

S8P1. D. I can construct an argument based on observational evidence to support the claim that when a change in a substance occurs, it can be classified as either chemical or physical.



### Chemical & Physical Properties of Matter Video Notes

1. Physical properties of matter are properties that can be \_\_\_\_\_ or \_\_\_\_\_ without matter changing to an entirely different \_\_\_\_\_. Physical properties are typically things you can detect with your \_\_\_\_\_.

2. What differences between salt and pepper can you detect with your senses? \_\_\_\_\_

3. The states of \_\_\_\_\_ are physical properties. At 20 degrees Celsius, coal exists as a \_\_\_\_\_ and water exists as a \_\_\_\_\_.

#### Additional examples of Physical Properties:

**#1 Boiling point.** \_\_\_\_\_ Is the temperature at which a substance goes from being a \_\_\_\_\_ to \_\_\_\_\_. For example, the boiling point of water is \_\_\_\_\_ degrees Fahrenheit or \_\_\_\_\_ degrees Celsius.

**#2 Ability to Conduct** \_\_\_\_\_. What part of a frying pan conducts heat? \_\_\_\_\_ How does it conduct heat? \_\_\_\_\_

\_\_\_\_\_ What part of the frying pan does not conduct heat? \_\_\_\_\_ Why is it not good at conducting heat? \_\_\_\_\_

**#3 Ability to conduct** \_\_\_\_\_ is a good conductor of electricity. \_\_\_\_\_

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Wires are often made of copper. Why are electric wires covered with a protective coating of plastic? \_\_\_\_\_

**#4 Solubility.** Solubility is a substance's ability to \_\_\_\_\_ in other substances.

What substances dissolve in water? \_\_\_\_\_ What makes them dissolve faster in water? \_\_\_\_\_

What substances do not dissolve in water? \_\_\_\_\_

**Check for Understanding! Write down at least 5 out of 7 physical properties of matter.**

4. The only time when you see chemical properties is when \_\_\_\_\_

How is rust made? \_\_\_\_\_

What is the difference between iron and iron oxide? \_\_\_\_\_

5. \_\_\_\_\_ is the ability of matter to \_\_\_\_\_ with other substances.

Name 2 substances that are extremely reactive. \_\_\_\_\_ What happens when they react with each other? \_\_\_\_\_

Which substances are unreactive? \_\_\_\_\_

What does this mean? \_\_\_\_\_

6. Flammability is the ability of matter to \_\_\_\_\_. When matter burns, it combines with \_\_\_\_\_

When it does, it \_\_\_\_\_ to different substances. What happens when wood burns? \_\_\_\_\_

**Check for Understanding! Why do you think wood is flammable, but most metals are not?** \_\_\_\_\_

In summary, physical properties of matter are properties that can be \_\_\_\_\_ or observed without matter \_\_\_\_\_ to an entirely different substance. Examples of physical properties include \_\_\_\_\_

\_\_\_\_\_ odor, and boiling point. \_\_\_\_\_ Properties can only be observed when matter undergoes a change to become an entirely different kind of matter.

What is the difference between chemical and physical properties of matter? \_\_\_\_\_