

Grade 5 - Science Practice Sheet

Lesson 1: Identify Properties of Materials

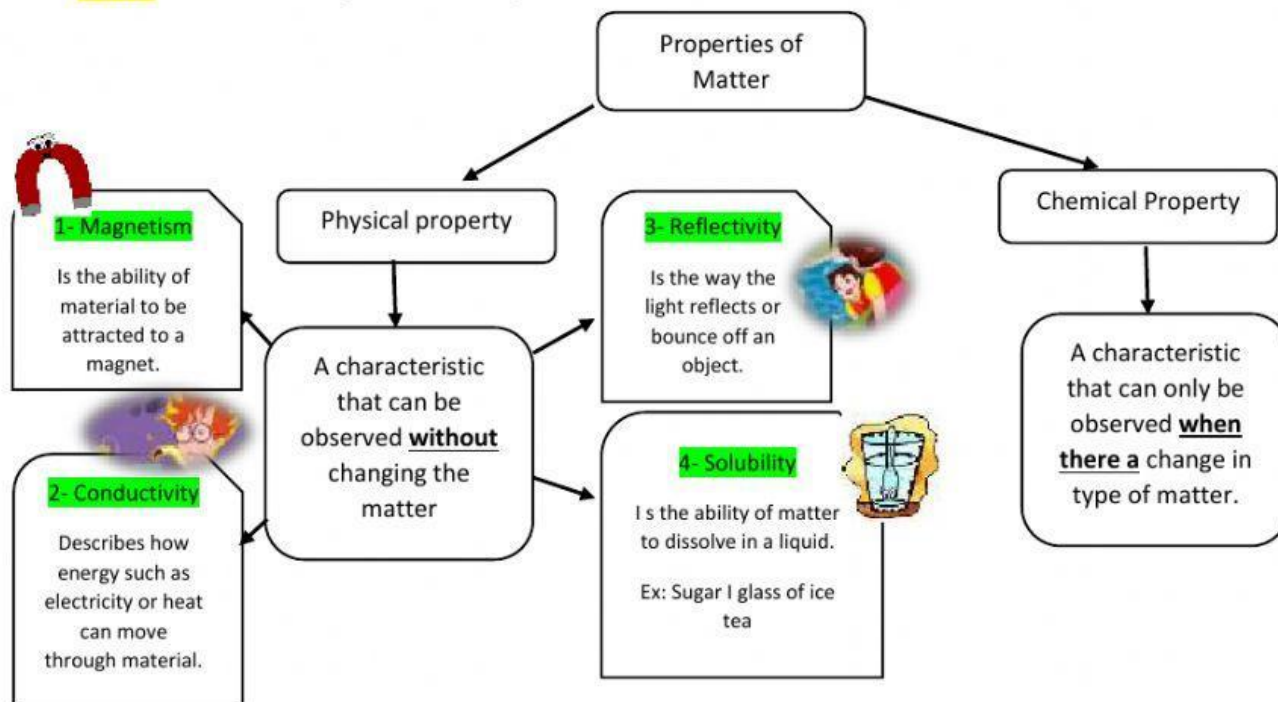
Matter is anything that has mass and takes up space.

Examples: The water you drink, the air you breath, and you are all made up of matter.

Mass: is measure of the amount of matter in an object.

(The more mass an object has. The more particles an object has)

Volume: describes how large or small an object is.



1- What is matter?

2- How do you define physical property: _____

3- Think about holding a golf ball and a ball. Which one has more mass?

4- Think about a football with a baseball that is half its size. Which one has more volume? Explain your answer.



Check the box that applies for the type of property described:

Substance	Physical Property	Chemical Property
solubility		
flammability		
Green color		

Reflectivity		
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Lesson 2: Mixtures and Solutions

Mixture is a physical combination of two or more substances

Type of mixture	Examples	Method of separation
Homogeneous You cannot see the different parts of the mixture.	Iron filings and sand	Magnet 
Heterogeneous You can see the different parts of the mixture easily. Colloid is heterogeneous mixture in which parts are so small that they do not settle out like fog and whipped cream	Garden Salad	Hand picking 

1- Explain how would you separate a mixture of copper nails and iron nails?

2- Describe the following as a homogenous mixture, a heterogeneous mixture or a colloid:

A- Sugar and water	
B- Muddy water	
C- Pizza	
D- Milk and cereal	
C- Whipped Cream	

Lesson 3: Physical and Chemical Changes

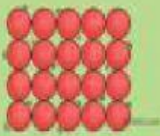
Physical Changes	Chemical Changes
Begins and ends with the same kind of matter. Examples: 1- Melting Ice  2- Chopping wood 	Is a change that produces new matter with different properties from the original matter. Examples: 1- Burning wood  2- Rotting banana 

Law of Conservation of Mass: States that matter is neither created nor destroyed during a physical change or chemical reaction.

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

Salt dissolves in water	
Pancakes cook	
Food is digested	
Ice melts	

Lesson 4: Solids, Liquids, and Gases

	Solid	Liquid	Gas
			
Closeness of particles	Very close	Separated	Well separated
Particle movement	Vibrate	Slide past each other	move freely

Adding Energy When energy is added to a solid, the particles start to move more quickly. When the particles move quickly enough that they slide past each other, the solid becomes a liquid by melting. If even more energy is added to this liquid, the particles' speed continues to increase and they move away from each other. As the particles spread out enough, liquid evaporates, becoming a gas.

Removing Energy If a gas loses energy, its particles slow down and move closer together. They start to slide past each other again. A liquid forms through a process called condensation. If the liquid loses enough energy, freezing occurs and a solid forms.

Changes of State

- Label the changes of state.

