

Criterion E: evaluate

steady hand game Evaluation

The evaluation process:

Here we have reached the last step of the design cycle, we have investigated, designed planned, created, and now evaluating our steady hand game. Each of the grade 9 students was able to come up with a steady hand game, that gives off light when the handle touches the wire shape. But, let us ask ourselves, is this what's important?, did we go through all that creation just to come up with a game? Well, I don't think so. Our evaluation is the most important process in creating this steady hand game, because by evaluating our game, we are learning how to comment on what we have done, in both positive and negative aspects, we are also learning how we could possibly improve the game, which in my opinion, is the most important thing, because if we just produce our game, without learning anything afterwards, we would not advance in any way, nevertheless, when we look at our mistakes and other possible improvements we are widening our thoughts as to become more creative, and produce more successful products further on. The evaluation process is actually one of the major MYP specifications, and this actually shows its importance, as its teaching us to look at things in another aspect, an aspect that would open us to a world full of ideas, which comes with a wide imagination. Therefore, I believe that reflecting and evaluating our work, is extremely an important step after we come up with a product, and im not only talking about school projects, however evaluation could help us in our future life, where we could reflect upon the decisions and the different actions we take, so that we are always constructive, and not destructive.

My final product; evaluation against the PDS:

Essential	Check list	Desirable	Check list
Printed circuit board	/	Sticking materials on the background eg. rocks	/
Wire shape	/	Having a decorated inner compartment, that could be seen by the base (acrylic part)	/
Compartment for circuit	/	Using recycled parts	/
Handle-wire follower	/	Combining acrylic and wood to use them in the same compartment	/
Visible output(LED)	/	Wire shape related to the theme	/
Having a theme	/	Colorful and creative	/
Done within a specific period(creation period-3weeks)	/	Shaping the base(circular or rectangular) and being creative in decorating it	/
Not too complicated	/	Parts sticking out of the background or compartment	/
Having a potential significance	/	Place to put the handle	/
Using available materials	/	Using materials from nature eg.leaves	/
Using cheap materials	/	Having a background that contains different shapes.	/
Related to the theme	/	Joining materials such as wood, acrylic and metal to produce the game	/
Having a background related to the theme	/		
Total/13	13	Total/12	12

Social significance of my steady hand game:

As mentioned in my investigation process, my target group are the mentally disabled, I have decided to have the mentally disabled as my target group, because I find it extremely hard to learn about outer space, and imagine what it looks like, therefore by having a game for the mentally disabled that reflects the theme outer space, they would continuously play with the game, trying to reach the end without touching the wire shape, which would increase their hand eye coordination and their focus, they would also have an image of what outer space looks like, so by playing the game, they are actually learning. I decided upon this idea, since I noticed that the mentally disabled do not respond to board pictures as they are easily disturbed and bored, so this game would actually keep them entertained, and teach them at the same time. I believe that I was successful in conveying my theme to those who play the game, as the planets sticking out of the background, along with my background and top base, give an idea of what outer space is like, and how the planets are actually like, in a rather simple way. Therefore im serving our community, by helping the mentally disabled in many different aspects, this would make them more aware of the world, and decrease the rate of their mental retardation, in addition I changed my wire shape to a rocket as to clarify how we get to outer space, for the mentally disabled to have a clearer image, I also took in notice, not having the wire shape too complicated so that they could play the game without feeling challenged or under stress. My game could also help children understand what outer space is like, and by playing the game, they would also develop their hand eye coordination and focus, however the aim of my game, was to give the mentally disabled an idea of what outer space looks like, in addition to developing their abilities in many different angles.

Evaluation of the process:

Evaluating my investigation:

In my opinion, my investigation was the best part I did of the design cycle, I was able to criticize and question the information I gathered in a very professional way, where I used paper tags on each paper and commented on what I thought was relevant from the text I read. I was able to research the history of electronics where I combined history and DT, which is actually the purpose of the MYP program, I was also able to research different electric games and machines, as to get an idea on how they are made, and what different materials were used to make them. I also looked at the different materials used in the steady hand game, and researched the use of each of those materials, as to be fully aware of their advantages and disadvantages, which would help me in the creation process, I was also able to conclude the relevant information from the text I read, and re write it in my own words, as to have a backup, and guide while working. I looked at different steady hand games, and criticized their strengths and weaknesses, which helped me get an idea of what I wanted to do, and made me ready to start with my planning process. I used more than one resource, as I interviewed MR. [REDACTED], on different materials and their uses, this helped me a lot, when I came up with my finals sketch where I took into consideration what he said. Throughout my investigation, I was able to come up with my theme which is outer space, and my target group which are the mentally disabled by using my different scatter charts, which helped me classify my thoughts, and opinions. However a weakness I found in my investigation was the potential significance of my theme, as I only found 4 relevant points, which I thought were not enough, I was also not able to criticize different materials used in the steady hand game very accurately, as I did not have an idea about their uses in actual life, so I highly depended on the sources I had. Nevertheless, I was able to finish my investigation before the given deadline, so this was a plus, in which I was proud of. All in all I was impressed with my work in the investigation, as I followed our design cycle checklist, and criticized all the information I found.

Evaluating my planning:

I actually had a lot of fun while planning my steady hand game, as I enjoy sketching, and evaluating the sketches I have. However I found some weak and strong points in my planning;

Strong points:

- ☒ My time plan was organized and realistic, as I was able to divide the time I had according to the specifications of each section of the design

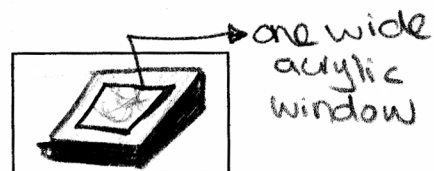
The student evaluated her own performance against each stage of the design cycle and also suggested ways in which her performance could be improved. Only the evaluation for the investigate and planning stages is shown here.

Possible improvements:

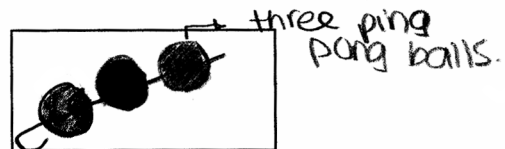
- ☒ Having a wider range of sketches as to scan more ideas and get a better final sketch
- ☒ Adding more steps to my production plan, since it lacked many steps that I found necessary in my creation process
- ☒ Reading more about the different techniques and tools in a workshop, as to become more self dependent, and have the ability to make the game on my own
- ☒ Making sure that all the different parts I have drawn are needed, before cutting them and working on them, by referring to my parts list, as not to waste pieces
- ☒ Having my windows cut more accurately by using the jigsaw in a more accurate way, and changing its nail to a thinner one

Possible improvement of the product:

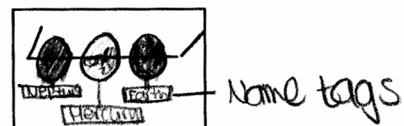
- ☒ Having a wider windows on my top base instead of four small ones, this would have made the inner base show better, and at the same time the top base would have looked much better.



- ☒ Having my handle made as a wire with 3 colored ping pong balls on it, with distances between them, those balls would show what I meant by my handle more clearly, as the piece of wood I had with the three balls, did not give a clear message that I meant to have them as planets, in addition the balls were not very accurate, as I used the lathe, and could not get them as accurately as I wanted, since it was my first time to deal with this machine.



- ☒ Having name tags coming down from my planets, as to give an idea of what each clay ball represents, as not all the people have the ability to recognize and differentiate between the different planets.



Peer evaluation:

For my peer evaluation, I set up a questionnaire, and asked different people about my final product, I got different answers from people where each of them reacted differently to my final product, I asked them to be as honest as possible, however they all liked my final product, and most of them advised me to have a couple of words on my base, showing what the product is about. Here is the questionnaire, along with my results in numbers.

<u>Question</u>	<u>Yes</u>	<u>No</u>
Does my steady hand game show the theme "outer space" clearly?	15	5
Do you think that my wire shape is related to my theme?	15	5
Do you think that my wire shape is easy to have the wire go through, so that a child could play the game?	17	3

Product testing:

for my product testing, I was 100% sure, that my product works well as when the people I questioned played the game, they all had the LED light when the wire handle touched the wire shape, this indicates that my inner circuit is working well, and all the inner parts are in the right places, I also made them make sure that the LED turns off when the wire handle touches the French clip, therefore I have been successful in soldering those two parts to the inner circuit. I also tried to play the game myself, and I got the same result as the people I asked, as the LED lit when the wire handle touched the wire shape, and turned off when the wire handle touched the French clip, I also tested the product safety wise, as I made sure that there were no metal parts sticking out, and that my metal parts at the back of the background were twisted inwards. Therefore I made sure that my product works, as well as its safe to play with, where children, and the mentally disabled could easily, and without worry play this game.

Self assessment:

Throughout the four design cycle stages, I was working positively without complain, what made me go on, is that I was really anxious to get to the end of the project and have my product ready, as it was a challenge to have the actually product resemble the sketch we were imitating. For the investigation, I was really excited to start it, as it was the first step to starting our project, therefore I used different re search methods, such as the internet, books, magazines, questionnaires, and even interviews, I went through all the steps mentioned in the design cycle check list, and fulfilled all its requirements, I also criticized all the information I had, which was actually very interesting, where I got to compare different sources I had, and how they are different, I also questioned why they were different, so I actually worked positively throughout my investigation, and finished it within the time given.

As for my planning, is was actually not that hard, as I really like to sketch, therefore my sketches were very detailed, and at the same time I enjoyed doing them, what was also interesting, was evaluating our sketches against the PDS, this made us understand and notice, how we could look at different things, in various ways, in addition the PDS made us notice what weaknesses and strengths each of our sketches had, which helped us in the end come up with our final sketch, which was actually a combination of all the different sketches we had. Our production plan, and our parts list were extremely

useful, as they gave us an idea of how the product is to be done, and what the pieces would look like, along with their sizes, I actually enjoyed doing my production plan, as it was interesting, and I also enjoyed sketching my different steps. However for my drawing in 2D and 3D I was not very positive in doing them, however I was very pessimistic, as I got bored of redrawing and re coloring my sketch 4 times, so I found it somehow boring, however I forced my self to do them all with the same standard of work.

As for the creation process, I was actually very excited to start with it, since all the sketches I had made motivated to see the final product, at the beginning I depended on the technician to cut my pieces, as it was dangerous for us to use the electric saw, however the other steps including cutting the windows, attaching the base, and decorating the final product, were done independently, with no help at all. At the start of our creation process, I was really fed up with the whole project since I was not doing anything, as the wood workshop became too overcrowded and we had to wait in long lines to reach our turns in cutting, however after this step, I developed a positive attitude and worked hard, as I finished the project before the dead line as we were given a lot of time.

In evaluating my process and my product, I worked independently, I also asked my friends about their opinions in my project and took in view what they said, which in my opinion was highly useful. I found the evaluation process one of the important steps in the design cycle, as it helps us look into our product in various views.

Conclusion

I really enjoyed the 4 different steps of my design cycle, and learned a lot from each, the best process was the creation, as it was fun, and at the same time we got to imply what we were studying in real life, which is the way I like to study things. This project taught us a lot about manufacturing techniques along with the different tools used, we also got to learn about electricity, and at the same time, imply what we learned to make our own circuit on the PCB. I just want to thank whoever bought up the idea of this project as we learned a lot by only manufacturing one piece of work, which did not take a very long time.