Dog Fur, Dirt, and Dust Removal Tool

Define the Problem

No one likes doing chores. Well our design will make one of those chores easier. That chore is sweeping and dusting no one likes it. So our design will make that chore easier by making your dog do the work instead of you doing it.

Research

We found that swiffers are safe for dogs. You can by a rumba which is a great for automatically picking up dirt, dust, and dog fur but it can be $100 to $300 which is a lot of money. There is lot of dog hair, dirt, and dust removal tools but most of them you have to get up to use it.

Requirements

Our requirements are the design has to be inexpensive, has to clean up dirt, dust, and dog fur, and can not get in the way of the dog walking or running.

Constraints/Limitations

Our constraints are the project is due at the end of January, and we can not spend a lot of money.

Prototype Designs

Prototype 1

Prototype 2

Materials

- 55in of Velcro 2in wide
- Hot Glue Gun/hot glue sticks
- 9in x 35in of Felt
- Pounce and Fetch 10-in 1 mega Lint Roller
- Swiffer
- Attachment for the Swiffer/ pads for them
- 58in of yarn

Procedures

Prototype 1

Step 1: Gather materials
Step 2: Cut felt to 35in x 9in
Step 3: Cut three pieces of the hook side of velcro 9in long and 2in wide
Step 4: Cut three pieces of the loop side of the velcro 9in long and 2in wide
Step 5: Cut two pieces of the loop side of the velcro 12in long and 2 ½in wide
Step 6: Take your 12in pieces of velcro and glue one onto your swiffer long ways and close to the top of the swiffer
Step 7: Take your other 12in piece of velcro and glue it on long ways close to the top of your pounce and fetch ten in one mega lint roller
Step 8: Take your three pieces of 9in pieces of the hook side of velcro and glue them on to the very left side of the piece of felt in a row
Step 9: Take your three pieces of 9in pieces of the loop side of the velcro and flip your felt over and glue them to the very right side of the piece of felt in a row
Step 10: Cut two pieces of the hook side of velcro 12in long and 2in wide
Step 11: Glue the two 12in pieces of velcro to the felt to the middle of the felt on each side
Step 12: Put the prototype on the dog and attach the swiffer and mega lint roller

Prototype 2

Step 1: Take your old piece of felt and keep the velcro on it and detach the lint roller
Step 2: Cut a piece of yarn to 58in long
Step 3: Tie the piece of yarn to the dog's collar and then wrap it under the felt and tie it

We tested it after we built the prototype.

Testing and Data

Prototype 1 didn't work. We tested it 4 times and none of the times it was successful. To test the prototype we had the dog turn around, walk up and down to hallway and to see if it was comfortable and if it was scared of the design.

Reflection and Redesign

   Prototype 1 did not work because the felt kept sliding back. Also, the dog tripped on the lint roller and it scared the dog. Modifications that we made are we added yarn to keep the felt from sliding back. Also, we only used the swiffer not the lint roller.

Testing and Data

Prototype 2 did work. We tested it 4 times and all 4 times it was successful. We did the same testing procedures as prototype 1. We made the dog turn around a few times in the design. We had the dog walk up and down the hallway. We also checked to see if the dog was scared of the design and if it felt comfortable in it.

Results

Prototype 1 didn't work. The lint roller tripped the dog and scared it. Aslo the felt kept sliding back. Prototype 2 did work. We added yarn to keep the felt from sliding back. We also only used the swiffer instead of using both the lint roller and the swiffer.

Comfort, Didn't scare, Walk normal and Turn around normal

■ Comfort   ■ Didn't scare   ■ Walk normal   ■ Turn around normal

Test Number
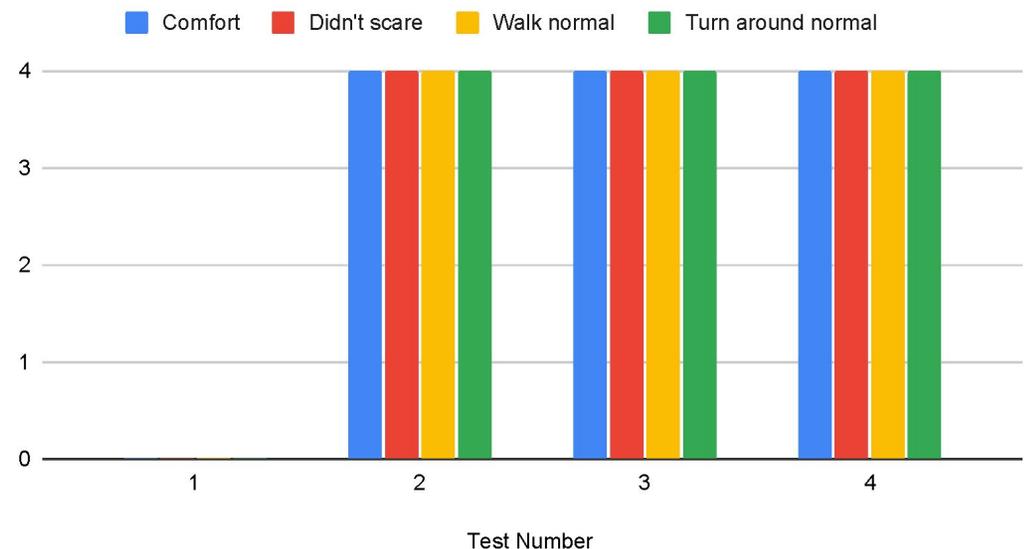
Proposal

Don't you hate doing chores? Well our design will help with 2 of those chores. Those 2 chores are vacuuming and mopping/sweeping. The design picks up dog fur, dirt, and dust. Your dog can do the chores for you.

The requirements are that the design has to be inexpensive and it has to clean. The biggest constraints are that we only have till the end of January and it can't be a lot of money.

For building the design gather the materials, cut and measure materials to size, and glue everything together. To redesign, find the things that are going wrong, draw your new blueprint, and build it. The testing procedures are to have the dog turn around, walk up and down a hallway, and see if the dog is scared of it.

The final prototype is the best because the dog is not scared of it, the dog is comfortable in it, can walk normal in it, and can turn in it. All four times we tested the final prototype 2 it worked.

No one likes doing chores, so why don't you have your dog do them for you? Our design is great. It picks up dirt, dust and dog hair. You can put this on your dog and play fetch. As the dog is running, the dog is cleaning the floors. That's why our design is great!

Bibliography

"Are Swiffers Safe to Use around Pets?: Cuteness." *Cuteness.com*, https://www.cuteness.com/13722722/are-swiffers-safe-to-use-around-pets.

"Fur-Zoff Pet Hair Removal Tool." *Chewy.com*,

https://www.chewy.com/fur-zoff-pet-hair-removal-tool/dp/158412.

https://www.amazon.com/Evriholder-Sw-250I-Amz-6-Furemover-Squeegee-Telescoping/dp/B00

0EFDOOA?th=1

Kuklovskai͡a Elizaveta. "DP." *Amazon*, "Books by Mail" Pub. Co.,

https://www.amazon.com/dp/B086WY4N2Y/ref=redir_mobile_desktop?_encoding=UTF8&aaxitk=e1

b1ff63271615363c178d3706281fc2&hsa_cr_id=7974067260201&pd_rd_plhdr=t&pd_rd_r=8487b009-

8143-489c-ac4a-527812db3828&pd_rd_w=4XsQU&pd_rd_wg=a9mqv&ref_=sbx_be_s_sparkle_lsi4d

_asin_0_img&th=1.