Name:_____

# Physical and Chemical Changes Webquest

Use the following links to answer the questions asked below.

**Part 1:** Go to:
https://chem.libretexts.org/Core/Analytical_Chemistry/Qualitative_Analysis/Chemical_Change_vs._Physical_Change

1. The difference between a physical change and a chemical reactions is _____.
2. Describe what happens during a chemical reaction.

3. Describe what happens during a physical change.

4. List 5 common examples of a physical change:
   a. _____ c. _____ e. _____
   b. _____ d. _____
5. List 5 common examples of a chemical reaction:
   a. _____ c. _____ e. _____
   b. _____ d. _____
6. Is a change in color always indicative of a chemical reaction? Why or why not?

7. Give an example of how a change in texture is only a physical change.

8. Give an example of how a change in shape is only a physical change.

9. Give an example of how a change in state is only a physical change.

10. Fill-in the table below on state changes:

| | |
|---|---|
| Solid → Liquid | |
| Liquid → Gas | |
| Liquid → Solid | |
| Gas → Liquid | |
| Solid → Gas | |

11. If heat is added to a substance, such as in melting, vaporization, and sublimation, the process is _____. In this instance, heat is increasing the speed of the molecules causing them move faster.
12. If heat is removed from a substance, such as in freezing and condensation, then process is _____. In this instance, heat is decreasing the speed of the molecules causing them move slower.
13. Define Luster.

14. How do you determine whether an object will sink or float using density?

15. Define Viscosity.

16. Give an example of how a change in odor is indicative of a chemical change.

17. Define Precipitate.

18. Give an example of how the formation of a precipitate is a chemical change.

19. When bubbles form during a chemical reaction, what is being made?

20. Give an example of how the formation of bubbles is a chemical change.

**Part 2:** Go to: http://novella.mhhe.com/sites/dl/free/007869387x/280088/E03.html

Before you begin the virtual lab read the information on the left side of the screen. Then, answer these questions:

21. In your own words, what is a physical property?

22. Draw a concept map of at least 4 physical properties that describe matter.

23. In your own words, what is a chemical property?

24. Draw a concept map of at least 4 chemical properties that describe matter.

Read the Procedure on the left side of the screen. Fill-in the charts below as you complete the virtual lab

| Event | Describe matter prior to change | Describe shape change | Describe color change | Describe bubbles formed | Describe odor produced | Describe heat given off |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |

| Event | Describe size change | Describe change of state | Describe new substance formed | Describe sound produced | Describe light produced | Is it a physical or chemical change? |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |

After you complete the virtual lab, answer the following questions:

25. Is evaporation of water a physical or chemical change? Explain why.

26. Give an example of a physical change that you encounter every day.

27. Give an example of a chemical change that you encounter every day.

28. Explain how a burning candle can be both a physical and a chemical change.

29. Draw a Venn diagram to compare and contrast the physical and chemical properties of matter.

**Part 3**: Go to: https://www.quia.com/quiz/303980.html

Take the physical or chemical change quiz. Place each of the examples given into the correct category below.

| Physical Change | Chemical Change |
|---|---|
| | |

My score was a _____%