

Name: \_\_\_\_\_

KEY

Date: \_\_\_\_\_



## GENIUSCHALLENGE

### CHEMICAL VS. PHYSICAL CHANGES

1. If two substances are mixed and a new substance is formed, what type of change is it?

\_\_\_\_\_ Chemical Change/Reaction \_\_\_\_\_

2. Placing the spoon in hot water was a physical change since the melted metal was still...

a. gallium

b. iron

c. steel

d. aluminum

3. When a substance changes states (melts, evaporates, etc.) it is often what type of change?

\_\_\_\_\_ Physical Change \_\_\_\_\_

4. Fill in the blank using **physical change** or **chemical change**.

When something burns, it is a \_\_\_\_\_ chemical change \_\_\_\_\_

5. True or false: since gas is detected during the candy + soda demo, it is an example of a chemical change.

\_\_\_\_\_ Physical Change \_\_\_\_\_

6. What is the evidence that the gas made in the mentos + soda demo was carbon dioxide?

\_\_\_\_\_ Balloon Filling up - Pouring gas over candles + the candles going out. \_\_\_\_\_

7. Which of these is the most reliable way to see if a new gas has formed?

a. Fill up a balloon

b. Flame test

c. Measure temperature

d. Look at it

8. How does hydrogen react in a flame test? \_\_\_\_\_ Made the flame pop. \_\_\_\_\_

9. Milk spoiling is an example of which type of change? \_\_\_\_\_ Chemical Change \_\_\_\_\_

10. What type of change is mixing air into egg whites to make frosting? \_\_\_\_\_ physical change \_\_\_\_\_

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## Chapter 1 Introduction to Matter

**Aim:** I can describe properties of matter.

**Notes:**



### Physical Properties:

- Physical properties are used to identify, describe and classify matter.

**Examples:** State of matter, odor, temperature, texture, hardness, viscosity, color, shape, size, mass, volume, density, ability to conduct heat or electricity, boiling or freezing points and magnetism

### Chemical Properties

- Describes how a substance changes into a new substance

**Examples:** Ability to rust, ability to burn (flammability), chemically reactive

### Physical Changes

- Matter changes but Keeps its chemical composition and properties

**Examples:** cutting, bending, shredding, grinding, melting

**Physical Changes In Nature:** Erosion of beaches, ice wedging, formation of canyons

### Chemical Changes

- Form new substances with different properties.
- Change in color, bubbling, light production, smoke, presence of heat, new smell, new material is made.

**Examples:** Rusting, burning, exploding, rotting/decaying, digesting, cooking

**Chemical Changes in Nature:** Limestone reacts with acidic water to form caverns, acid rain reacts with minerals to destroy statues, air reacts with iron to form rust.