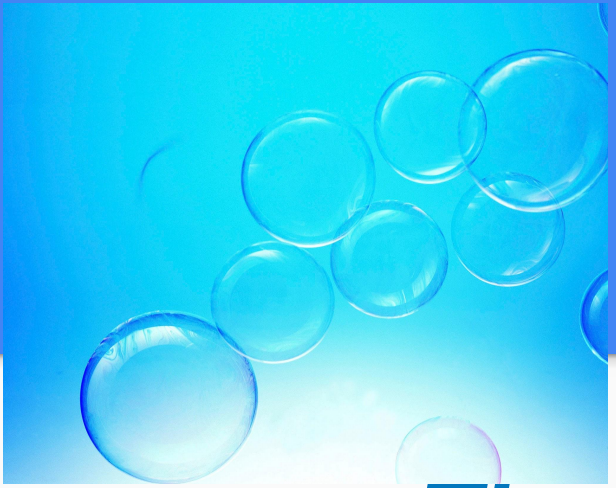


The Scrubby Hand Test

Problem

The problem I'm trying to solve is how to make washing dishes better. Nobody likes touching the wet and soggy food while they are doing the dishes. I hate touching the wet food on accident while doing the dishes, so I wanted to create something that can prevent that from happening. So I created a glove that has a scrubber on it, called the Scrubby Hand, that will prevent you from touching the wet food.

Research

Hawthorn (11/6/25) Beginners Guide to Fabric Types hawthornintl.com/fabric-guide

According to Hawthorn, neoprene is waterproof and insulating. That means that if you get the glove wet your hands won't get wet. Insulating means that if the water is hot your hands won't burn. So, I need to get gloves made out of neoprene.

Swift, Phil (11/6/25) Flex Glue flexsealproducts.com/products/flex-glue

According to Phil Swift, Flex glue can never have mildew and it can handle water, and even be applied underwater. It will stick, but you need to let it dry for at least 24 hours or 7 days. So, I need to use Flex Glue for this project.

Aranita Kiki (11/12/25) The Seven Very Best Dish Sponges
https://nymag.com/strategist/article/best-dish-sponges.html

Skura style kitchen sponges are quick drying sponges. The sponge can last for at least 3 months. The color will turn dark so that will let you know that you need to throw that sponge away and get a new one. Kiki thinks that the Skura style sponge is the best sponge because it takes away stains easily. So, we should buy Skura style kitchen sponges.

Criteria and Constraints

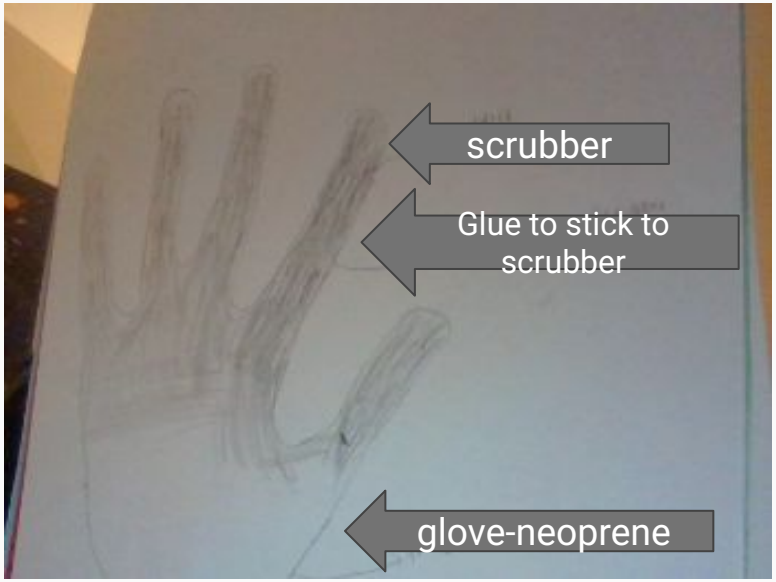
Criteria

- Cleaning enjoyment: how comfortable and easy it is to wash the dishes
- How long it takes: timing myself cleaning the same dish with each prototype
- Staying Together: how well the sponge stays stuck to the glove
- No Nasty Smell: if it smells moldy and not clean

Constraints

- A problem can be time because I have to let the glue dry for each glove.
- An issue I can have is having enough money to buy the right things like Skura Style scrubbers or Flex glue.
- A problem that I can have is my craftsmanship, to make sure I glue carefully and measure correctly.

Design Planning and Testing Slides



I was thinking that the finger tip will have the small scrubber pieces and then we will have the big piece of the scrubber on the palm. So the scrubber will have the spots on places so where you can reach the dirty food and stains. The palm will be the the easiest to get off stains, and the fingers will get the edges and hard to reach places.

Materials

- 3 Types of Sponges
  - Skura Style Sponges
  - Scotch Brite Heavy Duty Scour pads
  - Sponge Daddy scrubber
- 3 Types of Gloves
  - O Cedar Playtex Gloves
  - Clorox Premium Latex Gloves
  - All Living Playtex Gloves
- Flex Glue (medium size)
- Ruler
- Scissors

Steps to build my project.

Step 1) Measure the size of each finger onto the glove to from the fingertip to the base of the finger and width.

Step 2) Draw a square on the glove palm to get an idea of the shape of sponge should be cut into.

Step 3) Cut the sponges for the finger to be a quarter inch thinner than the width and height of the finger.

Step 4) Cut the sponges for the palm to match the drawing on the glove

Step 5) Use the Flex Glue to stick the sponge pieces onto the glove, push them firmly on and make sure they are really in place.

Step 6) Let it dry for at least a day

Prototypes- the models built

Prototype 1

Prototype 2

Prototype 3

Prototype 1: O-Cedar Playtex Gloves with Scotch Brite Heavy Duty Scour pads

Scoring rubric: 1-did not met citria 2-barely met citria 3-met some citra 4-almost met all criteria 5-met all criteria

Prototype 1	trial 1	trial 2	trial 3	Average
Cleaning enjoyment	5	4	4	4.3
Staying together	3	2	2	2.3
No nasty smell	4	5	5	4.6
Time to wash one dish	22s	32s	20s	24.6s

Prototype 2: Premium Latex Gloves with Sponge Daddy

Scoring rubric: 1-did not met citria 2-barely met citria 3-met some citra 4-almost met all criteria 5-met all criteria

Prototype 2	trial 1	trial 2	trial 3	Average
Cleaning enjoyment	5	5	5	5
Staying together	4.5	4.5	4	4.3
No nasty smell	4	4	4	4
Time to wash one dish	14	22	18	18

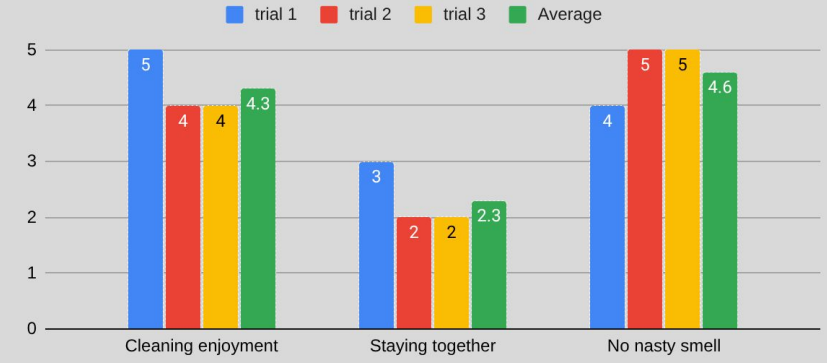
Prototype 3: All Living Playtex Gloves with Skura Style Scrubber

Scoring rubric: 1-did not met citria 2-barely met citria 3-met some citra 4-almost met all criteria 5-met all criteria

Prototype 3	trial 1	trial 2	trial 3	Average
Cleaning enjoyment	3	3	4	3.3
Staying together	5	4	4	4.5
No nasty smell	4.5	3	4.5	4
Time to wash one dish	14	30	19	21

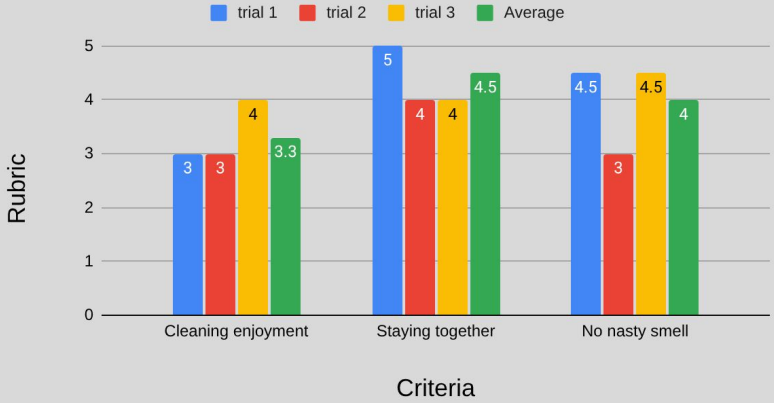
Data and Results

glove prototype 1

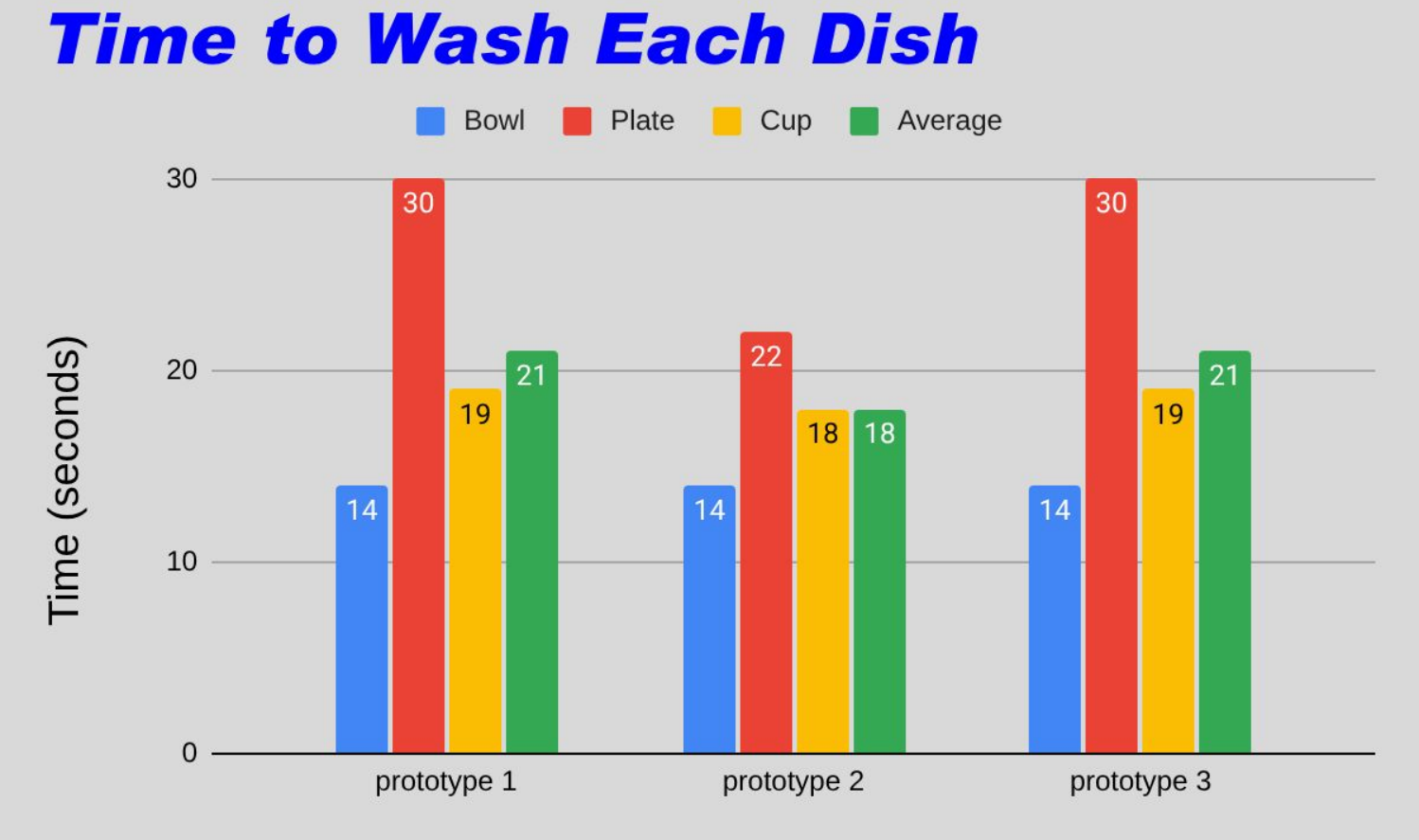


Glove Prototype 2

Glove Prototype 3



Data and Results



Limitations and Implications

The challenges I had to encounter was measuring every finger and measuring the glove. This is because when I cut out the sponges ot without measuring carefully the pieces will either be to long or too short and won't match the length its supposed to be.

I would find a better glue that will stick onto thighs better and not non-toxic for the little kids. Also I would look for a better scrubber that can do better then the Skura style scrubbers. A glove that is not hard to put on ad not hard to take off. I would also find a scrubber that can not have any nasty smell or have mildew.

I didn't see expecting that the pieces of the scrubber coming off of the glove it self.

The thing that I would do better for my next project is adding more glue and measuring more carefully. Make sure the scrubber is fully is on the glove.

Reflection, Conclusion and Evaluation

The gloves did well scrubbing the dishes.The challenge I had to face on Prototype 2 was that it’s hard to put on your hand. But overall, all of the gloves are excellent at washing. I would keep the Playtex Gloves, and the Sponge Daddy. I won't use the Heavy Duty Scour Pads again.The lesson I learned while doing this project was to add more glue and fully measure the sponge before cutting it. It will make the gloves better. For my limitation I only made one glove for each prototype. So you have to wear 2 different glove if you want two at the same time.

Application

I think it might impact society is because I know a lot of people hate touching the wet and soggy food and even the dirty dishes, so this prototype will prevent that from happening to people and they can finally wash the dishes without being uncomfortable and grossed out. When people use my tool they aren't going to be worry about how long it's going to take them. They know that they are going to be done fast because they have a tool to help then do the dishes fast and clean.

References

Hawthorn (11/6/25) Beginners Guide to Fabric Types *hawthornintl.com/fabric-guide*

Swift, Phil (11/6/25) Flex Glue *flexsealproducts.com/products/flex-glue*

Aranita Kiki (11/12/25) The Seven Very Best Dish Sponges https://nymag.com/strategist/article/best-dish-sponges.html