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Grade 5 Science - Quiz Outline



Topic: Chemical vs. Physical Properties and Changes

 Quiz Date: Wednesday, October 23rd

 Unit: Properties and Changes in Matter

Introduction

Next week's quiz will help you show what you've learned about **chemical and physical properties** and the difference between **chemical and physical changes**.

Use this outline to **study and organize your notes**. You can check your answers with the **Answer Key** at the back once you've tried them on your own.

SECTION 1 - Vocabulary & Definitions (5 marks)

Write clear definitions for each of the following terms in your own words:

1. Physical Property _____
 2. Chemical Property _____
 3. Physical Change _____
 4. Chemical Change _____
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SECTION 2 – Multiple Choice (5 marks)

Choose the best answer for each question.

1. Which of the following is an example of a **physical property**?
 - a) Ability to rust
 - b) Colour
 - c) Flammability
 - d) Reactivity with acid
2. When wood burns, it turns into ash and gas. This is an example of:
 - a) Physical change
 - b) Chemical change
 - c) Melting
 - d) Freezing
3. Which of these is **not** a sign of a chemical change?
 - a) Change in colour
 - b) Change in shape
 - c) Formation of gas
 - d) Production of heat
4. A student dissolves sugar in water. What type of change is this?
 - a) Chemical
 - b) Physical
 - c) Both
 - d) Neither
5. Which of these describes a **chemical property**?
 - a) The metal is shiny and bends easily
 - b) The metal reacts with oxygen to form rust
 - c) The metal melts at 600°C
 - d) The metal conducts electricity



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SECTION 3 – Diagram (5 marks)

Instructions:

Label and explain the diagram below (students will receive a blank version of this on the quiz).

Diagram Description:

A before-and-after picture of an iron nail left outside. The nail becomes rusty.

Label:

- What is happening to the nail?
- Identify the type of change and why?

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SECTION 4 – Short Answer (5 marks)

Answer the following in 1–2 complete sentences each.

1. How can you tell if a change is chemical or physical?

2. Give one example of a physical property and explain how it helps identify a substance.

3. Give one example of a chemical change that happens in everyday life.

4. Why is a change of state (like melting or freezing) not considered a chemical change?

5. Why do scientists study both physical and chemical properties of materials?

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Answer Key (For Self-Check)

(Students should only look here after completing their outline practice.)

Section 1 – Definitions

1. Physical Property – a characteristic that can be observed or measured without changing the substance.
2. Chemical Property – a characteristic that describes how a substance can change into a new substance.
3. Physical Change – a change in form or appearance that doesn't make a new substance.
4. Chemical Change – a change that forms one or more new substances.
5. Reactivity – how easily a substance reacts with another substance.

Section 2 – Multiple Choice

1. b) Colour
2. b) Chemical change
3. b) Change in shape
4. b) Physical
5. b) The metal reacts with oxygen to form rust

Section 3 – Diagram

- Process: Rusting (oxidation)
- Type of change: Chemical change, evidence: Colour change, new substance (rust) forms

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Section 4 – Short Answer

1. A chemical change forms a new substance; a physical change does not.
2. Example: Melting point—helps identify substances that melt at specific temperatures.
3. Example: Cooking an egg—heat changes the proteins into new substances.
4. Because it's still the same substance, only in a different state.
5. To understand how materials can be used or changed safely and effectively.

Section 5 – Long Answer

Type of change: Chemical change.

Cause: Oxygen reacts with substances in the apple when exposed to air.

Evidence: Change in colour (browning), new substances form, and it can't be reversed easily.