CHEMICAL and *PHYSICAL* changes NAME _____/58

1. Look at your pencil. Observe it carefully. Record its color, smell, shape and any other physical characteristic you can think of. DESCRIBE this object.

_____

_____

2. Sharpen your pencil. Describe how your pencil has changed.

_____

_____

3. Observe the shavings. What physical properties do they have? How would you describe them? _____

_____

4. Are these changes physical or chemical changes?

_____

5. Get a small piece of potato and place it into a large solo cup (4oz). Observe and record its physical characteristics below.

_____

_____

6. Set it aside. Record what time it is now. _____ At the end of this lab, observe this potato again and record the changes. For now, go on to question 8.

_____

_____

7. Do you think this was a physical or a chemical change? _____

8. Get another piece of potato and put it in a different cup. Cut it in half. Was this a physical or chemical change? _____

9. Add hydrogen peroxide into the cup until it just covers the potato. Observe and record what you see. How is the potato changing?

_____

_____

10. Did the potato with the peroxide undergo a physical or chemical change?
_____

11. Get a piece of scrap paper. Describe its physical properties below.

_____

_____

12. Crumple it up. Have any physical properties changed? If so, which ones?

13. Is this action reversible? Could you make it look EXACTLY like it did originally?

14. Was this a physical or chemical change? _____

15. Tear the paper into many pieces. Which physical properties have changed?

16. Is this action reversible? Is it possible to make the paper look like it did originally?

17. Get one small piece of the paper (approximately 1cm x 4cm) from your teacher. Using tweezers to hold the paper, carefully put the paper into a candle's flame. How is the paper changing? Describe the paper now.

18. Is this a physical or chemical change? _____ Return your candle and match case to the supply table.

19. Get a small solo cup and put about 1.5 cm of milk in it. (fill it ½ full) Describe its physical properties.

20. Add a tablespoon of vinegar to the milk. Observe and record the changes.

21. Describe what is forming on the bottom of the cup.

22. At the start of this experiment, both reactants (starting substances) were in which state of matter? (solid, liquid, gas) _____

23. At the end of this experiment, were all the products (ending substances) still liquid?

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24. One of the products is called a PRECIPITATE. Which one do you think it is?

_____

25. What form of matter are precipitates? _____

26. Is the vinegar/ milk experiment showing a physical or chemical change?

_____

	New substance formed? (yes or no?)	Physical change?	Chemical change?	Any hypotheses or other comments
Pencil sharpened				
Potato in air				
Potato in hydrogen peroxide				
Crumpled paper				
Ripped paper				
Vinegar and milk				

27. Are all physical changes reversible? _____
28. Can some physical changes be reversible? _____
29. Think of an example where a physical change occurs, but it can be reversed.

_____

30. Look at the chart. Which experiments were chemical changes?

_____

31. Can these changes be reversed? _____

32. Think of a physical change from this experiment. (your choice) What molecules were present before the experiment and then afterward?

_____

_____

33. Did the molecules change their identity by the end of the experiment?

_____