



# 11. Hydrogen Release

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# Task

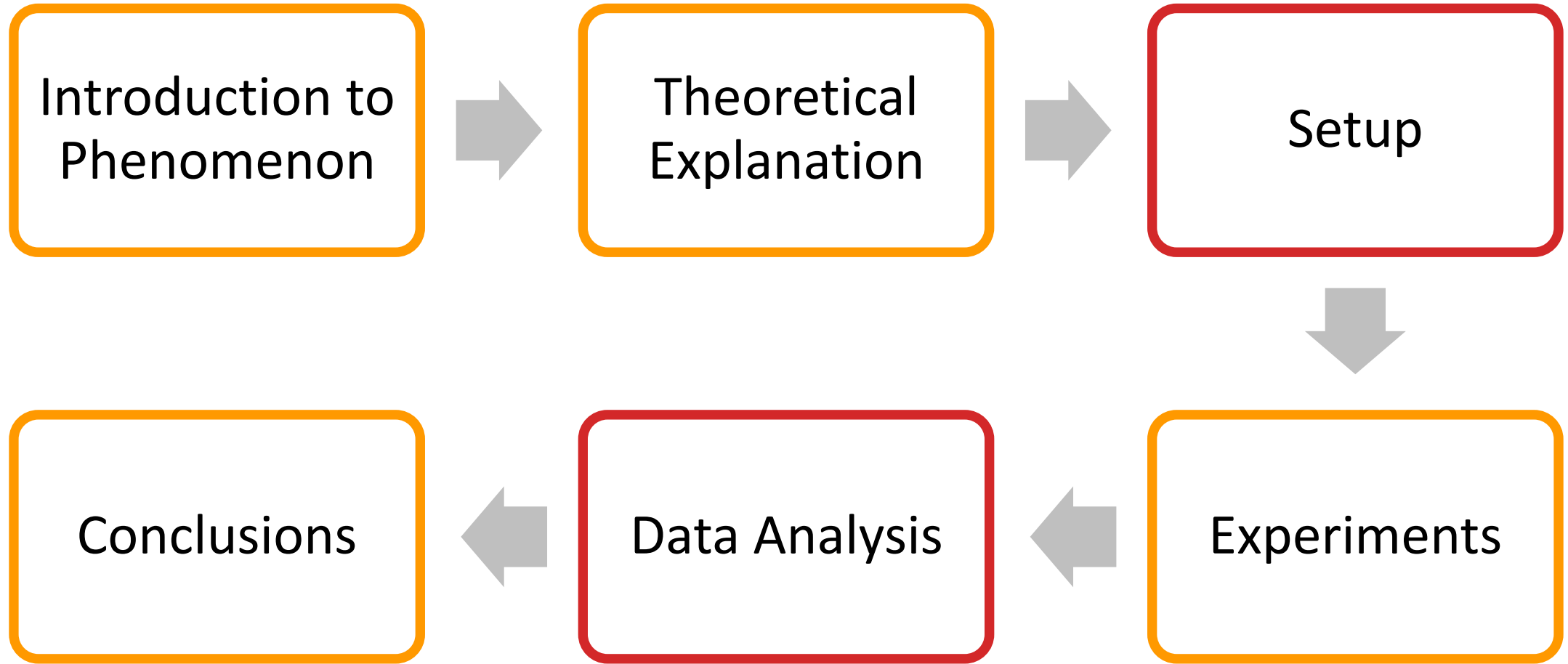
A simple method to produce **gaseous hydrogen** is the reaction between metal **aluminum** and **two salts** in aqueous solution (e.g. copper sulphate and sodium chloride). Investigate how the **reaction rate** depends on the **concentration** of each salt and other relevant conditions. **What salts react** with aluminum to release hydrogen?

- Reaction rate
- Conditions:
  - Concentration
  - Temperature
- Other salts that react to release hydrogen





# Outline



 Well done

 Good

 Needs work



# Explanation of Phenomenon

- Hypothesis does not specify what they think will happen
- Aluminium oxide layer correctly identified
- Reading off slides
- No quantitative data
- No justification of why no reaction occurred
- Two concentrations: no valid conclusions
- Inaccurate data measurement in Litres
- Verification of hydrogen



# Discussion Topics

## Other Parameters

- Surface Area?

## Data Analysis

- No graphs
- Only 2 data points

## Temperature

- Why does this affect reaction rate?
- Theoretical relationship – linear, quadratic, etc.





# Discussion

