Name_____ Date _____ Period_____

Physical and Chemical Changes Sort

Directions: Take out all of the laminated cards. Find the “Physical Change” and “Chemical Change” cards. Using the posterboard, put the “physical change” card on the left side and the “chemical change” card on the right side.

Physical Change	Chemical Change

Now take out the remaining cards and lay them out in front of you. As a table, look at the picture and read the description on the back. Decide whether your group thinks each one is a physical change or a chemical change. Once everyone has agreed, place the card on the correct side of the poster.

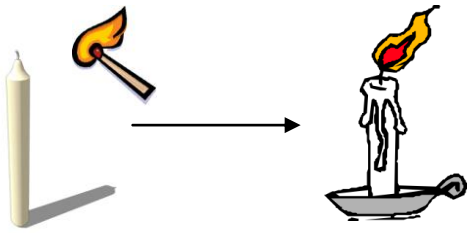
Record your answers in the table below by placing an “X” in the physical or chemical change box:

Card Number	Physical Change	Chemical Change
1		
2		
3		
4		
5		
6		
7		
8		

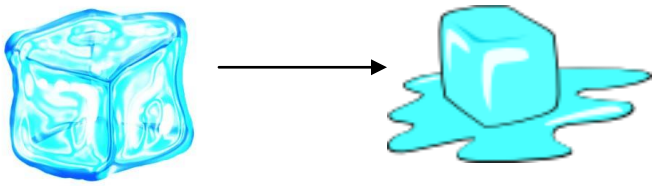
What did you notice about the chemical equations for physical changes?_____
_____

What did you notice about the chemical equations for chemical changes?_____
_____

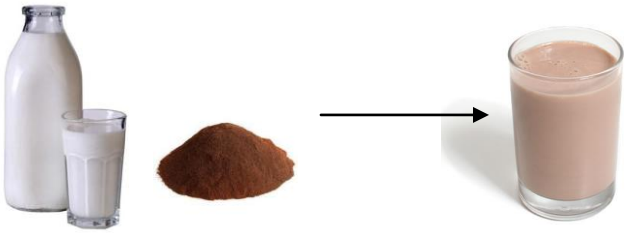
Card 1
Burning Candle



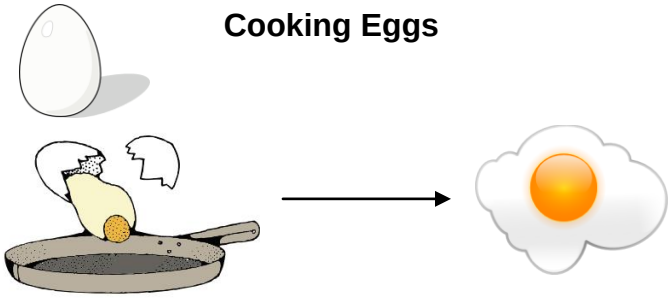
Card 2
Melting Ice Cube



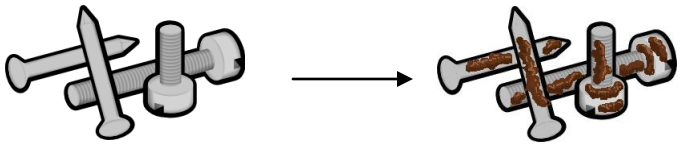
Card 3
Mixing Chocolate Milk



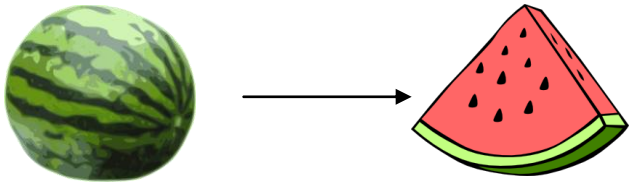
Card 4
Cooking Eggs



Card 5
Oxidizing Iron (rust)

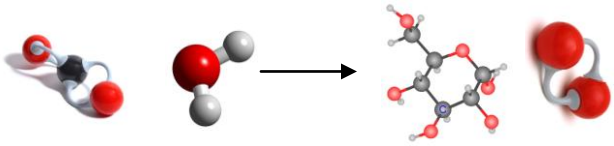


Card 6
Slicing Fruit



Card 7
Subliming Carbon Dioxide

Card 8
Photosynthesis



Card 2 **Melting Ice Cube** H_2O (solid) → H_2O (liquid) This is the chemical equation for ice and water. Notice they are the same except for the state of matter.	**Card 1** **Burning Candle** $C_{25}H_{52} + 38\ O_2 \rightarrow 25\ CO_2 + 26\ H_2O$ This is the chemical equation for a burning candle. You start with a wax candle and oxygen and as it burns, it turns in to carbon dioxide and water.
Card 4 **Cooking Eggs** Raw egg+ heat → cooked egg When we cook anything, the heat changes the chemical bonds in the food.	**Card 3** **Mixing Chocolate Milk** Milk + cocoa → milk + cocoa mixed There is no true chemical equation for mixing chocolate milk.
Card 6 **Slicing Fruit** Whole watermelon → small piece of watermelon Most things can be cut, torn, or sliced into smaller pieces.	**Card 5** **Oxidizing Iron (rust)** $4Fe + 3O2 + 6H2O \longrightarrow 4Fe(OH)3$ Anything made of iron will turn in to rust if exposed to water and oxygen. The oxygen and iron combine to form the rust in a process called oxidation.
Card 8 **Photosynthesis** $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$ Photosynthesis is a complex reaction that occurs in the chloroplasts of plant cells. It is the combining of carbon dioxide and water to form glucose and oxygen.	**Card 7** **Subliming Carbon Dioxide** CO_2 (solid) → CO_2 (gas) Carbon dioxide must remain very cold to remain a solid. Even room temperatures can make it change from a solid straight to a gas, skipping the liquid phase.

PHYSICAL CHANGES

CHEMICAL CHANGES