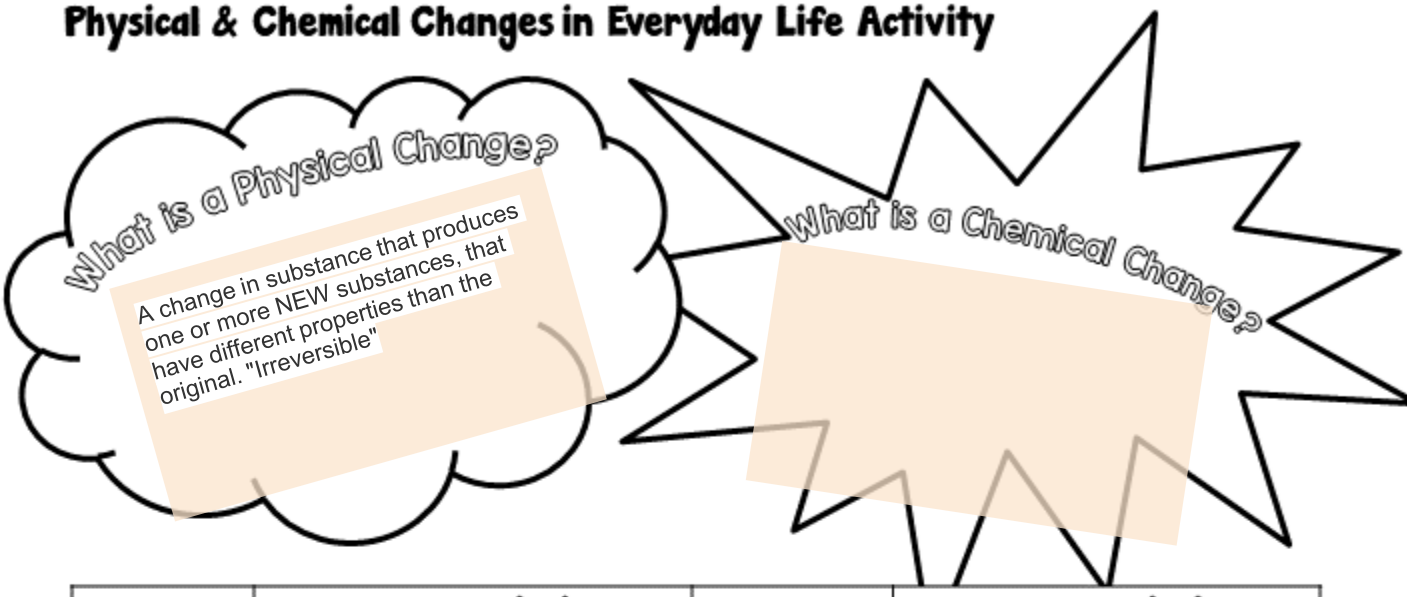
IDENTIFYING PHYSICAL AND CHEMICAL CHANGES IN EVERYDAY LIFE

DIRECTIONS:

1. On slide 2, fill in the definitions for physical change and chemical change.
2. View the Physical and Chemical Changes in Everyday Life example cards on slides 3 through 6.
3. For each example, decide if it is describing a physical change or a chemical change. Complete the chart on slide 2 with your answers.
4. On slide 7, read the story and use the movable highlighter pieces to highlight the physical changes in PURPLE and the chemical changes in ORANGE.
5. Complete the practice activities on slide 8 to review.

Name _____ Class_____

Physical & Chemical Changes in Everyday Life Activity



#	Physical (P) or Chemical (C)?	#	Physical (P) or Chemical(C)?
1		13	
2		14	
3		15	
4		16	
5		17	
6		18	
7		19	
8		20	
9		21	
10		22	
11		23	
12		24	

Score: _____ / 24 correct

Using a mortar and pestle, you grind up a substance into a fine powder.

p

1

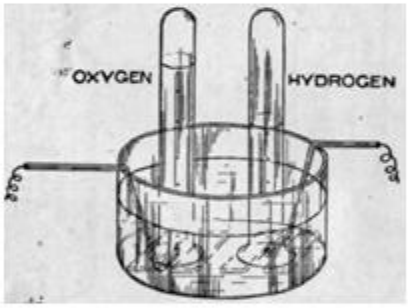
You watch solid carbon dioxide change into its gaseous form.

c

2

An electric current causes water to be transformed into hydrogen and oxygen gasses.

c



3

You mix flour, water, and sugar to make cookie dough.

p

4

You add iodine to cornstarch solution and produce a new, blue substance.

c

5

You cut an apple into twelve slices with a knife.

p

6

Your sliced apple from lunch has turned brown.

c

7

You make a homemade volcano by mixing baking soda and vinegar.

c

8

You mix food coloring into the icing for your friend's birthday cake to make it blue.

9

p

While you are filling your car with gasoline, a small amount spills but soon disappears.

c

10

After you drive your car around town, less gasoline remains in the tank.

c

11

After swimming in the ocean and resting on the beach, you are no longer wet, but your skin has a salty film on it.

12

p

After stirring some sugar into your iced tea, the sugar disappears, but the tea tastes sweet.

c

13

You dissolve an Alka-Seltzer tablet into water and it bubbles and fizzes.

c

14

A plant uses sunlight to make energy by photosynthesis.

c

15

Your bicycle has rusted in the rain.

c

16

You chop wood for a bonfire.

p

17

Giant salt crystals have formed in a cave.

c

18

Mushrooms decompose the soil beneath them.

c

19

You activate glow sticks for the party.

c

20

You cut your hair.

p

21

A baseball breaks a window!

p

22

You make popcorn for the sleepover.

c

23

Fireworks explode at the New Years celebration.

c

24

Name _____ Class_____

Physical & Chemical Changes in Everyday Life

Physical and chemical changes occur all around you every day. Read the story below and use the movable highlighter pieces to highlight the physical changes in PURPLE and the chemical changes in ORANGE.

Physical changes Chemical changes

When my alarm went off at 7 o'clock, I hit "snooze" a few times then finally got out of bed with excitement for my morning bowl of cereal. I poured the cereal and milk into my bowl. But before I even drank it, I could tell from the smell that the milk had soured! So, I decided to blend up a banana smoothie instead. I took some ice out of the freezer and grabbed the only banana that we had in the kitchen, which was covered in brown spots. My grumbling stomach needed to be satisfied before school so I didn't really care.

Just as I was sitting down to drink my smoothie, my little brother came bounding into the kitchen and asked, "Would you make some eggs and toast for me for breakfast?"

"Ugh, sure," I said. I cut a piece of bread in half and put it in the toaster, then I cracked two eggs and whipped them with a fork. I reached for one of my mother's copper cooking pans in the cabinet and saw that it was completely tarnished! I didn't want to be blamed for this, so I ran to tell my mother right away. As I ran out of the kitchen I slipped on that banana peel and it smeared all over the floor! As I lay on the floor with the wind knocked from me, I noticed that our family's plants were dying and that some water had evaporated from our fish tank. I made a mental note to take care of these things after school.

Just as I regained my breath and stood up, I heard glass breaking upstairs and my mother shrieking. I ran up the stairs, breathing heavily now. Steam was rolling out from the open bathroom door. When the steam cleared, I saw why my mother had been screaming. Before me was my older sister standing in the bathroom with purple hair! I inferred from the scene that my mother had dropped a glass when she first saw her! "Look what your sister did to her hair!" my mother yelled furiously. I decided that I needed to get out of the house immediately; this morning was a crazy one!

A distinct smell was wafting up the stairway and I realized that my brother's toast must be burning! When I reached the kitchen, my brother was happily spreading butter on his very browned toast. "I like my toast really crispy!" he said.

"Good! I can't handle any more chaos this morning!" I exclaimed. I grabbed my backpack, headed out into the foggy morning air, and hopped on my slightly rusted bicycle to ride to school. A few minutes into my ride, my stomach grumbled and I realized that I never got a chance to drink my banana smoothie. Luckily, I had stashed a chocolate bar in my backpack yesterday. "Yes!" I thought as I stopped pedaling, grabbed the chocolate, and broke off a piece. As the chocolate melted in my mouth, I knew that my day was bound to get better!

Name _____ Class_____

Identifying Physical & Chemical Changes Practice

Identify the following as physical (P) or chemical (C) changes to matter.

1. _____ NaCl (table salt) dissolves into water
2. _____ Ag (Silver) tarnishes
3. _____ An apple is cut
4. _____ Heat changes water to steam
5. _____ Alcohol evaporates
6. _____ Milk sours
7. _____ Wood rots
8. _____ Pancakes cook
9. _____ A paper towel absorbs water
10. _____ Baking soda reacts with vinegar

Can you recognize the physical and chemical changes that happen all around us? Read each scenario and decide if a physical (P) or a chemical (C) change has occurred.

1. _____ An ice cube is placed in the sun. Later there is a puddle of water. Later still, the puddle is gone.
2. _____ Baking powder in bread reacts to release carbon dioxide bubbles, which make the dough rise.
3. _____ The starch and sugars in your food are digested by enzymes in your digestive tract.
4. _____ Salt and pepper are mixed in a shaker.
5. _____ A straight piece of wire is coiled to form a spring.
6. _____ Two substances are mixed and light is produced.

Read the statement and answer 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. _____ Combining hydrogen and oxygen to make water is a chemical change.
4. _____ Sand being washed out to sea from the beach is a physical change.
5. _____ Stirring iced tea mix into water is a chemical change.
6. _____ When ice cream melts, a chemical change occurs.
7. _____ When paper is torn, the chemical properties of the paper are not changed.
8. _____ When frost forms from water vapor in the air on a cold morning, a new substance with new properties is formed.