

Journal 11

DATE: 2/19- Monday Work time

Team/Group members involved:

Sohum, Mary, Katie, Ryan, Grant

What I did:

- Discussed attaching seats
- Switch out wheels
- Test drive
 - Ryan
 - Grant

What I learned:

Today, Mary and I came at 11 like we normally do. When we got there, we discussed with Sohum how the seats would be attached. Sohum believed there was no way I was as short as it appeared I was according to where the seat was. I was going to get on the rover, but before that could happen, Ms. Makins walked in and told us there were better ways for us to do that. I sat on the back of '17 with my back against the seat back and had my leg at a comfortably extended point. Then Sohum measured from the back of the seat to that pedal. Then we compared with the new rover. I am apparently actually that short. Also it was good I didn't sit on it because the rover apparently fell of the table later in the day.

Afterwards, I went and started switching out wheels, and I really do not appreciate how the plywood messes up the alignment of the flange. I got Mary to help me since Katie no longer required her services and together we got the wheel on with help from Ryan, Mr. Cribbs, and Ms. Makins. We had to drill a lot of holes in the wheel to get it to go straight through the wheel. Finally we could test drive. Since Wes wasn't there, Ryan got to be on the front and it was an interesting experience to say the least. We did many laps around the flagpole and one around panther drive/student body parking lot testing out the new wheels. They are so much bumpier than last years wheels, and after driving around for a bit, it



was very obvious. My pedal arm would also seized and/or fall off the bearing and he longer we were out the worse it got. Then Grant showed up, so we decided to see who is faster on the rover by having a race. First it was Grant and I. About halfway through Grant starts dying and is going a lot slower and I am shouting at him we are almost there you got this. Please keep in mind I had not gotten off the rover and it had been over an hour because we went out around 2 and this was around 3. Then Ryan got back on. He started dying halfway around as well and I'm yelling the same things at him, except he is breathing really hard and I thought it was something breaking. Also for like the last hundred yards, my pedals felt like they were doing nothing, but I kept pedalling because I did not want Ryan to realize that I wasn't doing anything. The differences ended up being three hundredths of a second in Grants favor.

DATE: 2/20- B1

Team/Group members involved:

Me, Mary and Sohum were there but we did not interact

What I did:

- Wrote my journal

What I learned:

Today, I came in during B1 and wrote my journals. I had two left to write and Mary wanted me to go to the den with her, so I said okay. Looking back, I realize I could have been a lot more useful and laser cut out wheels while writing my journals, but I didn't, and I cannot change the past, so what is the point of regretting it. Ww would have had more cut to be jigsawed and glued during class, but oh well. I did not take a photo so here is a screenshot of smartsheet.

* Materials Research	10/16/17	01/03/18	Katie, Emma, Mary	80d			Comple
* Design Big Seat Mold	01/09/18	01/22/18	Seat Team	14d			Comple
* Create Seat 1	01/26/18	02/05/18	Seat Team	11d			Comple
* Create Seat 2	02/05/18	02/19/18	Seat Team	15d			Comple
Put gaffers tape along edges of both seats	02/20/18	02/20/18		1d			Comple
Seat Report	01/22/18	02/23/18	Seat Team	33d			In progr

DATE: 2/20- Class

Team/Group members involved:

Full Team- specifically Mary, Katie, Ryan, Grant

What I did:

- Briefing slides

- Put glue on wheels
 - Issue with a wheel

What I learned:

Today, we did briefing slides for a really long time because so much was done in the previous week and on Monday. Class was short today, so after that there was not much we could do. Mary and I joined the wheel team while Katie did what a Katie does since the seat team is basically complete. We are planning on putting gaffers tape on the seats, so that the edges are less sharp, but we want it to be the school colors (red and blue), so we will wait for those colors to come in from shipping. Class was also split in half by lunch, so after lunch was when we glued the wheels. We grabbed a layer 6 and 7 to glue together, but they would not line up no matter how they were oriented. We then went to solve the mystery of whose handwriting matched the writing on the wheel. It was Grant. We just wanted to point it out to him to be more careful. The wheel was actually a layer one. We only had time to glue one wheel and wash out the glue bucket since class was shortened, so we glued a different 1 and 2 together and then washed out the glue bucket. Mr. Cribbs almost stood on the rover, but it seemed a little shaky, so he didn't. Then class was over.



DATE: 2/22- B1

Team/Group members involved:

Myself but Mary was in the den

What I did:

- Jigsaw wheels
 - fish

What I learned:

Today, Mary requested that I come in during B1 with her again, so I did. I was a lot more useful today than on Tuesday because I jigsawed out wheels. Now we have more wheels ready to be glued (yay). Also because class was next, I didn't have to do much cleaning up, I still vacuumed everything, but everything



else was left in a relatively neat order to make it easier for who ever was jigsawing wheels in class. I also briefly assisted Mary with photo taking. Another not really important thing I did was I made a fish. Normally when I cut out wheels, I cut out the middle in a circle. Instead, I accidentally cut out in a fish like shape, and I was like huh this looks like a fish. Then after I had cut another wheel, I had gotten attached, so I made fish a eye and a mouth. Now there is a new mascot in the den above the whiteboard. Please do not throw away fish, I will take it home if fish is not wanted.



DATE: 2/22- Class 1 and Flex

Team/Group members involved:

Full Team- specifically Sohum, Mary, Mark, Wes

What I did:

- Figure out placement of my seat
- Cover the edges in gaffers tape
 - hot glue
- Mini test drive

What I learned:

Today, is a good day because we have class twice. During class one, Katie went off to do Katie things while Mary and I put gaffers tape on the edges of the seat. Because I am linearly challenged, I cut the tape for Mary and she put it on so it looked really nice. Only the red tape was there, but the blue tape was expected for the afternoon. Wes's seat now looks super nice. There was a little bit of blue tape that Mr. Cribbs had, so we were able to do part of my seat. Mary and I also discovered some divets that were fairly sharp far enough away from the tape that putting the red or blue on them would call attention to the flaws. I went on the search for scotch tape because it is clear, but then I remember, hot glue. We put hot glue into the holes because its clear, so it wouldn't show and only really looked like resin. I was also called in by Sohum and Mark to figure out the placement of my seat. The first place it was placed my knee was hitting my face, and Sohum asked me how the placement was, I gave him an incredulous look and said it needed to be farther back. Mark pointed out the knees in face



and was like it really needs to be farther back. Then Mark tack welded the seats on farther back because just balancing the seat on a pole was not a good idea. He also put on Wes's based on his height. Afterwards Wes came in and remarkably the place Mark welded my seat on was correct. Then we moved the rover outside the shed and went on a mini test drive to the front of the den. In this test drive came my favorite series of photos from rover yet. (zoom in on Wes's face). Then Cribbs tested it. Afterwards while taking it back to the den a weird noise was heard that would be more fully investigated in class 2.



DATE: 2/22- Class 2 and After School

Team/Group members involved:

Full Team- specifically Sohum, Mary, Mark, Wes, Katie

What I did:

- Test Drive
- Break things
- Fix said broken things
- Help put the pedal arm back on '17
- Make fenders

What I learned:

Today we got to test drive the rover. It was so exciting. The mysterious noise got worse and we figured out that it was the chain popping off the sprocket then fixing itself. The back axle also shifted over making the shaft collar move and a nut from the disk brake scratch the frame. We decided that going back to the den was a good plan. Class was also over even though we did have after school. The sprocket that was attached to Wes's axle had become unwelded, and then the chain popped off, so I got to drive down the hall by myself until my chain had popped off as well. I actually was expecting that because it was super loose, and had pointed it out. Then Wes and I stayed on the rover while being pushed down the great hall and watching people's faces when they realized we weren't actually pedalling was



so funny. Once we got back to the den, we started fixing all the issues. Katie took the seats and started cutting out the bits that were tearing up the wheels because of the turn radius. I helped Ms. Makins reattached the pedal arm and internal hub to '17 because someone had taken it off who shouldn't have even been touching it. That took a while because Jake had built it so it only worked if the internal hub had been placed one way. Mary and I also made the fenders. We cut all the material then she sanded and I laid down the stickers after she finished. Then I glued together a whole wheel and helped Mary a little bit with the rest of the gaffers tape. Then Mary and I cleaned out the glue and left.

DATE: 2/22- Saturday Work Time

Team/Group members involved:

Full Team- specifically Mary, Wes, Mark, Ryan, Micah

What I did:

- Glue wheels
- Cleaned out saw dust bag from CNC
- Jigsaw wheel
- Learn about tasks
 - Make a sample retrieval thing
 - Ran out of screws

What I learned:

Today, Mary and I came at 11 and glued some wheels together. We thought we should be useful while they were drying, so Grace, Mary, and I changed the sawdust bag for the CNC. Please do not ask me to do this again. It was horrible. I was covered in so much sawdust and it took forever. Next time, clean it out before it gets that full and please pick someone else to do it. I am still finding sawdust in my clothes. It was good though because it was very much needed, so we could keep making more plywood parts of wheels. Afterwards, Mary and I started working with the tasks. We figured out which side they would most likely be on and whether or not we would have to get off. Then we started making a box mirrored after the one from the actual competition to practice with. Before Mary left, we built the exterior frame. Wes saw me seeing how the length of wood compared and thought that I



was making the arm for the scoop and was very confused, but we weren't so all good. Then Mary left and I made two mini boxes by myself. Kavita, Ryan, and Grace all helped me hold wood. Also, I just couldn't get a screw in and Grace got it, so I am very grateful. Between making the two mini boxes, I helped Micah by showing him where I wanted my handle to be on the frame. Before they left Mark and Wes told Micah to do what I said, and I smiled at him and the fear on his face was very amusing. After I finished the two boxes, I asked Ryan what the wheel team needed help with, so I glued another wheel and jigsawed out the last one we had. I cleaned up all the jigsaw mess since no one had all day, and it was after 3 to make it easier for them at the end. Then I left.