

Science Fair - log book -

- November 1st : Topic, Candy lab

We decided to make a fun candy lab which included making one edible slime and the other normal slime and the goal or question was to figure out if the edible slime can be as stretchy as normal slime or do the same things as a normal slime?

Prereeta's Job : Make the edible slime

- Marshmallows
- Powdered sugar
- Oil

• one bowl and mixing utensils

Subhreet's Job : Making normal slime.

- Glue
- Tide
- Food coloring
- one bowl and mixing utensils

- November 8th : We thought that a Slime / Candy lab was too easy to do and wouldn't give us as much for a scientific experiment - plus it was done many times. So instead, we thought of doing a cardboard robotic hand because it relates to today - the time period where robots/robotics are thriving.

As for robots they have batteries that preserve energy, but our robot hand will be made out of cardboard, even if we still have to control it that it would be very

What would happen if robots were never made out of metal but cardboard instead?

The one who created a robotic hand, got the idea from walking disability.

we completed all the research, hypothesis, problem and variables

We also got all the materials needed for the experiment.

Prereeta's job:

- Writing the log book & other stuff
- Drawing stencils
- Attaching strings, elastic, etc

Subhreet's Job:

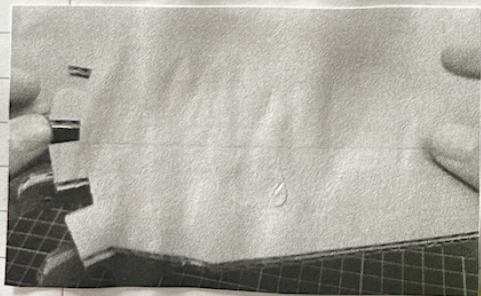
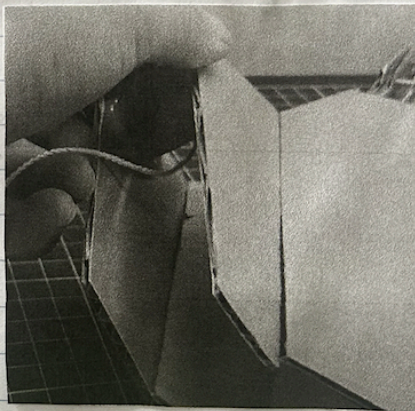
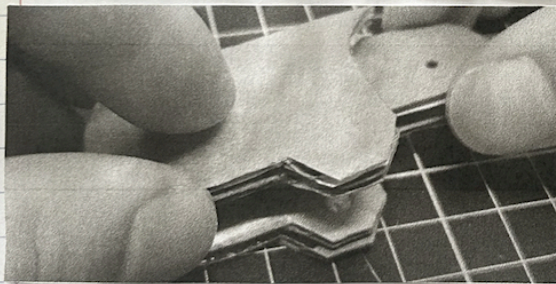
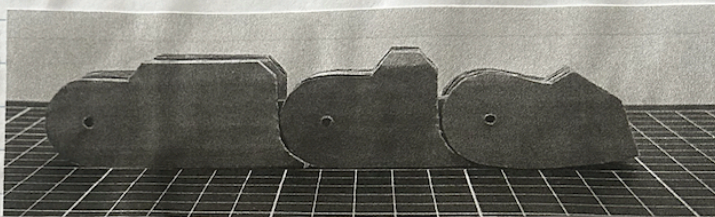
- Cutting out pieces
- Glueing
- Attaching sticks

- December 22 when we tried cutting out the pieces the first time it wasn't cutting smoothly and the pieces were all wrong and couldn't fit into each other, we also put the pieces the wrong way.



Because of this little problem we started stressing out on how to do things, because we couldn't even cut the pieces.

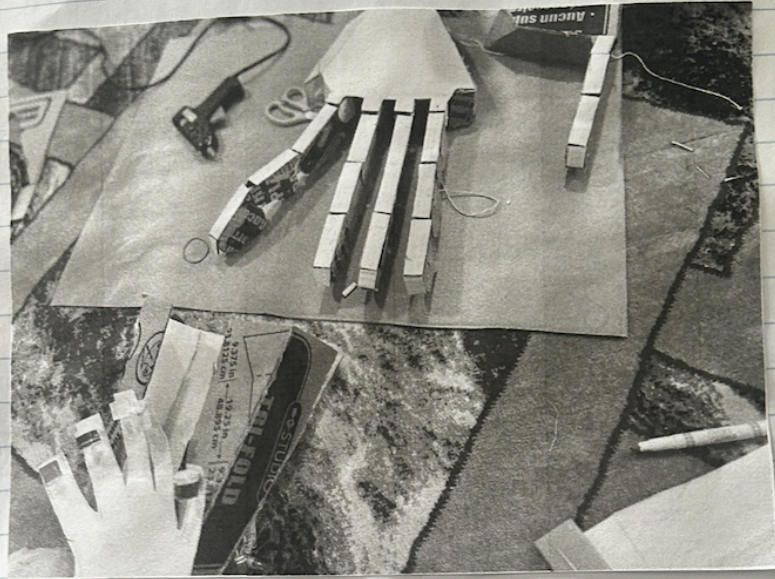
- Jan 5: We tried cutting again after buying good cutting supplies, and it went well this time and we were able to finish more than half of the head.



we had finished alot
still had doubt on
if we
could
cut, especially
that good.

The video which we referred to, some of the steps were massive, which made it very difficult to make certain things

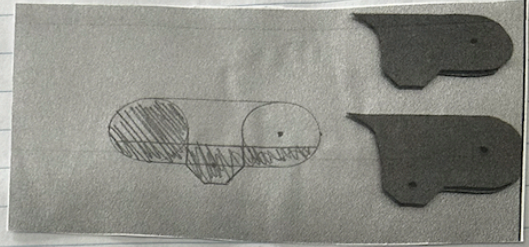
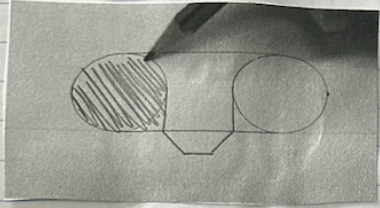
- Jan 20: we finished building the hand and experimenting it.



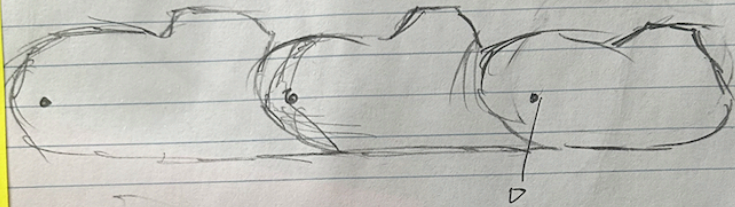
When we were experimenting the hand sensor controls the robotic hand wasn't pulling the strings properly so we decided to take that part out and leave the rings so it would be easier to pull.

The looks weren't the best but, we thought if it worked then that's good enough.

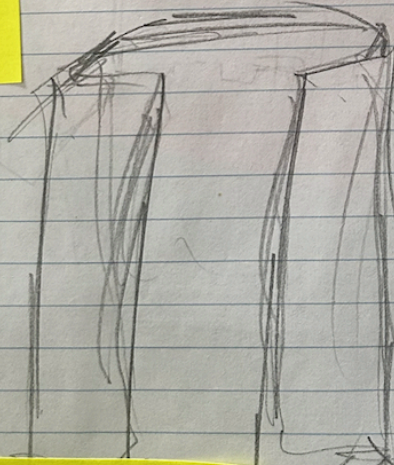
Digamma



we had to estimate how long
even pieces of
the finger would
be



Holes which
connect and is
the reason why
the pieces move



→ Arm piece

Instead of making
a big opening then
having to close
it, we should make
a Smerkos one

▷ Pre-templates that
are folded to be
3d

The base of the head:

where
the
set
attached

where
the
wind
goes

In the video that we referred to didn't have any measurements on how big the head is, so we had to make an estimate on how big it should be.

During this process we thought about taking it all apart and trying something else all the time.

- We put cardboard pieces that fitted the top of the fingers so that the fingers would be able to bend when we put the elastics on them

