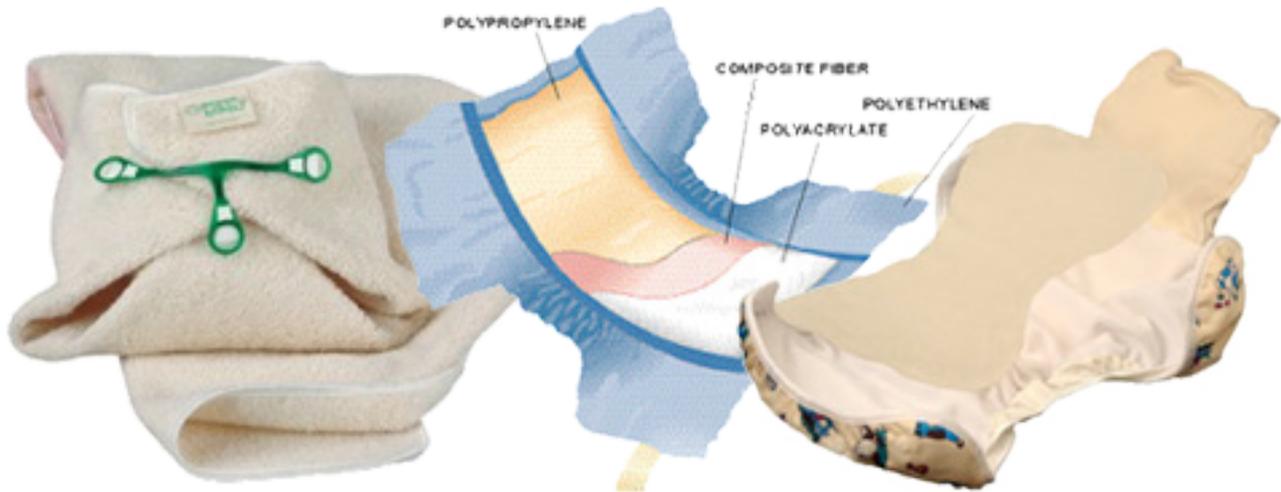


# Hydrogels - Research Booklet



During the Research stage, you must choose a relevant topic and application of hydrogels.

You must decide on a specific aspect to research. This will become the aim of your assignment.

You must then gather data information and may decide to carry out some practical work.

**IT IS IMPORTANT THAT YOU RECORD YOUR RESEARCH AND PRACTICAL WORK AS YOU WILL NEED THE INFORMATION TO COMPLETE THE COMMUNICATION STAGE.**

**YOU SHOULD USE THIS BOOKLET TO RECORD YOUR NOTES.**

Name: \_\_\_\_\_ Class \_\_\_\_\_

Teacher: \_\_\_\_\_

## **Introduction**

A guest speaker will introduce and talk about various aspects of this Topic. You may want to make some notes.

The title of my chosen area of research is:

My specific aim is:

State how your chosen area of chemistry can be used in everyday life.

Describe how the use of your chosen area of chemistry impacts on society and/or the environment.

During the research phase you need to gather information which will allow you to;

1. Explain the relevant national 5 **underlying chemistry**.
2. Collect **data** which can be processed and presented.

This information must come from a minimum of **two** sources and the sources need to be recorded accurately. You must also be able to justify your selection of sources based upon their relevance and reliability.

## Underlying Chemistry

In the space below collect **information** that will help you explain the **chemistry** involved in your chosen area of research.

**This chemistry must be of National 5 level (or above).**

This could include;

- An explanation of the basic chemistry involved
- Diagrams
- Chemical formulae
- Chemical equations
- Chemical calculations

**Data Collection**

You must now collect some relevant **data** from **at least 2 sources** to include in your report.

This data must include any 2 from;

- Raw data from an experiment (make sure you include title & aim too)
- Tables of data
- Graphs
- Charts
- Text

You need to be able to process both sets of data into a different format.

e.g. turning tables of data into charts

turning text containing numbers into a table or graph

calculating averages from the data you have found

summarising text, charts, diagrams using text, flowcharts or diagrams.

N.B. One of the formats must be a graph/table/chart/diagram

**Source 1 - From Experiment**

**Title** (of experiment):

**Aim** ( of experiment):

**Raw Results:**

Record the raw data generated from your experiment - you will process this data later.



**Other Sources - From Research**

## **Processing & Presenting Data**

You will now need to process the data you have collected in the previous section into **two different formats**.

You need to be able to present **both** sets of data in a **different processed** format.

e.g. turning tables of data into charts

turning text containing numbers into a table or graph

calculating averages from the data you have found

summarising text, charts, diagrams using text, flowcharts or diagrams.

**N.B. One of the formats must be a graph/table/chart/diagram.**

It is very important that you make sure that appropriate title/ labels/ scales/units and headings are used.

Attach your processed data below:

(e.g. a bar graph you have made from a table, and a summary of text)

**Processed Source 1**

-

**Processed Source 2**

**Comparison of Data/Information from Source 1 & 2:**

How does the data in two of your sources compare? Is it similar or different? Do the sources agree with each other?

## Evaluation of Sources

You will also need to **explain why** you have selected your chosen sources.

Think about

- Relevance.....How useful were they?
- Reliability.....Who wrote the source? Are they reputable or could they show bias?
- Similar/different perspectives.....Do your sources agree/disagree with each other?

For each source answer the following questions;

### Source 1

1. Was this source relevant? Why?
  
  
  
  
  
  
  
  
  
  
2. Was this source reliable? How do you know

### Source 2

1. Was this source relevant? Why?
  
  
  
  
  
  
  
  
  
  
2. Was this source reliable? How do you know

### Source 3

1. Was this source relevant? Why?
  
  
  
  
  
  
  
  
  
  
2. Was this source reliable? How do you know

## **Conclusion**

The conclusion must relate to your aim and be supported by evidence from your research.

## **References**

At the end of your report you must record the sources you have used with enough detail to allow someone else to find them.

If one of the sources is an experiment/practical activity, then you need to include the title and the aim.