

# 8G Metals and their Uses- Revision Worksheet

List four **physical properties** of a typical **metal**.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Explain why **copper** is used in water pipes.

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Write the **word equation** for when **iron** and **sulfur** are reacted together. Label the **reactants** and the **products**.

Write the **word equation** for the **rusting** of **iron**.

Explain how you can **protect metals** from **corrosion**.

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Explain why **potassium** is not used in the building industry.

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Describe what a **catalyst** is.

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Explain the role of **metals** in **catalytic converters**.

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Compare and contrast **corrosion** and **rusting**.

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Write a word and **symbol equation** for the **corrosion** of **aluminium**.



Complete the following **word equations**:

Sodium + water →

Lithium + water →

Potassium + water →

Describe the test to show that a **gas** given off is **hydrogen**.

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Describe what the **reactivity series** is.

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Define the following key words:

<b>Accuracy</b>	_____
<b>Reliability</b>	_____

Complete the table of different **reactions** below:

Metal	Reaction with oxygen	Reaction with cold water	Reaction with dilute acid
Potassium			
Sodium			
Calcium			
Magnesium			
Aluminium			
Zinc			
Tin			
Lead			
Copper			
Mercury			
Platinum			

Describe what you would see when a **metal reacts** with an **acid**.

Write the general **word equation** for **metals reacting** with **acids**.

Describe how to obtain the **salt** after **reacting metals** and **acids**.

Complete the following **word equations**:

Sodium + hydrochloric acid →

Iron + sulfuric acid →

Magnesium + nitric acid →

Write out the **symbol equation** for the following **reaction**:

Iron + hydrochloric acid → iron chloride + hydrogen

Define the word '**alloy**'.

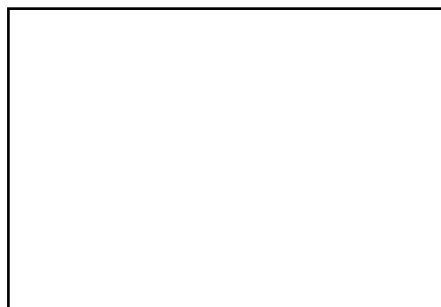
Draw diagrams to represent a **pure metal** and an **alloy**:

Explain the advantages of using the **alloy duralumin** in building aircraft.

Compare and contrast the **melting/boiling points** of **alloys** and **pure metals**.



Pure metal



Alloy

Rate the following on how well you think you can do them:



I can...

- Describe some common properties and uses of metals.
- Write word equations for the reactions of metals and non-metals.
- Describe what a catalyst is and some uses of catalysts.
- Describe what happens during corrosion and rusting.
- Explain how metals can be protected from corrosion.
- Identify the products and reactants using a symbol equation.
- Describe substances accurately using adjectives.
- Identify and explain adjectives used in science.
- Describe the reactions of metals with water.
- Place the metals in order of reactivity.
- Write word and symbol equations for reactions.
- Explain what is meant by accurate data.
- Identify data that is, or is not, reliable, repeatable or reproducible.
- Explain how to improve the quality of data collected during an investigation.
- Describe the reactions of metals with acids.
- Explain what alloys are and why they are used.
- Use models to explain the properties of alloys.
- Identify pure substances by their melting points and boiling points.