

Engineering design reflective report

As an overall result of this group project I personally think myself and my group came out very successful. On our first meeting we decided to designate Gwydion as our group leader so once we all created our individual parts (theory and practical) we would then send them to Gwydion to make one large report and also create the basic structure of the launcher. I think the main reason for this is because we made sure every member in our group stuck to their designated role. As for group meetings we did find it difficult to ensure that every member of the group was in together due to commitments such as children and jobs so when every member was in we made sure to try and get as much of the theory work out of the way as possible because the others were around to help each other with things like measurements of the parts we were making. We made sure that the work was distributed evenly between the group members to ensure that no one was struggling because they were doing more than others.

Due to time management I think when it came to the theory, myself and others in the group tended to leave it quite last minute which has led to a lot of little mistakes within the report, as for the practical I personally think we were one of the first groups to assemble out launcher as it was assembled just a few days after the start date and comparing to other groups in the workshop. We made a lot of time to meet together with other members of the group even if it was just for an hour to ensure we knew exactly what we were doing for the next task and knew what parts we needed to buy.

As for communication within the group I don't think it was bad but there is definitely room for improvement. On the day the assignment was set I messaged one of the members of the group which I already had on social media to suggest we make a group chat and we did it straight away and met within the next few days. As part of people being absent we would get days where some members would come in and wait for the other members to show but were absent and didn't let the others in the chat know but overall, I think the group was good at communicating, with things such as work if someone was struggling with a specific task they would send a message to the chat and the other members would help each other.

The technical design that we created we tried to make it quite basic because if we were to make it incredibly complicated it would have made it very difficult to make on solid works and obviously some members of the group are better at using solid works than others and we didn't want to make it too difficult for each other. When creating the technical design myself and the rest of the group all come in on the same day and created all of our parts together, this was the most effective way of us doing it because we made sure that every member's parts were the right size to try and ensure that the parts would assemble as best as possible.

With creating our prototype, we each had our individual parts to get with a budget total of £30 which was a very tight budget to stay within. We each gave our parts to Gwydion who then assembled the basic frame of the launcher at home because he had all the supplies and tools he needed to do so. When creating the launcher there were some of the members that were a lot more hands on than others so when they were doing their part we made

sure that we'd do the other things that would need to go on the launcher closer to the due date, the reasoning for this was because when the launcher was assembled realistically only one person could work on it at a time so when the parts were being added the others were trying to think of little bits to add to the launcher to improve it, for example we added to more springs to the launcher which lead to it having a lot more power when launching it.

When beginning this project, we should have made a time slot within the week where every member must attend. I think practising on solid works would have been key to make our launcher more technical which could possibly have led to a better outcome. To make sure most of the budget goes on the spring and launching mechanism because the other parts could be even cheaper than what we had them for.