

## **Risk Benefit Analysis of an Everyday Chemical**

In this project you are going to analyse the properties of a commonly used but potentially harmful chemical substance. Determine how that substance affects the environment and evaluate the risks and benefits of the substance to human health. You then need to determine and propose ways to lessen the harmfulness of the substance OR identify alternative substances that could be used for the same purpose.

Some products are listed below. You are not limited to these products, but your topic must be approved by your teacher before you begin your research.

- fertilizer
- pesticide
- plastics (eg., Tupperware, Rubbermaid)
- a household cleaning product
- materials used in electronics
- materials used in batteries
- nuclear energy
- coal for energy
- gasoline
- chemical additives in foods (eg. msg)

In your finished product include a risk-benefit table of the effects of the product for the environment and human health.

Based on the risks and benefits, make a recommendation to consumers as to the suitability of your product for its intended purpose. Be sure to either propose ways to lessen the harmfulness of the substance OR identify an alternative substance that could be used for the same purpose.

## SCH 3U

### Rubric:

Identify the product	0	1		
Identify the chemical formula of the product (or the chemical formula of the molecule that poses the most risk within the product)	0	1	2	
Identify why we make/use the product	0	1	2	
Create a risk-benefit table	0	1		
Identify risks of the product to the environment	0	1	2	3
Identify risks of the product to human health	0	1	2	3
Recommendation to consumers about suitability of product for its intended purpose(s)	0	1	2	
Identify alternative substances OR ways to limit the harmfulness of the product	0	1		
Explain why the alternative method works better than the original product	0	1	2	3
Spelling/grammar	0	1	2	
References	0	1	2	
Total marks:				/22

Suggested Format:

<b>Name of Product and Chemical Formula</b>	
<b>What the Product is Used For</b>	
<b>Risks</b>	<b>Benefits</b>
<b>Alternate Product</b>	
<b>References</b>	