

# Reactivity

## Lesson 12 - Reactivity Series

Chemistry - Key Stage 3

Miss Fenner



# Which applies to potassium?

Option 1

Highly reactive

Option 2

Barely reactive



**Give one observation you would see when potassium reacts with water.**

- Fizzing/ bubbles of hydrogen
- Lilac flame



# Why is potassium stored in oil?

It would react with the oxygen in the air if it wasn't.



# Which of these is a sign of a vigorous reaction?

Option 1

Slow production of bubbles

Option 2

Rapid colour change



# Which of these is a sign of a vigorous reaction?

Option 1

Reaction lasts a long time

Option 2

Large temperature change



# Independent Practice

1. Write a definition for a vigorous reaction.
2. Give an example of a vigorous reactions.
3. State 3 observations associated with a vigorous reaction.



# Independent Practice

1. A vigorous reaction is one which is carried out **forcefully, energetically** and **quickly**.
2. An example of a vigorous reaction is potassium reacting with water.
3. Rapid colour change, large colour change, rapid temperature change, lots of bubbles produced, reaction ends quickly.



**Which is more reactive,  
sodium or copper?**

**Sodium**



**Which is more reactive,  
aluminium or iron?**

**Aluminium**



**Which is more reactive,  
silver or zinc?**

**Zinc**



# Independent Practice

1. Define the reactivity series?
2. Sodium is more reactive than magnesium.
3. Put these metals in order of reactivity from most reactive to least reactive. Silver, calcium, tin and gold.
4. Which metal would be best to make a bracelet out of, silver or calcium? Explain your answer.



# Independent Practice

1. A league table for metals.
2. Which is more reactive, sodium or magnesium?
3. Calcium, tin, silver, gold.
4. Silver would be best to make a bracelet out of because it is less reactive so won't react and change. Also calcium could damage our skin as it reacts.



# Does the description apply to iron or magnesium?

Metal reacts very slowly over a long period of time with water.

**Iron**



# Does the description apply to zinc or calcium?

Lots of bubbles of hydrogen produced rapidly when reacting with acid.

**Calcium**



# Does the description apply to copper or platinum?

No reaction observed with acid. .

**Platinum**



# Independent Practice

True or false

You are likely to see lots of bubbles when copper is placed in water.

The reaction between zinc and acid will be more vigorous than the reaction between tin and acid.

A large change in temperature was observed when magnesium reacted with acid.

The colour change happened rapidly when silver reacted with oxygen.



# Independent Practice

True or false

You are likely to see lots of bubbles when copper is placed in water.

The reaction between zinc and acid will be more vigorous than the reaction between tin and acid.

A large change in temperature was observed when magnesium reacted with acid.

The colour change happened rapidly when silver reacted with oxygen.

