

Name:

Date:

Class:

Engineering Design Lab Packet

Names of Team Members:

State the problem:

What we learned from our research:

Sketch a blueprint for your prototype (label parts):

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Itemized cost of materials:

Name of Material	Cost Per Item	Number of Items	Total Cost

Add the total costs of each material to calculate final cost: \$_____

Build your prototype based on your blueprint!

Test Your Prototype Using 3 Different Sized/Shaped Water Bottles:

Rate how well the 3 different water bottles fit into your water bottle holder prototype:

All 3 types of water bottles fit comfortably.	All 3 types of water bottles fit but 1 or more is squeezed in.	One or more water bottles cannot fit in our water bottle holder.
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Rate how well your prototype holds the weight of each water bottle and whether it remains securely attached to the desk or chair leg for at least 3 minutes:

All 3 types of water bottles stayed in place easily for 3 minutes.	All 3 types of water bottles stayed in place for 3 minutes but 1 or more looked like it would not last long.	One or more water bottles did not last in place for 3 minutes.
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Rate how durable your prototype is at absorbing or resisting condensation on water bottles:

Our prototype absorbed or resisted condensation.	Our prototype absorbed or resisted most of the condensation.	Our prototype did not absorb or resist condensation and is damp or soggy inside.
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Time to Iterate the Design Process!

Based on your testing, which areas need improvement (size, strength, durability) and what could you do to improve performance?

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Do you need to make design changes? If so, draw your redesigned prototype below and label all changes.

Itemized Cost of Materials for Redesigned Prototype:

Itemized cost of materials:

Name of Material	Cost Per Item	Number of Items	Total Cost

Add the total costs of each material to calculate final cost: \$_____

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