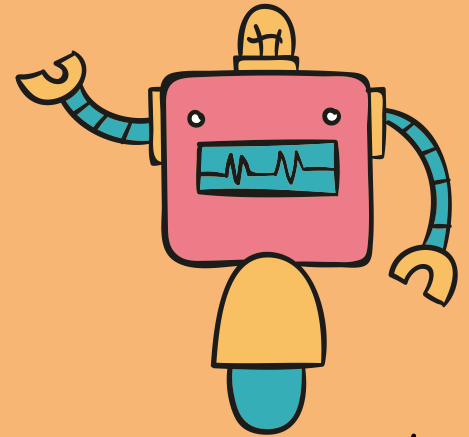
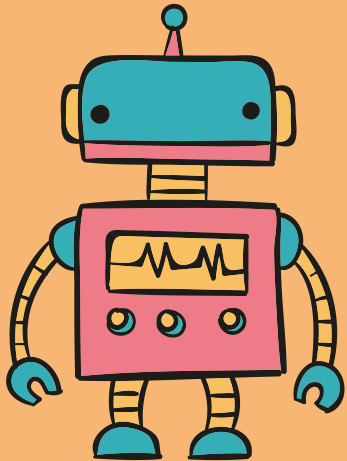


Bristlebot Race

K19

Science Fair 2021
Kindergarten



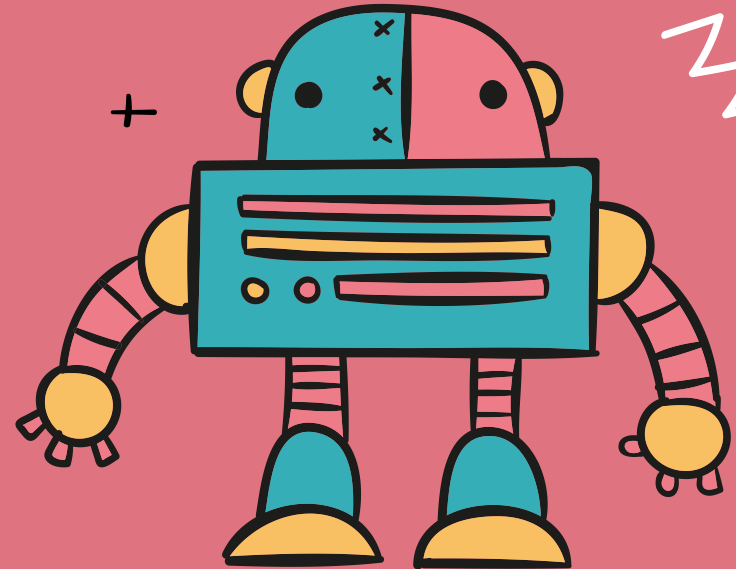


Purpose

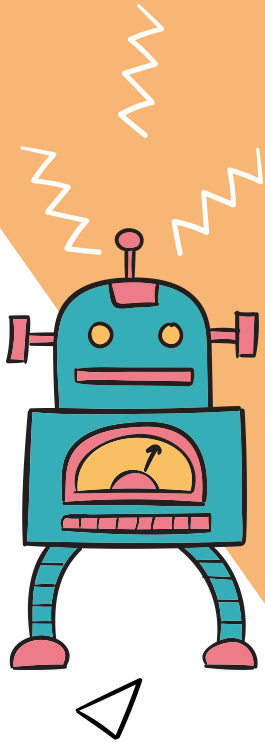
The purpose of my experiment is to see which surface is best for racing two types of bristlebots.

Hypothesis

I think a flat bristlebot on a plastic surface will be fastest because of the flat bristles and smooth surface.



Research



01

Observe

I watched a video about making bristlebots and wanted to know what makes them move.

03

Talk

I talked to my mom and dad about electricity and circuits.

02

Learn

I watched videos about electricity, what makes a circuit and how to make a bristlebot.

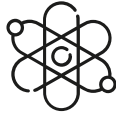
04

Practice

I got ready to race my bots.



Materials



- 2 vibrating motors with leads
- 2 coin cell batteries with leads
- toothbrush heads - one with slanted bristles and one with flat bristles
- glue gun
- scissors

- 5 large textbooks
- stopwatch
- wood table
- carpet floor
- plastic lid
- foam bumpers

Experiment



Step 1

Gather materials



Step 2

Make bristlebots



Step 3

Set up racing fields



Step 4

Race bristlebots



Step 5

Write down results



Step 6

Make conclusions



Photos



Carpet

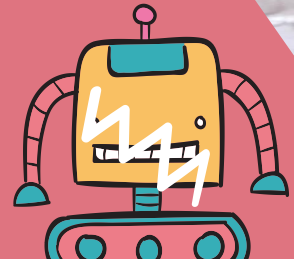
Wood

Plastic





Ready, Set,
Race!





Analysis



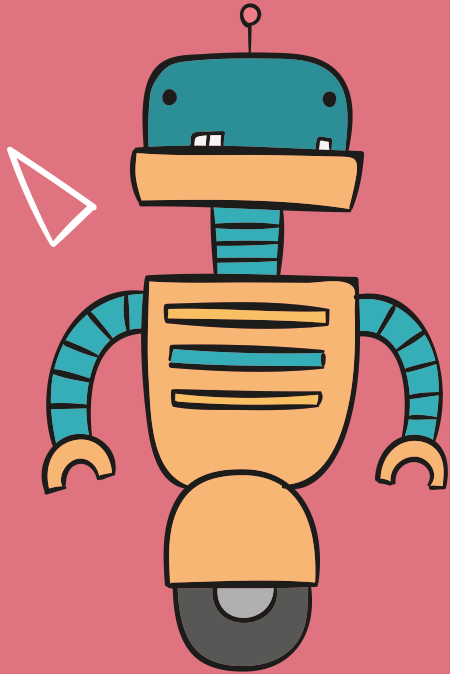
TYPE OF BRISTLE

+



SURFACE TYPE		Slanted Bristle Bot	Flat Bristle Bot	Total Time 
TYPE OF SURFACE 	Wood	3 seconds	9 seconds	12 seconds
	Carpet	Didn't move	Didn't move	X
	Plastic	2 seconds	5 seconds	7 SECONDS
Total	5 SECONDS	14 seconds		

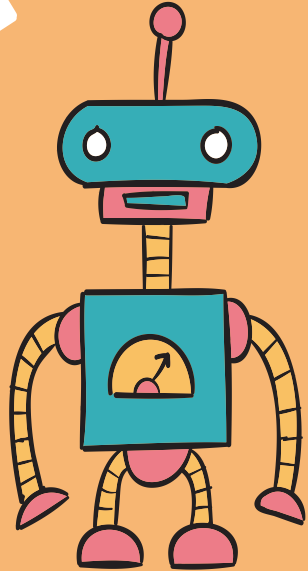




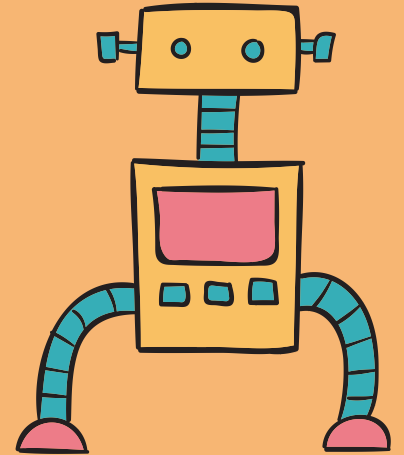
Conclusion

The slanted bristlebot turned out to be faster on plastic than the flat bristlebot. The plastic surface was the fastest.

Real World Connection



This project helped me learn that materials make a difference in how fast things go and that electricity can make things move. Surfaces are important to make things like cars move.



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- Disney Science Fair 2021 Google Classroom
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- Cynthia Galano, Mom

