**PHYSICAL AND CHEMICAL PROPERTIES**

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| --- | --- |
| **PHYSICAL PROPERTY** | **CHEMICAL PROPERTY** |
| 1. Observed during a physical change 2. observed with senses 3. determined without chemically changing matter | 1. indicates how a substance reacts 2. matter will be changed into a new substance after the reaction |

**1. Identify the following as a chemical (C) or physical property (P):**

|  |  |
| --- | --- |
| \_\_\_\_\_\_1. blue color  \_\_\_\_\_\_2. density  \_\_\_\_\_\_3. flammability (burns)  \_\_\_\_\_\_4. solubility (dissolves)  \_\_\_\_\_\_5. reacts with acid  \_\_\_\_\_\_6. supports combustion  \_\_\_\_\_\_7. sour taste | \_\_\_\_\_\_8. melting point  \_\_\_\_\_\_ 9. reacts with water  \_\_\_\_\_\_10. hardness  \_\_\_\_\_\_11. boiling point  \_\_\_\_\_\_12. luster  \_\_\_\_\_\_13. odor  \_\_\_\_\_\_14. reacts with air |

**2** Physical or Chemical Property? Fill in the chart using the vocabulary words provided**.**

# **Vocabulary words**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Boiling point** | **Ability to rust** | **Melting point** | **Brittleness** | **Reactivity with vinegar** |
| **elasticity** | **Flammability** | **Density** | **Transparency** | **ductility** |

**Each word is used once. Define the word when done!**

|  |  |
| --- | --- |
| **Chemical Property↓** | **Definition** |
|  | • The ability to burn |
|  | • Reacts with oxygen to produce rust |
|  |  |
| **Physical Property↓** | **Definition** |
|  | • The property of letting light pass through something |
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**3. Background:** Define the following terms.

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| --- | --- |
| **VOCABULARY WORD** | **DEFINITION** |
| Physical Property |  |
| Physical Change | **Change in which the identity of the substance does NOT change** |
| Chemical Property |  |
| Chemical Change |  |

# ANSWERS

**1. Identify the following as a chemical (C) or physical property (P):**

|  |  |
| --- | --- |
| \_\_\_P\_\_\_1. blue color  \_\_\_P\_\_\_2. density  \_\_\_C\_\_3. flammability (burns)  \_\_\_P\_\_\_4. solubility (dissolves)  \_\_\_C\_\_\_5. reacts with acid  \_\_\_C\_\_\_6. supports combustion  \_\_\_P)\_\_\_7. sour taste | \_\_\_P\_\_\_8. melting point  \_\_\_C\_\_\_9. reacts with water  \_\_\_P\_\_\_10. hardness  \_\_\_P\_\_\_11. boiling point  \_\_\_P\_\_\_12. luster  \_\_\_P\_\_\_13. odor  \_\_\_C\_\_\_14. reacts with air |

**2:** Physical or Chemical Property? Fill in the chart using the vocabulary words or phrases provided**.**

## Vocabulary words

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Boiling point** | **Ability to rust** | **Melting point** | **Brittleness** | **Reactivity with vinegar** |
| **elasticity** | **Flammability** | **Freezing point** | **Transparency** | **ductility** |

**Each word is used once. Define the word when done!**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Chemical Property↓** | | | | | | | |  | | | | **Definition** | | | | | | | | | | | | | | | | | |
|  | • flammability | | | | |  | |  | | | |  | • The ability to burn | |  | | | | | | | | | | | | | | |
|  | • Ability to rust | | | | | | |  | | | |  | • Reacts with oxygen to produce rust | | | | | | |  | | | | | | | | | |
|  | • Reactivity wit | | | | | | | h vinegar |  | | |  | • Reacts with vinegar to produce new substances | | | | | | | | |  | | | | | | | |
| **Physical Property↓** | | | | | | |  | | | | | **Definition** | | | | | | | | | | | | | | | | | |
|  | • transparency | | | | | |  | | | | |  | • The property of letting light pass through something | | | | | | | | | |  | | | | | | |
|  | • Boiling point | | | | |  |  | | | | |  | • Temperature at which a substance goes from liquid to gas | | | | | | | | | | | |  | | | | |
|  | • Melting point | | | | | |  | | | | |  | • Temperature at which a substance goes from solid to a liquid | | | | | | | | | | | | |  | | | |
|  | • Brittleness | | | |  | |  | | | | |  | • Tendency to crack or break | | | |  | | | | | | | | | | | | |
|  | • Ductility | |  | | | |  | | | | |  | • Ability to bend without breaking | | | | | |  | | | | | | | | | | |
|  | • Elasticity | | |  | | |  | | | | |  | • Ability to be stretched or compressed then return to original size | | | | | | | | | | | | | |  | | |
|  | • Density |  | | | | |  | | | | |  | • Mass per unit volume | | |  | | | | | | | | | | | | | |
| **VOCABULARY WORD** | | | | | | | | | | **DEFINITION** | | | | | | | | | | | | | | | | | | | |
| Physical Property | | | | | | | | | |  | **Characteristics of matter that can be seen through direct observation such as** | | | | | | | | | | | | | | | | | |  |
| **density, melting point, and boiling point** | | | | | | |  | | | | | | | | | | |
| Physical Change | | | | | | | | | |  | **Change in which the identity of the substance does NOT change** | | | | | | | | | | | | |  | | | | | |
| Chemical Property | | | | | | | | | |  | **Characteristic of matter that can only be observed when one substance changes** | | | | | | | | | | | | | | | | | | |  |
| **into a difference substance, such as iron into rust** | | | | | | | | | |  | | | | | | | | |
| Chemical Change | | | | | | | | | |  | **Transforms one type of matter into another kind, which may have different** | | | | | | | | | | | | | | | | |  | |
| **properties.** | | |  | | | | | | | | | | | | | |