

# Design Project

## Portable Water Filter

### Part I Preliminary Research

Identify and research a chemical contaminant in drinking water. Organize your findings in the table below.

Contaminant (compound name/chemical formula)	Molecular structure (Lewis diagram/polarity and solubility)	Origins (from where/how does it enter system)	Health Effects (toxicity/ailments)	Water Treatment (methods of removal)

**Due Date:** October 28<sup>th</sup>

### Part II Design Plan

Design a water filter based on the preliminary research.

#### *Cover Page*

- Product name
- Logo
- Image(s)

#### *Assembly and Operation*

- Labeled diagram

**Due Date:** November 4<sup>th</sup>



### Part III Prototype Testing

Construct and test the prototype. What tests will you perform with your filter? How will you rate your filter's performance?

Test Performed	Observations	Conclusions

**First Test:** November 10<sup>th</sup>

**Second Test:** November 24<sup>th</sup>

### Part IV Product Evaluation

Based on the results of the prototype testing, is your water filter marketable? What further modifications are required?

**Due Date:** December 9<sup>th</sup>

#### **Evaluation**

B1	<b>analyse</b> the properties of commonly used chemical substances & their effects on human health & the environment, & propose ways to lessen the impact
E1	<b>analyse</b> the origins & effects of water pollution, & a variety of economic, social, & environmental issues related to drinking water
A1	<b>demonstrate</b> scientific investigation skills (related to both inquiry & research) in the 4 areas of skills (initiating & planning, performing & recording, analysing & interpreting, & communicating)