Water Cooler

Objectives:

Research Various Aspects of Water Coolers, Analyze Found Data, Create a Conceptual Design

Two weeks for research and concept development

9/21 - 10/4

Team Members:

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Water Cooler

Research:

This project was mainly one focusing on the research aspect of Industrial Design. We began by looking at existing products, how water is filtered, and how the water coolers work. We then started asking questions like, “What are some of the ways humans interact with water?”

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Research:

While doing our in-field research, we conducted interviews, observed people using the water coolers and also watched some people change the bottle.

We looked at things from how the bottles are stored, to the cleanliness of the water spill tray, to how the user interface helps or hinders a person getting the water.

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Research:

To better understand how people view water and water coolers, we devised a survey sheet. Members of the team went out to various locations and selected random people to fill out this sheet. From this, we discovered that most people would choose bottled water over tap because they feel it is cleaner and many say it tastes better. Many would also choose a water cooler instead of a fountain because they know from where the water comes. All this added up to what is most often looked for when in search of a refreshing cup of water.

ēko design

Male Female

Age

What do you drink most often?

Do you prefer bottled or filtered tap water?
(Circle One)

Bottled Water Filtered Tap Water

Which would you choose?
(Circle One)

Water Fountain Water Cooler

Why? (Brief Explanation)

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Analysis:

From our research, we developed “A Day in the Life” stories. With these stories, we were better able to understand and identify some important issues which we then tried to address.

Works at a plumbing supply call center. Ordered cooler because it’s clean, water tastes very fresh and he knows where it’s coming from. Uses it to fill his water bottle for the day and uses cups on occasion. Storage for bottles is in the warehouse. Has the warehouse guys switch bottles because of arthritis Bottles are too heavy

Receptionist at a Dentist’s office. The dentist’s practice ordered the water cooler. Uses her own glass to make hot chocolate and tea with the hot water spout. Storage for bottles is underneath the reception counter. Larger men lift the bottles. Hates the fact that she has no leg room under the counter because of the bottles

School Teacher. School ordered the cooler because there’s no sink in the teachers’ lounge. Uses it for instant soup at lunch. Instead of using a cup, she uses a mug. Bottle storage is in the corner by the copy machine, you have to move the bottles if there’s a paper jam. She has to change the water bottles because she’s the tallest. She has lower back problems by lifting 42lb bottles. Complains of awkwardness of loading

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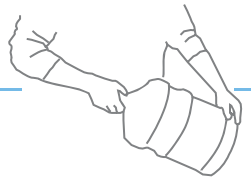
Analysis:

These problems were identified and separated into two categories:

LOADING

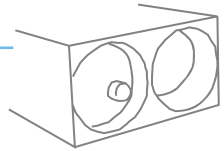
Weight



Bottle handling

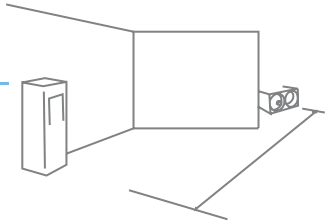
Getting bottle up to the right height

STORAGE



The need for crates

Identifying empty bottles
Identifying the date of the bottles



Locations of storage far from the unit

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Ideation:

Knowing which issues we wanted to tackle, we began the sketching process.
All the sketches we did, culminated in one full-scale concept model.

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Team Work:

And so we began the building process...








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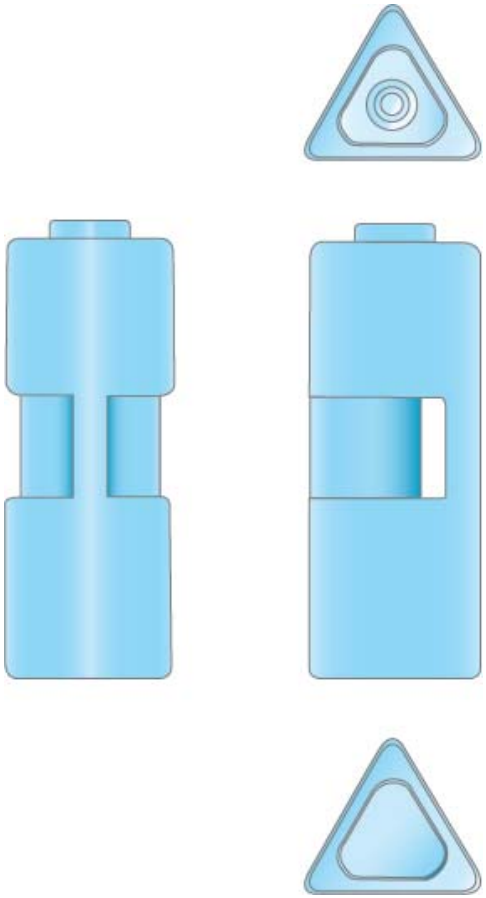
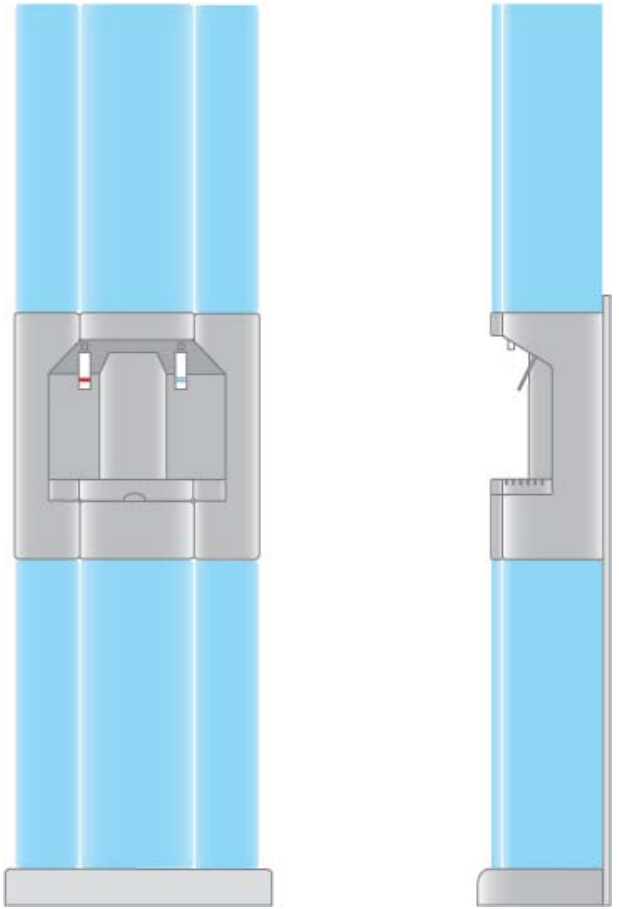
Concept:





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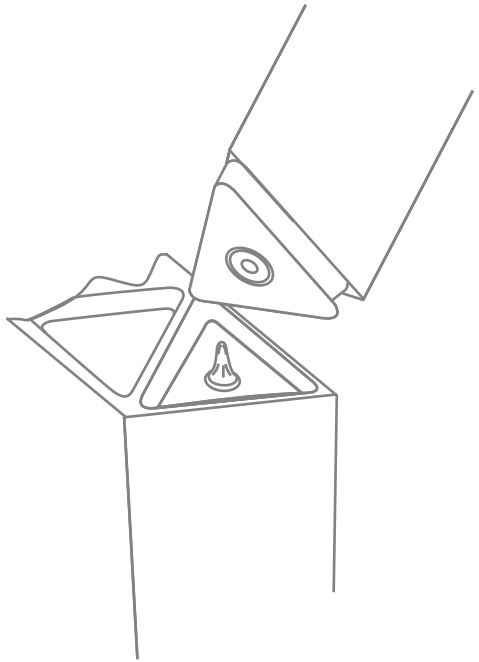
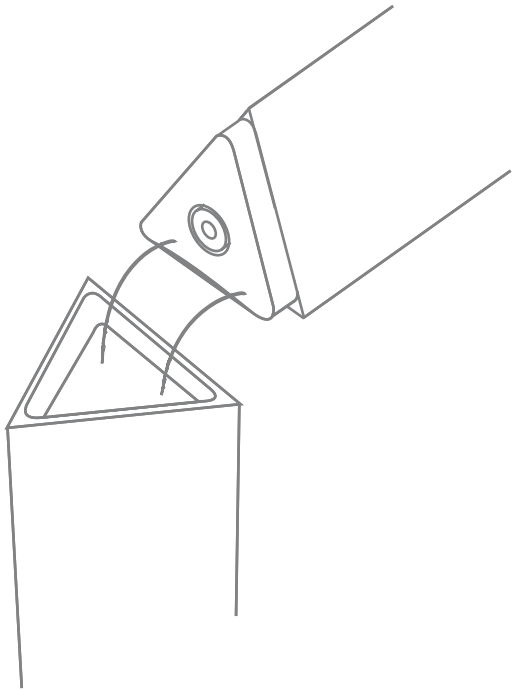
Concept:

Puncturing device lines up with the rubber center on the cap



Stackable bottles



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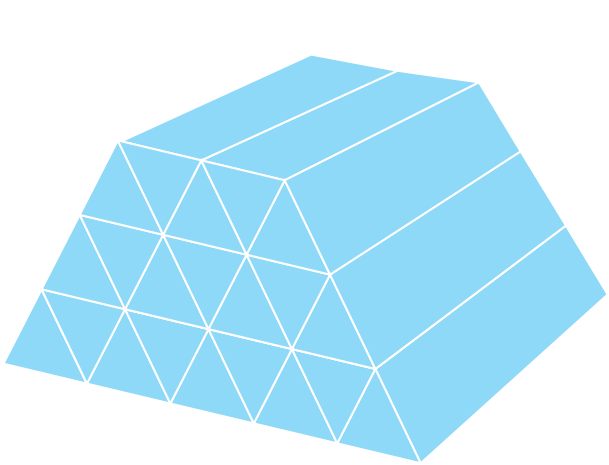
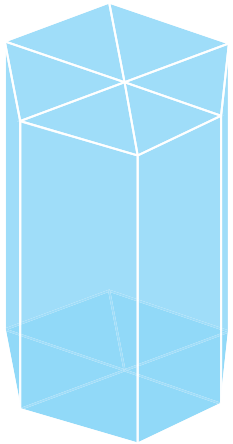
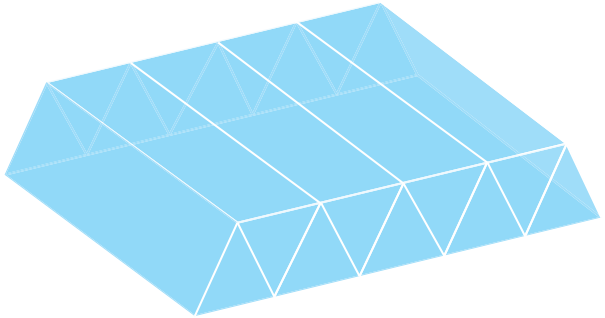
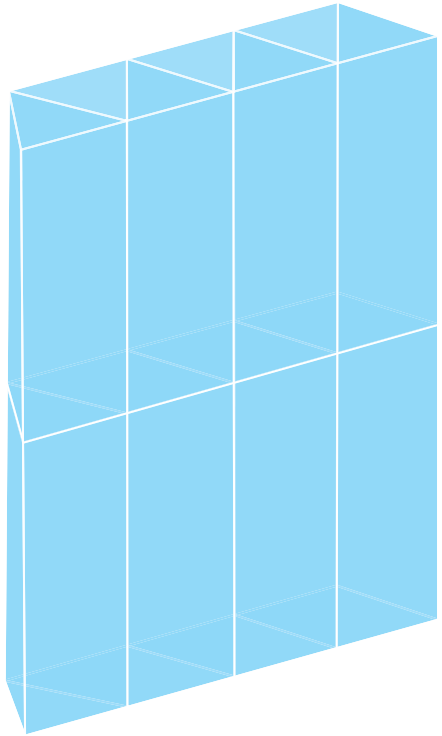
Concept:

Possible configurations of storing bottles









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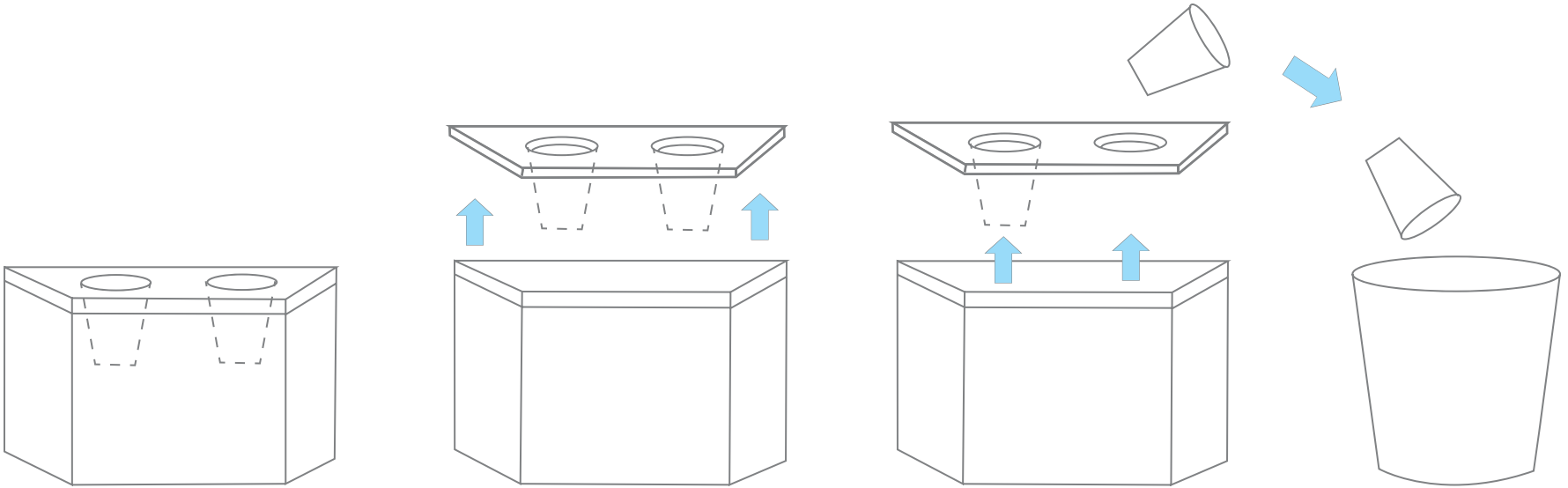
Concept:

Cleaning the water spill tray



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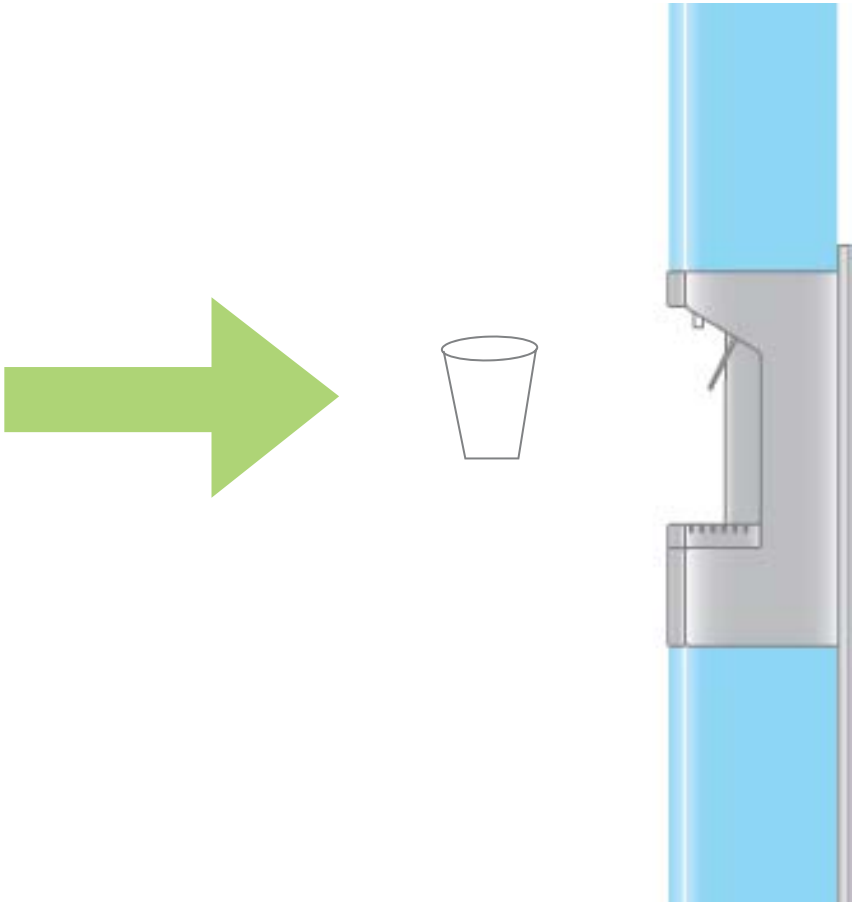
Concept:

Using the spouts only requires one hand to press the cup against the lever.



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Concept:

With our final concept, each bottle contains 3 gallons of water. Three bottles can be loaded and used at one time while another three can be stored under the spill tray. With the modular triangle shape, many more bottles can be stored easier and take up less space than the round bottles. The handle makes it easier to carry and load into the machine.