Summary

Proving the Law of Conservation of Mass

Target Age

Age 16 and above

Level of Difficulty

☐ Easy X Medium ☐ High

Keywords:

Magnesium, redox reactions, circular economy, conservation of mass

Description:

The aim of this lesson is to test the law of conservation of mass experimentally. The reaction used in this experiment is deliberately chosen so that the students cannot prove the law of conservation of mass, thus raising the issue of resource circulation, the conditions in which production processes take place, side reactions and other aspects.

Learning Goals:

- To perform simple lab tasks;
- To observe and record signs of chemical reactions;
- To use information sources to analyse the situation, determine and discuss possible side reactions, as well as reactive substances present in the atmosphere;
- To get acquainted with the concept of an “actual result”.

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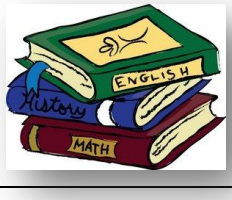
Summary

Learning Outcomes

- Apply the principles of redox reactions;
- Observe various types of chemical reactions and correlate the observations with these reactions;
- Observe the signs of a chemical reaction and assess how the conditions of the experiment affect the end products of the reaction;
- Analyse the composition of the air and the reactive substances contained therein.



Cross-curricular Connections

- Chemistry
- Technology

Prerequisites

- Knows how to write chemical equations using the law of conservation of mass.
- Can independently search for information and critically evaluate whether it is relevant.
- Recognises the signs of a chemical reaction.

Time Requirements *and other conditions (i.e. equipment)*

☐ 1 h ☐ 40 min

Equipment*: balances (readability of at least 2 decimal places), fume hood, gas burner.*

Learning and Teaching Resources Included in the Toolkit

1. Lab Procedure/s - Modules
2. Student's Cards

.RM Ambassadors

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