



WJEC Chemistry GCSE

Specified Practical 6A

Metal Reactivity

[Methods are adapted from the [Royal Society of Chemistry](#)]

England Specification





Displacement Reactions

Some metals are more reactive than others. Strips of metal can be added to a solution of a metal compound to analyse this reactivity. More reactive metals displace (push out) less reactive metals from a compound.

Aim

To investigate metallic displacement reactions in order to derive the relative reactivities of the metals.

Equipment

- 16-hole spotting tile
- Dropping pipette
- Beaker
- Marker pens
- 1 cm strip lengths of:
 - Copper foil
 - Lead foil
 - Magnesium ribbon
 - Zinc foil
- 0.1M solutions of:
 - Copper(II) sulfate
 - Lead(II) nitrate
 - Magnesium sulfate
 - Zinc sulfate

Method

1. Using a dropping pipette, put a few drops of zinc sulfate solution in four of the depressions in the spotting tile. Ensure you label this row with the solution name.
2. Repeat for each metal solution, rinsing the pipette between each one.
3. Place each strip of metal into the depressions until the spotting tile appears as in the diagram.
4. Observe for 5 minutes and write down any observations of reactions.

Safety Precautions

- Lead nitrate is toxic and dangerous for the environment.
- All chemicals should be handled with care.
- Tie back long hair.
- Clean up any spillages immediately.



Diagram

	Zn	Mg	Cu	Pb
Zinc Nitrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Magnesium Nitrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper Nitrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lead Nitrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

