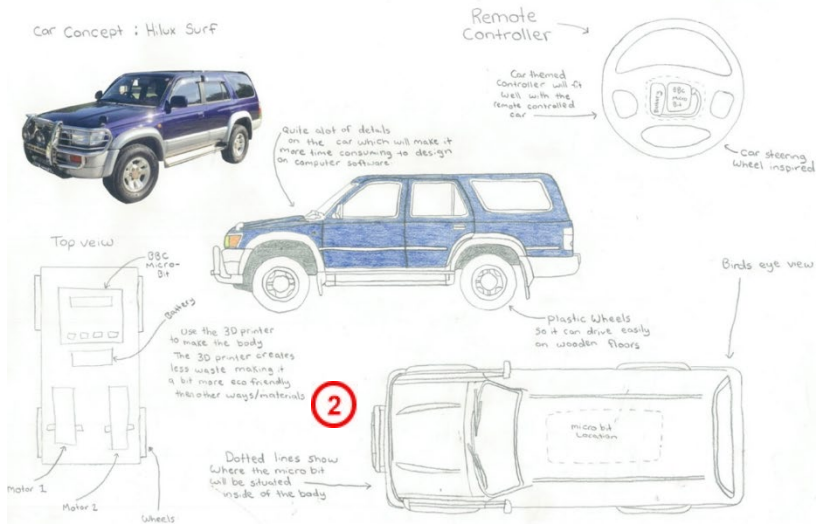
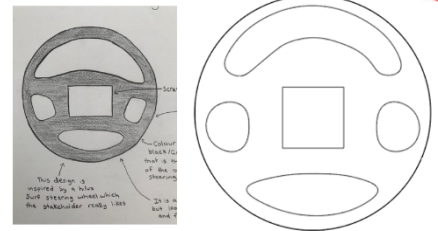


Student 6: High Not Achieved
Intended for teacher use only

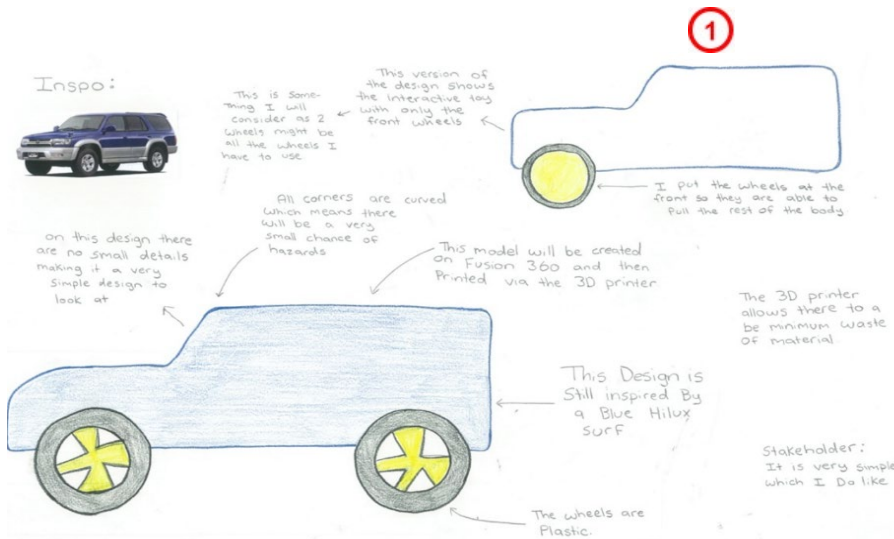


Development - Remote ①



I used inspiration from the drawing I sketched to produce the design.

I have created a remote-controlled via using illustrator. Originally, I was going to make the controller through Fusion 360, but I think laser cutting it will work better with how much time I have.



Specifications Points	Hilux Car Design	rate
Aesthetics -	This design is navy blue which fits in with specifications of the neutral colours.	5/5
Customers -	This design is suitable for all ages	4/5
Environment -	The wheels on this design are a good fit for the wooden floors in the stakeholder's home.	5/5
Safety -	This design has all rounded corners.	5/5
Durability	The way this product is constructed should be durable enough to not break after being driven a little crazy.	5/5
Size	This design would be around 20 x 13 cm	

Existing product analysis 1 (secondary research)

Client
- The recommend age for the Hell Rider is 6 years or over. Therefore this product can easily be used for my client but the design of it is specifically made for a younger market.



③

Size
- 40 cm long monster truck
- 40cm long is quite long. Having a toy this size for my stakeholder may be a bit large and possibly suited for younger ages

- This remote controlled monster truck has racing body that is light, flexible and stable with full suspension. The Hell Rider goes up to approx. 9 km/h and able to be thrown around a bit when using.

Aesthetics—A dark get and black creating a sense on evilness. The whole truck gives you a sense it wants to crush you.

Cost
- \$72

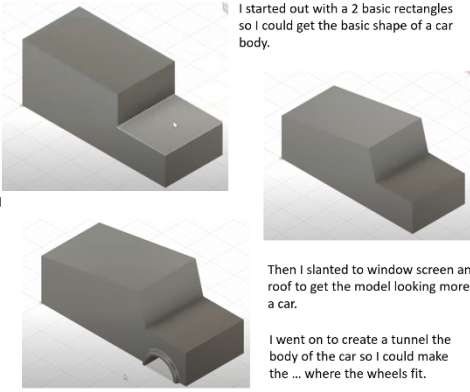
Environment
- This remote controlled monster truck uses 6 x AA batteries which is quite a lot of batteries which may not be great for the environment. The rest of the product is made from

Conclusion
- Overall this product has helped me to gather information about an existing product on the market that I can learn from through my analysis.

Concept 1

1

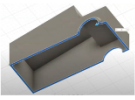
This process was all done on Fusion 360. I firstly design the shell of a car.



I started out with a 2 basic rectangles so I could get the basic shape of a car body.

Then I slanted to window screen and roof to get the model looking more like a car.

I went on to create a tunnel the body of the car so I could make the ... where the wheels fit.

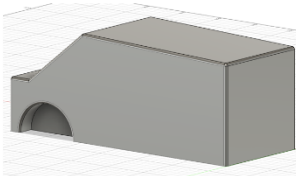


So that I can fit all the inside parts into the body I had to make the inside hollow.

This car design is very simple but was a good place to start. I can now add to it to make it the design that best fits all specifications and what the stakeholder wants.

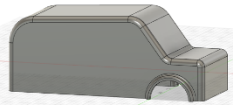
Concept 2

1

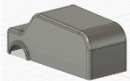


For this development, I started to curve the corners to see if I could get the shape that is inspired by a Toyota Hilux Surf.

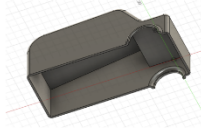
The picture up above is where I had only curved the corners a bit and the model looked a bit strange so need to develop that error.



This was after I curved the edges more. These curves create a much better shape for the design I'm going for.

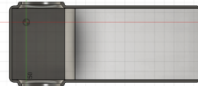


This design will only have two wheels, so I did not add holes for wheels at the back like the ones at the front.



This is a snapshot of the bottom view. It has been hollowed out to allow the technology parts in.

The length and width of this model is 195mm x 78 mm



Development

4

I designed this development so that the wheels are inside the the body of the interactive toy. I did this because I thought the it would add more support, but it didn't really provide that.

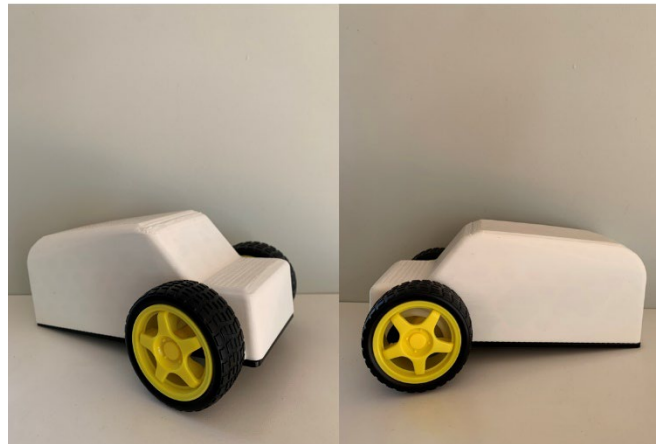
I started this development by measuring the size of the wheels and then marking that up on a piece of foam board. I then cut out where the marking said. I had to ensure that there was still room for the wheels to be able to spin without getting caught on the sides.

This design would mean that I would have to make the scale of the interactive toy body big which would not meet the specifications of the wanted size.



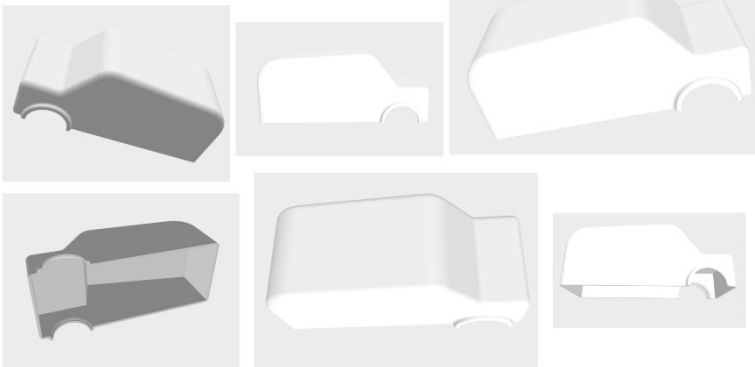
5

Interactive Toy Mock up



Final Fusion model

4



Evaluation against the specifications

Specification points	Specific criteria	YES/NO	Justification
Aesthetics 6	A neutral colour palette so the product doesn't look stressful. Stakeholder requested either blue or grey.	Sort of	The end model was white which in a neutral colour pallet and isa few shades lighter then grey which in one of the colour the stakeholder requested.
Cost	The product would probably range at about \$115 due to the cost of all the resources and if I wanted to be ethical during the potential of manufacturing, I would want to pay the employees the correct amount and not underpay.	Durability	The materials chosen have a good amount of strength so the durability of the toy should be great.
Customers	The interactive toy is designed to appeal to the eyes of 40-50-year-olds but people 11 years and above would still enjoy using it making it suitable for those ages as well.	Material	The car will be made from 3D printer plastic and acrylic to hold the micro-bit in. the remote is made from acrylic.
Environment	The wheels on this are perfect for wooden floors inside a house.	Function	Design is super easy and fun interactive toy that can keep the user entertain during free time.
Safety	Yes, all the corners on the final design have been rounded and there are no small details giving it a 5-star safety rating.	Size	The car is 83 x 19cm and the controller is 15 x 15 which meet the size specifications.