons and notice that they are very dull and have some black spots.		
7.	A straight piece of wire is coiled to form a spring.		
8.	Food color is dropped into water to give it color.		
9.	Chewing food to break it down into smaller particles represents a _____ change, but the changing of starch into sugars by enzymes in the digestive system represents a _____ change.		
10.	In a fireworks show, the fireworks explode giving off heat and light.		

**Part C: True (T) or False (F)**

1.	Changing the size and shapes of pieces of wood would be a chemical change.
2.	In a physical change, the makeup of matter is changed.
3.	Evaporation occurs when liquid water changes into a gas.
4.	Evaporation is a physical change.
5.	Burning wood is a physical change.
6.	Combining hydrogen and oxygen to make water is a physical change.