CYSF logbook

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* Dec 11, Hubert and I came up with an idea: which paper airplane can go the Farthest? We thought of different planes to use but later that day we gave up because we found that there were so many types of paper airplanes that exist. Then we tried only doing world record ones, we searched it up but found out that many of the designs were secret. Additionally, each plane has its own unique throwing style so it wouldn't be fair if we tested all of them with the same throw.
* Dec 12, Hubert and I came up with an idea that we both agreed on: which type of paper airplane launcher could launch a paper airplane the farthest. Then Hubert wanted to know which type of paper airplane we would launch a dart, glider or hybrid. We decided to launch 2 types of airplanes: a dart and a glider.
* Dec 14, Today, Hubert searched for some types of airplane launchers on google. We found four: pulley, arm, motor, and slingshot. We also needed a place to throw them. Firstly, Hubert thought of the mall. But it got shut down, when I suggested throwing it in my basement.
* Dec 15, Hubert thought of 2 paper airplane designs, one a glider and the other a dart. We tested both of them and found out that they would work. The dart went really fast but the glider swooped up and down.
* Dec 18, we both came up with designs for our launcher, Hubert was going to make a lego slingshot while I was going to order a pack of motors off amazon to build mine.
* Dec 21, I ordered the pack of motors off amazon, I didn't know if the flywheels would work for the job so I quickly designed some for the launcher in tinkercad so

I could 3D print them later.

* Dec 25, Hubert was going to make the pulley but he couldn't figure it out so he came up with another idea. A magnetic accelerator. The plan was to take a magnetic board and angle my neodymium magnets to accelerate a car which then would have a clamp loosely attached to a paper airplane, then it would suddenly stop and cause it to fly using inertia.

* Dec 27, I tried making a magnetic accelerator but it was extremely hard to get it going that fast so I gave the job to Hubert to see if he could figure out the magnetic accelerator.
* Jan 1, I finally received my amazon order, and started working on it. I used cardboard to make my design, I put in two motor holes and wired them with the battery pack. I connected them with the switch and attached it to a stand. Then we tested it. It worked however there were a few minor problems, the motors kind of dug a hole in the cardboard and the motors pushed away a bit so there wasn't much of a gap in between.
* Jan 16, Hubert tried building the accelerator however there was no luck so we decided not to do it. But he told me that he finished his launcher and was ready to test.
* Jan 17, me and Hubert are trying to find a time we could meet up but it’s hard because Huberts is only free on Sundays and sometimes I can't always do it.

* Jan 25, I got mad at my machine because it kept breaking so i had the ingenious idea to make it fully 3d printed. I used tinkercad to design my launcher, I took measurements and tried my first test. It didn't work so well so I made a few adjustments to it. Surprisingly, I got the top part on test 2. I then designed the sides and stand.
* Jan 27, I finally finished adding the parts using hot glue. It worked and looked great. Plus I got rid of the 2 small problems. But one more thing arose, i wanted to clamp the parts together so i had ebay access if something failed. I designed some clamp parts so they were parallel to the parts so then I could use file clamps to clamp them together. “Now I am officially ready for the test.”
* Feb 17, I totally forgot about this logbook but I answered a few questions in the CYSF form. The variables plus the procedure.
* Feb 18, Hubert and I agreed that we shouldn’t do the arm because we want to make this into real life and how hard would it be to make and build a robotic arm that just flies gliders around.
* March 3, Finally Hubert found the time to come over to my house so we could test, we jumped straight into it but then we ran across a problem. Each time the slingshot went it tore a hole in the back of the glider. So we decided to scrap the idea because it wouldn't be accurate with three different planes testing. After we finished testing I looked at Mrs Tang's email and we started making our slideshow. Hubert left at 6 but I continued to work on it.
* March 4, We finished the slideshow and I did most of the questions on the CYSF form but I had a few questions on some of them.
* March 5, Darek explained a few questions to us on the portal. We found out that we shouldn’t do the presentation box or the ethics due care 2B.
* March 6, Mrs Tang helped answer a few of the questions I had on the portal.