

Science Skills Year 7 booklet: 1

Investigating Magnesium and Acid

Task 1 deadline (self-assessed):

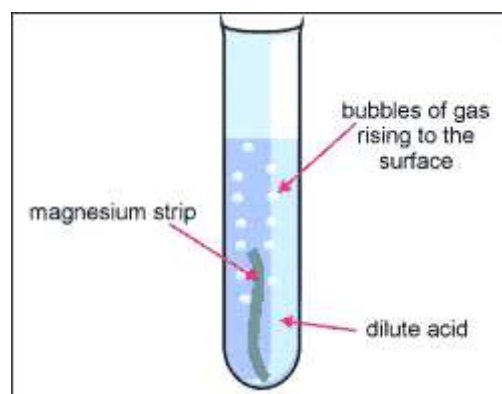
Task 2 deadline (peer-assessed):

Task 3 deadline (teacher-assessed):

The tasks in this booklet relate to the investigation below. Read the following information before attempting any of the tasks.

To investigate magnesium and acid:

- Add 5ml of hydrochloric acid into your test tube.
- Measure the temperature and record it in your table.
- Add a 2cm piece of magnesium.
- Measure the temperature and record it in your table.
- Record all other observations in your table.
- Repeat the above method using 1.5cm, 1cm and 0.5cm.



Risk assessment:

Wear goggles

Take care with glassware

Wash hands if you get acid on them

The tube will get hot - do not touch the bottom of it

Place the thermometer into the tube slowly, do not drop it

Task 1

Everyone to do- Match the key terms to the definitions:

Independent variable
Dependent variable
Control variable
Magnesium
Thermometer

A device to measure temperature
What we change
What we keep the same
What we measure
A reactive metal

Green: you will be tested on the spelling of the five key terms

Amber: you will be tested on the spelling and the definition of the key terms

Red: you will be tested on the spelling and definition of the key terms. You will also need to put each into a sentence

Killer: you will be asked for synonyms for the key terms (if there are any!)

Task 2

Green:

Identify the three different measurements in the method. List the piece of equipment you would use to make the measurement and why you would use it.

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Peer assessment score:

Amber:

Decide if the method is repeatable. Justify your decision. Decide if the method is reliable, explain how you could increase the reliability of the method.

You need to use a minimum of 40 words and 3 different explaining terms. Hint: make sure you define repeatable and reliable!

Peer assessment:

STAR:

STAR:

WISH:

Red:

Explain how accurate the method is. Link in the idea of resolution on equipment. For each point you make, explain what piece of equipment could be used to increase the accuracy. Make a minimum of 2 points.

Peer assessment:
STAR:
STAR:
WISH:

Task 3:

Green: On a piece of A4 paper, design a results table for the investigation.

Amber: On a piece of A4 paper, improve the risk assessment so that it includes: what the risk is, how likely it is that the risk will occur and how the risk can be minimised. This should be a paragraph of 40+ words.

Red: On a piece of A4 paper, evaluate the investigation (advantages, disadvantages and suggest improvements for next time). This should be about 100 words, made up of more than one paragraph.

Teacher assessment:

A2L = 1	Work is thorough, you have picked challenging tasks and have shown effort and understanding.
A2L = 2	Work has detail in most places, you have picked relevant tasks and have shown effort.
A2L = 3	Work lacks detail, there are some errors and shows some lack of preparation/understanding.
A2L = 4	Work is incomplete, there are errors throughout and a clear lack of preparation/understanding.

Teacher comment: