

Design & Communication Graphics



Exam Number: 152161

Solidworks Version: 2016



1



A **travel mug** is a container which stores liquids at a consistent temperature. Travel mugs are designed for use when driving, as they can fit into built-in **cup holders** notched into the dashboard or centre console of many vehicles.

TIMELINE

► 10,000B.C

The earliest mugs date back to the Neolithic Stone Age period and were made from bone.

► 1892

A British chemist, Sir James Dewar invented the vacuum flask. With this creation, he was able to keep chemicals at the correct temperature. It was then discovered that vacuum insulation technology could be used commercially to keep drinks hot or cold.

► 1980s

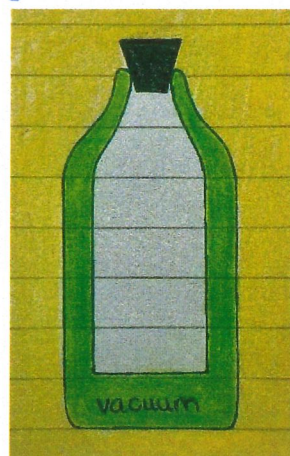
Travel mugs were invented in the 1980s in America, when convenience stores and fast-food restaurants offered discounts to customers on coffee refills when they bought a mug. The invention of the minivan in 1983 introduced the use of built-in cup holders in vehicles. Before this, motorists had few choices for keeping a beverage upright while driving.

► 2022

Nowadays, travel mugs are a necessity for the daily commuter.

Innovations in technology have introduced 'smart' travel mugs with multiple capabilities.

A **cup holder** is a device for holding drinking containers.

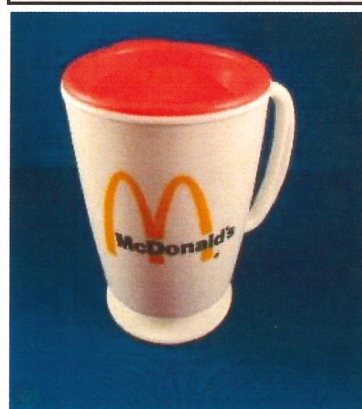


A **vacuum flask** is a container that keeps a substance hot or cold by means of a double wall enclosing a vacuum.

Material is the matter from which a thing is made. Generally, travel mugs are made from **aluminium**, **stainless steel**, or **plastic**. Metal is the best insulator, meaning it will keep temperature for both cold and hot drinks.

Reusable **travel mugs** are designed to keep liquids at a preferred temperature for a prolonged period. Their ergonomic design has resulted in a range of sleek, lightweight and customisable products which are insulated, leak proof and compatible with standard cup holders in many vehicles. Some '**smart**' products can heat or cool liquids to a required temperature and can track daily consumption with the use of **apps**.

(A) Carry out a design investigation of existing reusable travel mugs in graphic format. Your investigation should include an analysis of **physical forms and shapes**, **ergonomics**, **materials**, **connectivity**, etc.



6. Travel mugs were originally made from plastic and often showed off a company logo imprint.
Image of a vintage 'Trip Sip' McDonald's coffee mug from the 1980s I found online



Some smart travel mugs are heated by battery which is charged by placing the mug on a **charging coaster**. Others are connected to a power source via **power port**.

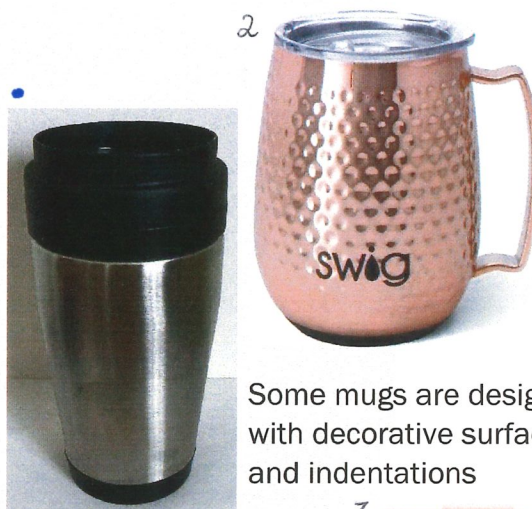


Connectivity is the state of being connected. Some travel mugs have a **Bluetooth** and **Internet connection**.



An **app** is a type of software that can be installed on a computer, tablet, smartphone, or other electronic devices that has a specific function. Some smart travel mugs are linked to apps that can allow you to set the precise drinking temperature for beverages and track caffeine consumption, e.g., the **EMBER app**

Physical forms and shapes refer to the overall appearance, layout, and shape of an object. Most travel mugs have a cylindrical or curved body. They can come in a range of colours and materials



Some mugs are designed with decorative surfaces and indentations



Many travel mugs have a **sliding cap** or a **snap cap** that locks into place. This allows users to easily access their beverage. Others don't have a drinking spout and the lid must be removed fully to access the drink.



Some mugs come with a **digital display** which allows users to select a drinking temperature

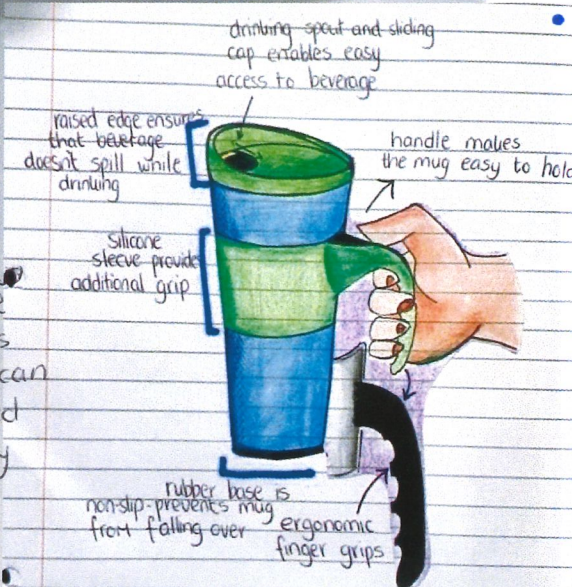


Most travel mug lids are surrounded by a **rubber sealing ring** which prevents spillage



Travel mug lids come in a variety of types. **Screw lids** are sealed by moving them in a twisting motion. Other lids are closed by simply pushing downward

Here is a sketch I drew explaining the different ways travel mugs can be designed ergonomically

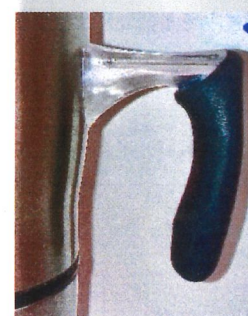
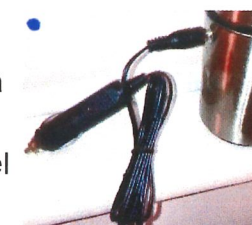


Ergonomics is the process of designing workplaces, products, and systems so that they fit the people who use them.

Many mugs come with a **silicone band/sleeve** which means its non-slip and comfortable to hold



Some mugs have **handles** while others don't. Many mug handles come with a grip for extra support



After completing this page and gaining all the necessary information on travel mugs, I felt confident in moving onto the next phase of the project

DESIGN RESEARCH OUTPUT 1

PRODUCT OVERVIEW

BRAND:

Ingenious

MATERIALS:

Main body/Power port:
Stainless steel

Digital display/Lid/Handle:
Plastic

Handle grip/Non-slip base:
Rubber

COLOUR:

Silver/black

TARGET MARKET:

With its relatively basic design, this travel mug is intended to appeal to all demographics. Someone who values function over appearance may buy this product as it has a digital heating display and car charger.

COMPONENTS:

1. Main Body
2. Digital Display
3. Handle
4. Handle Grip
5. Charging Port
6. Band around Body
7. Ridge around Digital Display
8. Lid
9. Band around Lid
10. Cap on Lid

DIMENSIONS:

Height- 204mm
Width- 82mm
Depth- 75mm²

CAPACITY:

300ml

COST:

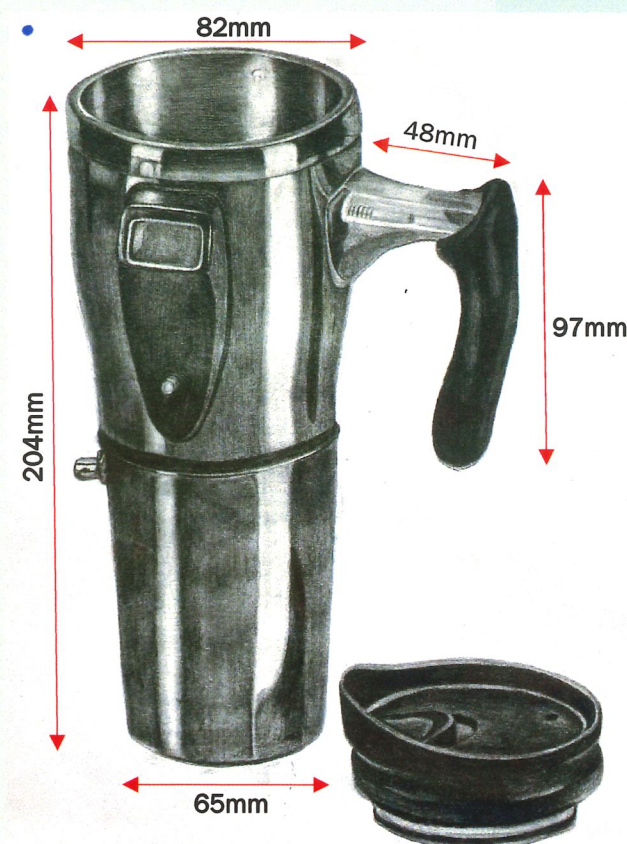
£18-23

ERGONOMICS:

- Build-in heat element that lets you keep beverage at preferred temperature (4 heat settings)
- Rubber handle strengthens grip
- Non-slip base prevents mug from falling over
- Car charger and power port mean that mug can be charged while travelling

COMPARE & CONTRAST

Heated Travel Mug



Pink Floral Hot Stuff Insulated Thermal Mug



PRODUCT OVERVIEW

BRAND:

Ban.do

MATERIALS:

Main body – acrylic plastic
Lid – PVC plastic

COLOUR:

Pink with floral design

TARGET MARKET:

The mug's floral surface design would suggest its target market is the female population.

COMPONENTS:

1. Main body
2. Spill proof lid
3. Snap cap

DIMENSIONS:

Height- 203.2mm
Width- 76.2mm
Depth- 76.2mm²

CAPACITY:

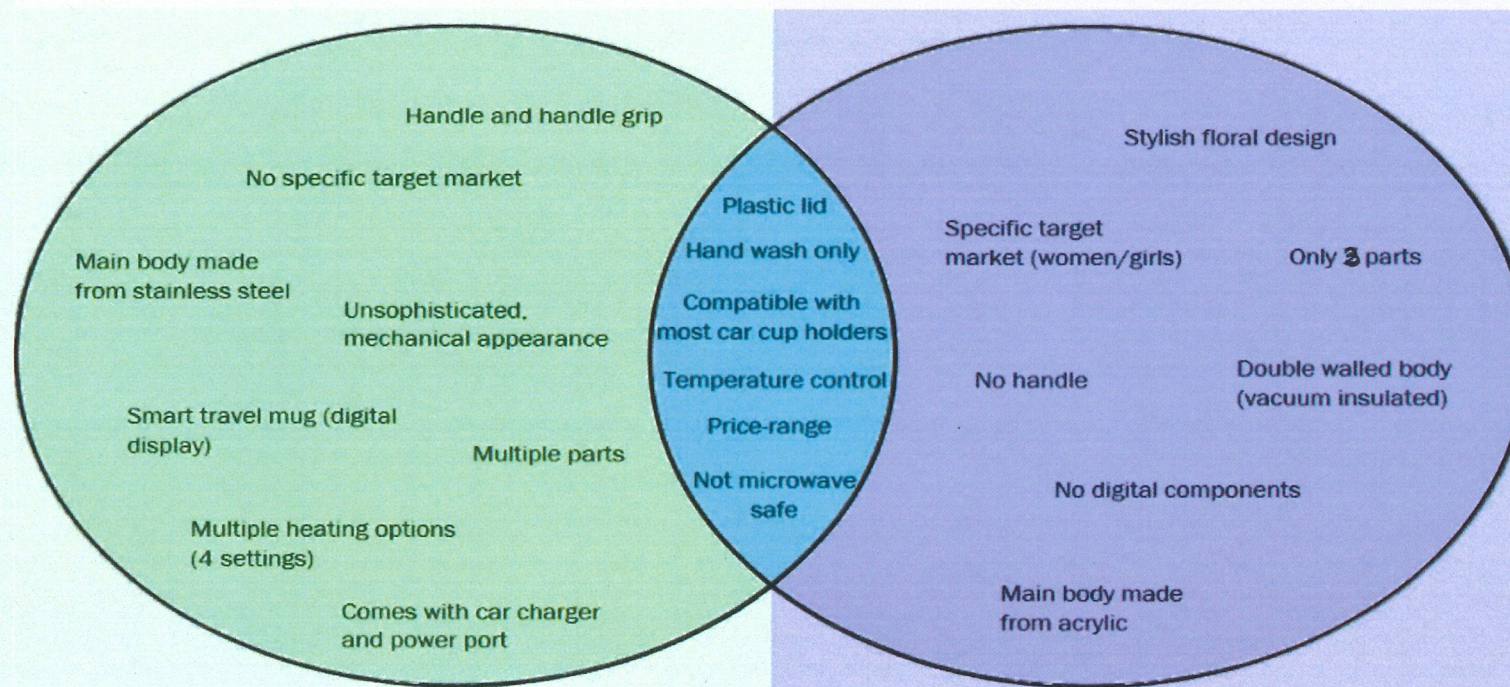
453ml

COST:

£22

ERGONOMICS:

- Double-walled body (vacuum insulated) keeps beverage hot or cold and prevents condensation
- Spill proof plastic lid prevents spillages



DESIGN FEATURE COMPARISON OUTPUT 1

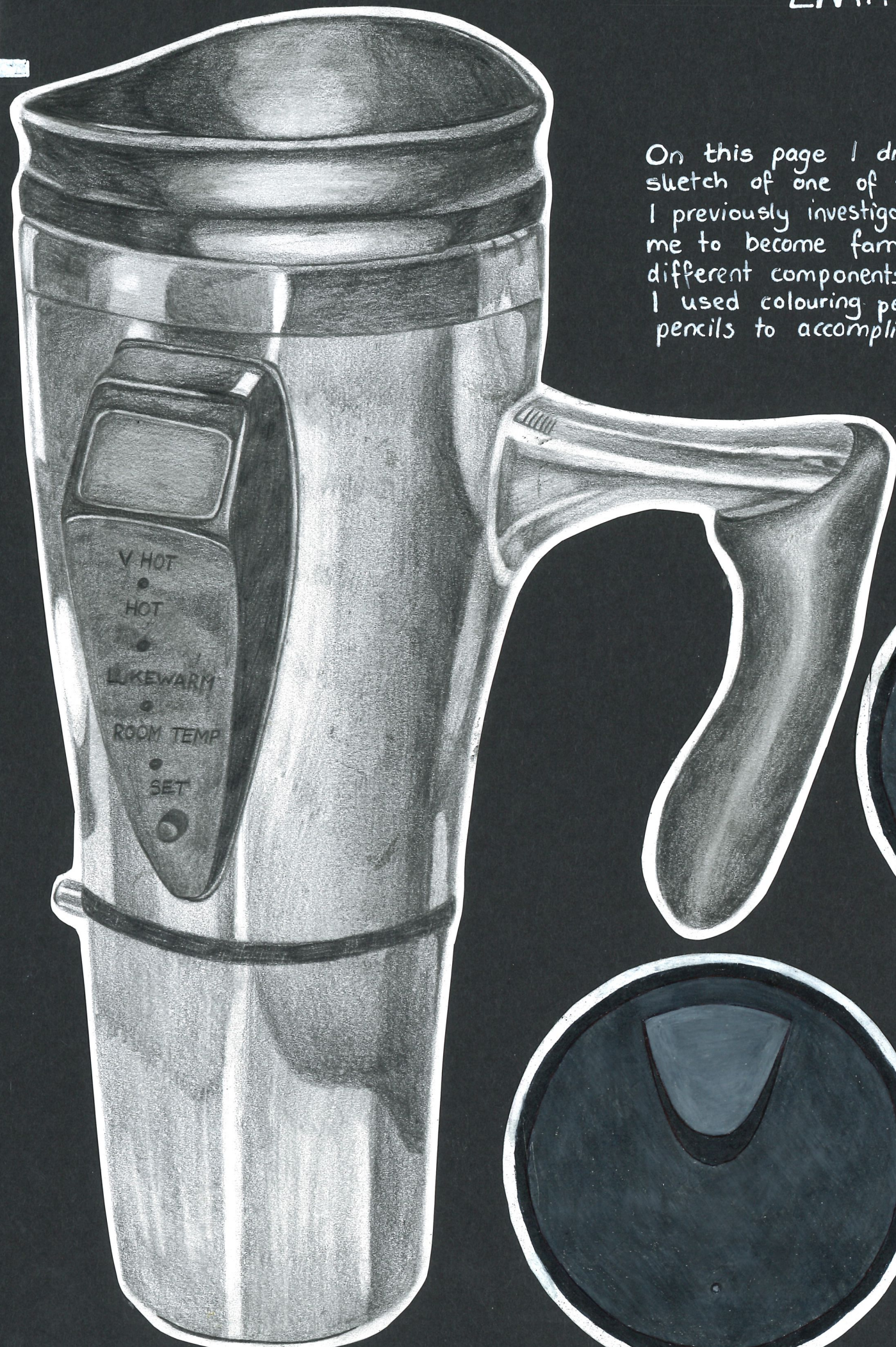
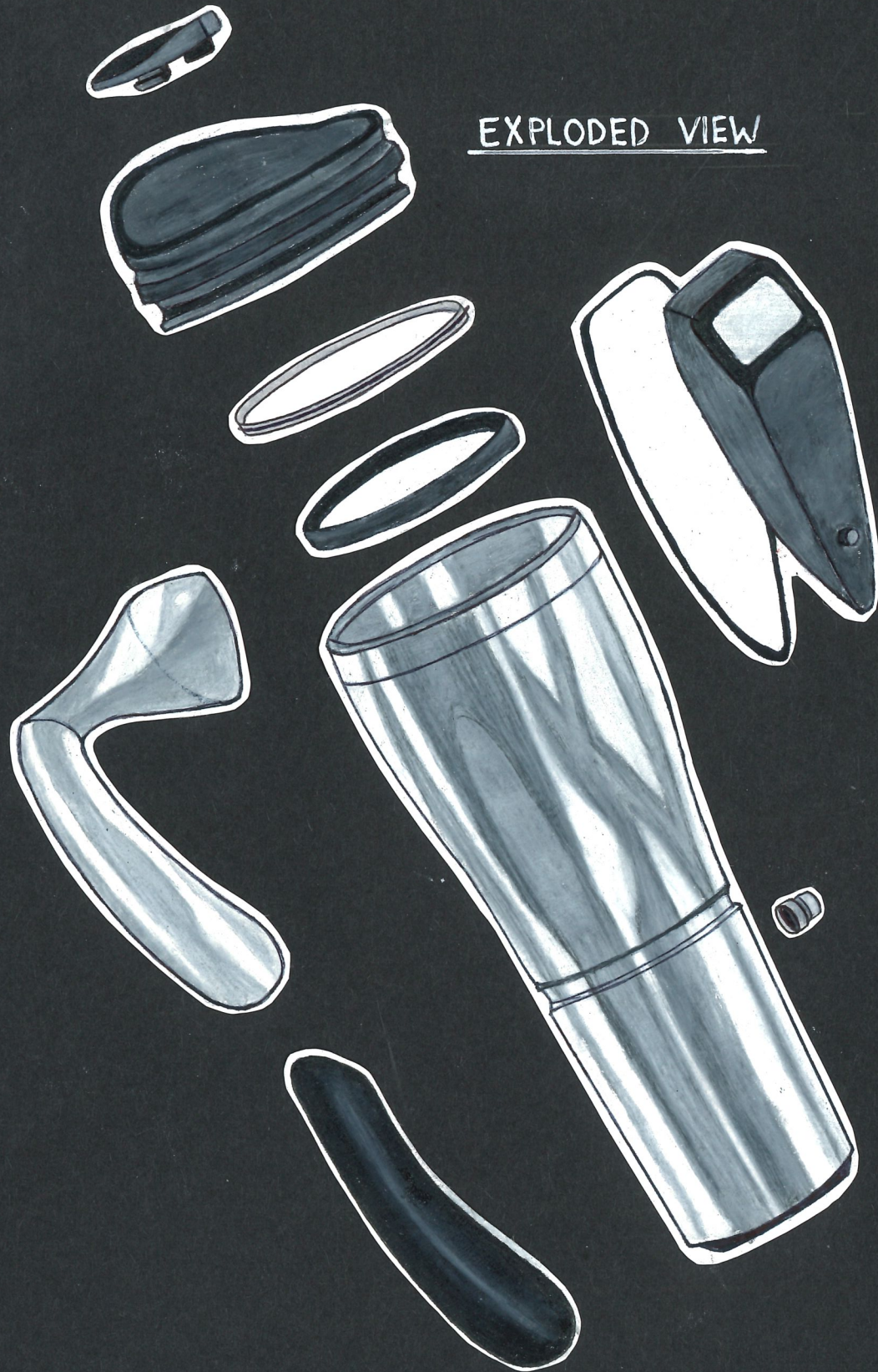
The process of identifying the similarities and differences between these two travel mugs showed me that while there are multiple ways of designing a travel mug, some components like a curved body or drinking spout are essential to all. This process also helped me to decide which travel mug I wanted to model on Solidworks.

FREEHAND GRAPHICAL REPRESENTATION

EXAM NUMBER: 152161

On this page I drew a freehand sketch of one of the travel mugs I previously investigated. This enabled me to become familiar with the different components of the mug. I used colouring pencils and graphite pencils to accomplish this drawing.

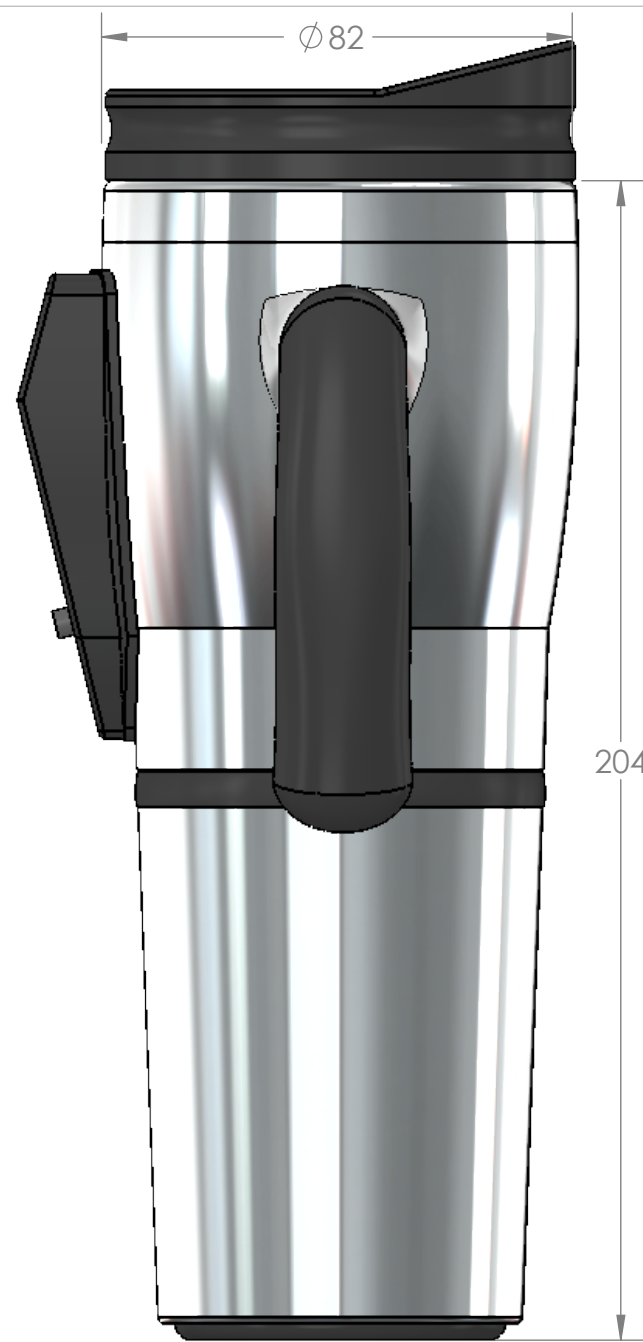
EXPLODED VIEW



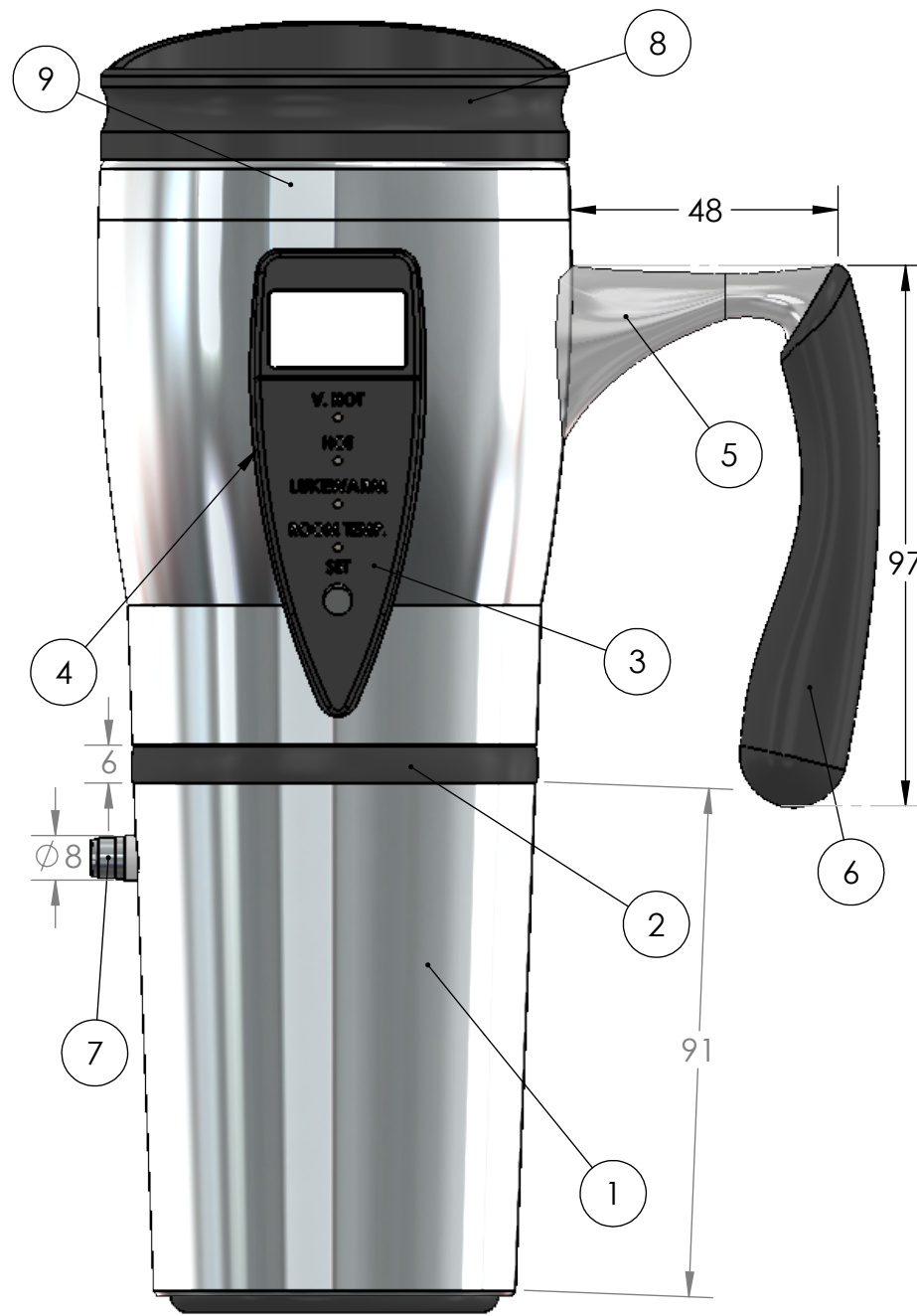
PICTORIAL VIEW

PLAN

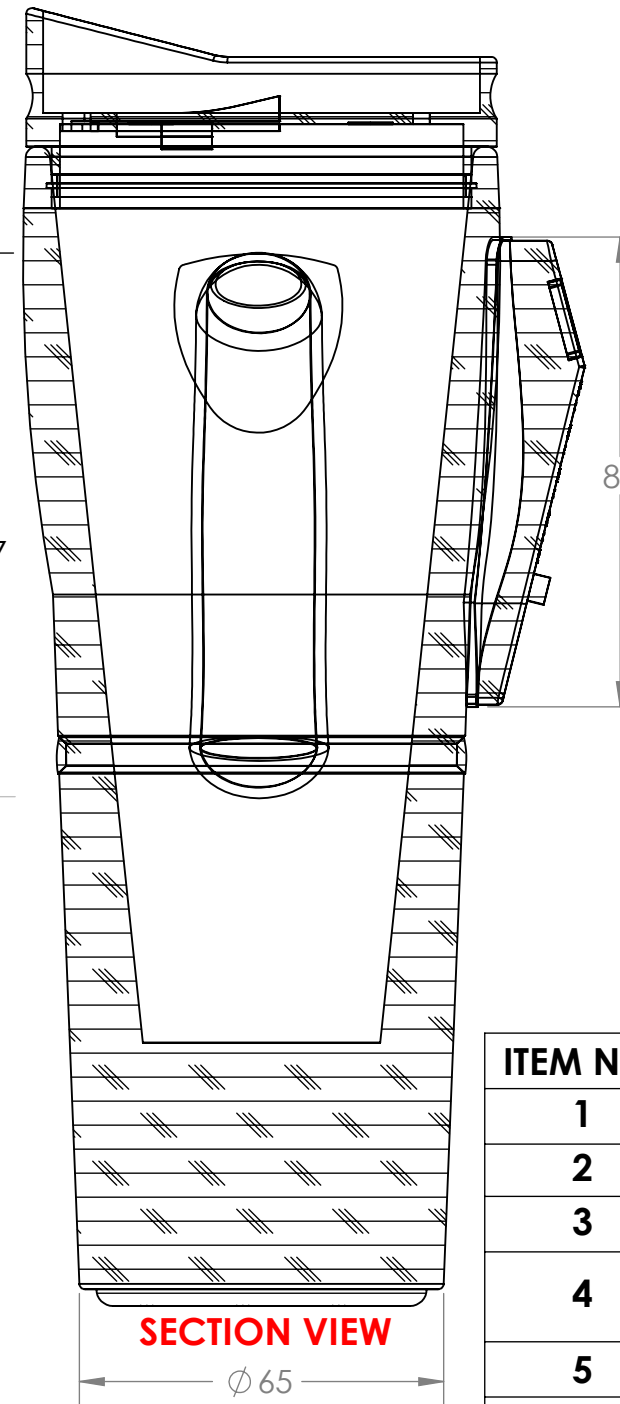
The cap on the lid slides to open and close.



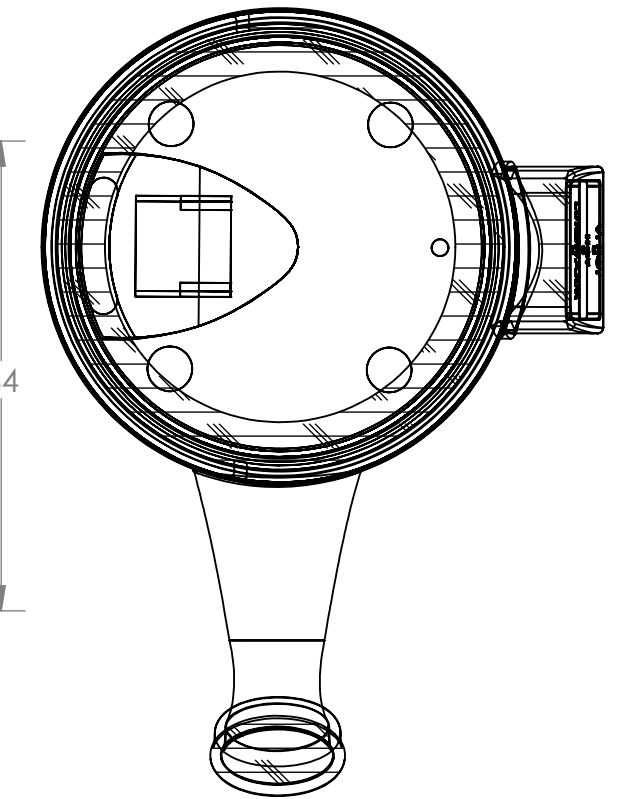
END VIEW



ELEVATION

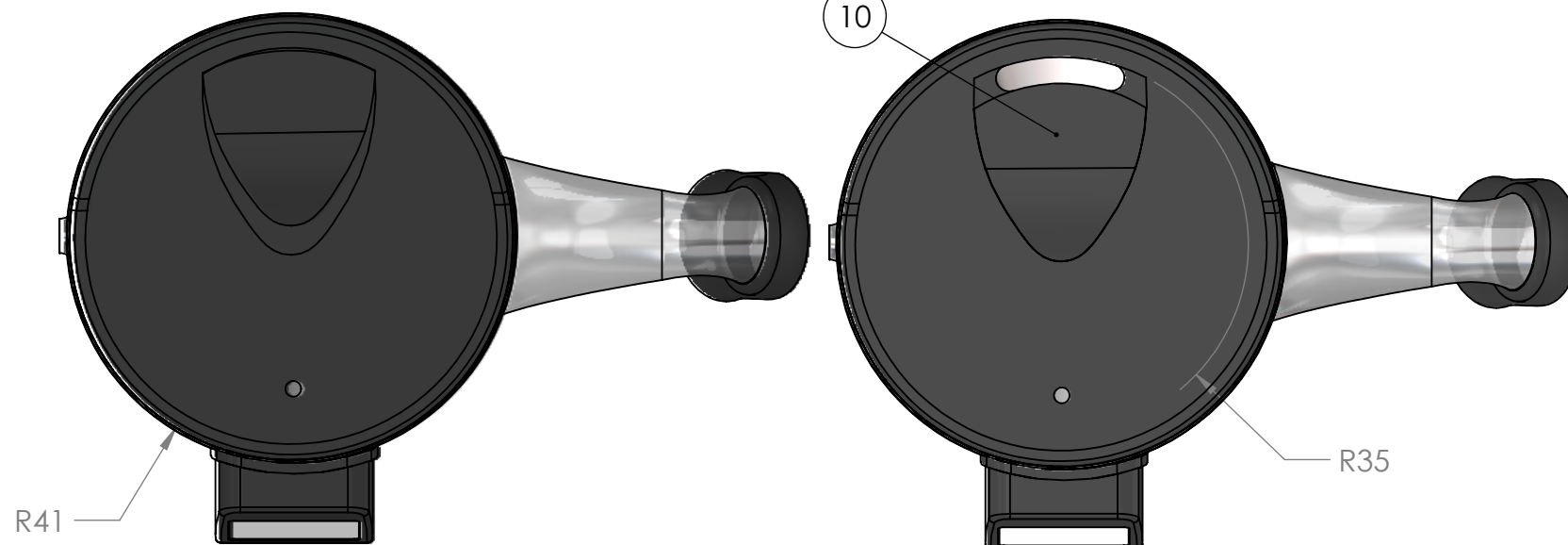


SECTION VIEW



SECTION VIEW

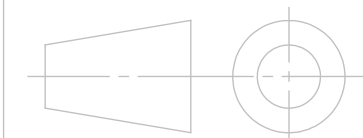
ITEM NO.	PART NUMBER	QTY.
1	Main Body	1
2	Band around Body	1
3	Digital Display	1
4	Ridge around Digital Display	1
5	Handle	1
6	Handle Grip	1
7	Charging Port	1
8	Lid	1
9	Band around Lid	1
10	Cap on Lid	1



LID CLOSED

PLAN

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DESIGN & COMMUNICATION GRAPHICS

TITLE:

DRAWN BY:

SCALE: 2:3

DATE:

SIZE
A3

UNLESS OTHERWISE SPECIFIED ALL
DIMENSIONS ARE IN mm



CHARGING PORT
CLOSE-UP

REAR
EXPLODED
VIEW

INTERIOR OF LID

PICTORIAL VIEW

INTERIOR OF LID
CLOSE-UP

EXPLODED VIEW

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DESIGN & COMMUNICATION GRAPHICS

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SCALE: 2:3

DATE:

SIZE
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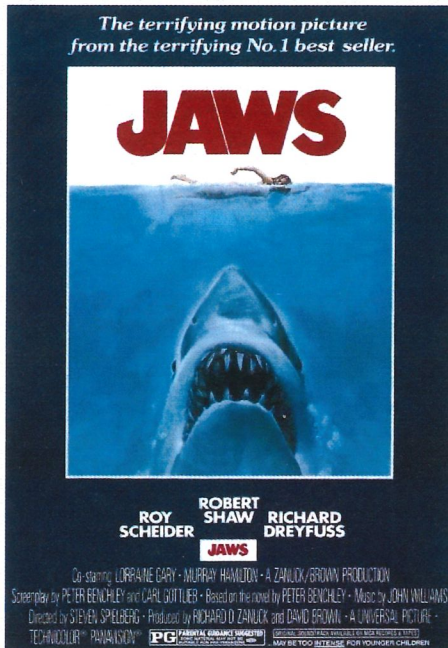
- b) Show graphically how you would physically modify a chosen reusable travel mug to improve its overall design.

or

Develop and graphically communicate a new concept design for a reusable travel mug based on a selected theme or target market.

INITIAL INSPIRATION

14.



'Jaws' is one of my favourite films. The film tells the story of three men, a policeman, a marine scientist, and a fisherman, out at sea in search of a murderous great white shark. While watching the film, I was struck by the harsh weather conditions these men had to endure. This inspired me to create a travel mug specifically for fishermen, who have to face the elements every day.



Another reason why I wanted to investigate the theme of fishing was because my dad is a keen fisherman. This was helpful to me as I was able to gain insight into a fisherman's lifestyle. My dad spoke to me about all the different aspects of fishing, and this helped to decide which direction I wanted to go with my concept design.

Here is a picture I took of my dad's boat



Output 5 – Graphical Exploration of Design Solutions

Theme

After some consideration, I decided to create a **nautical-themed travel mug**. This theme would incorporate all the aspects of fishing and the sea, giving me a broad spectrum of ideas to choose from.

Target Market

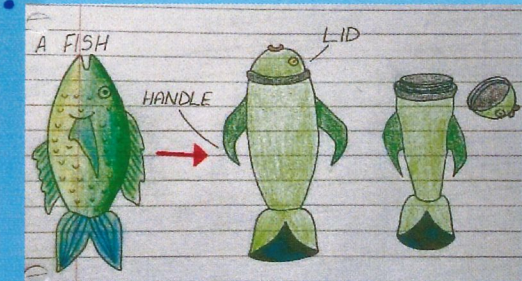
My travel mug is primarily aimed at fishermen. Other markets might include sailors, ocean enthusiasts, and people who live by the coast. I chose fishermen as my main target market as I felt they would benefit from using a travel mug more than most demographics. Having to contend with stormy weather conditions, I can imagine that a fisherman would appreciate a hot beverage. In some cases, a fisherman may not have access to electricity out at sea, which rules out the opportunity of using a kettle. A travel mug would be a convenient solution in these circumstances. I wanted my concept design for a travel mug to reflect a fisherman's fondness for the sea and the coast.

Design Ideas

Having decided on a theme and target market, I needed to decide on a specific design for my travel mug. After completing Part A of the project, I had a good understanding of the necessary components of a travel mug. This helped me to come up with a feasible concept design within my theme.

Idea 1

My initial idea was to create a travel mug in the shape of a fish. I thought this would be a quirky design concept that a fisherman would appreciate. However, I abandoned this idea as I felt that the shape of a fish would not easily translate into a travel mug. As you can see from this sketch, I had to manipulate the fish's body in order to create a suitable container shape. I also had to place the fish's tail on a flat base so it could stand upright. I felt that the finished result would look like an oversimplified version of a fish and not have the impact I was looking for.



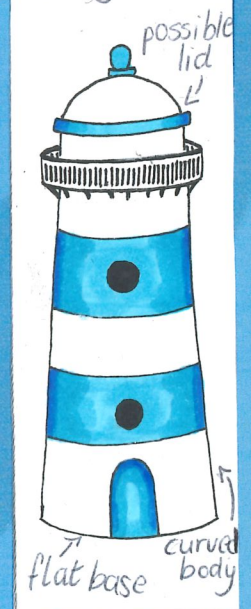
Idea 2

My second idea was to create a travel mug in the shape of a lighthouse. This struck me as a much better idea than the fish for the following reasons:

- A lighthouse has a curved, often cylindrical body
- It has a flat base, allowing it to stand upright
- A lighthouse is synonymous with the sea, and therefore fits my theme perfectly

As a result, I felt that I could develop this idea further.

Quick sketch of lighthouse



On this page, the process of brainstorming and experimenting with ideas resulted in me coming up with an idea I am proud of.

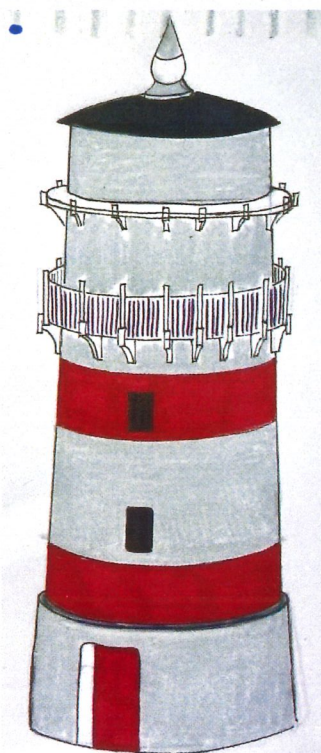
Output 5 – Graphical Exploration of Design Solutions

28



Lighthouse in Cape Palliser, New Zealand

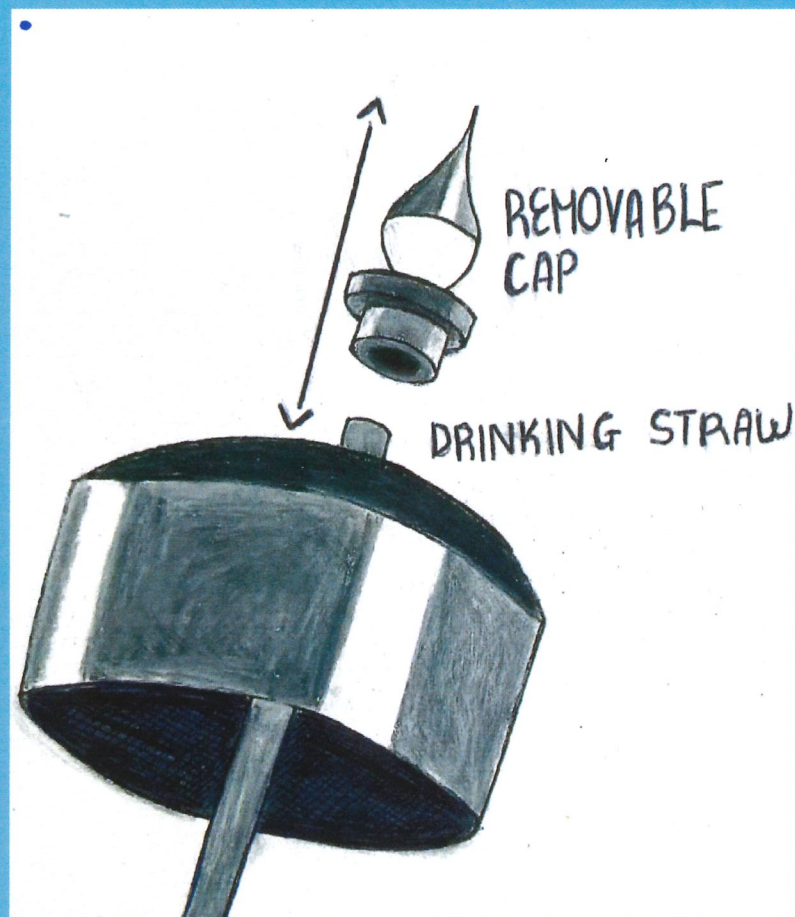
I decided to loosely base my travel mug design on the Cape Palliser Lighthouse in New Zealand. The challenge came in trying to achieve this design while also accounting for the functional requirements of a travel mug.



Here is a sketch I drew of my final concept design for a travel mug.

Development of Ideas

I learned from Part A of the project that a drinking spout is a vital component of a travel mug. It allows users to conveniently take a drink, without having to unscrew the lid. However, in developing my concept design, I found it difficult to incorporate a drinking spout, as I felt it would compromise the aesthetic appeal of the travel mug.



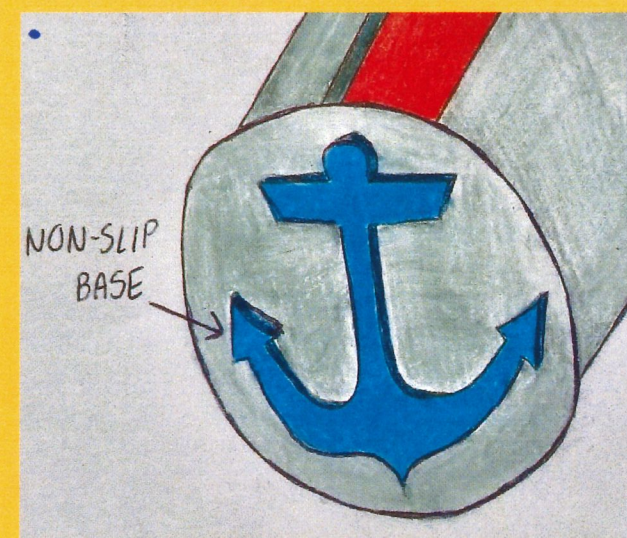
Solution

In the end, I decided to attach a drinking straw to the lid, allowing users to easily take a drink. I decided to make the beacon at the top of the lighthouse serve as a cap, which covers the drinking straw and can be removed when a user wants a drink. I thought this solution was appropriate as neither functionality nor design was compromised.

This page was helpful in bringing my lighthouse idea to life. Having considered aspects like functionality, aesthetics and environmental sustainability in great detail, I believe I have come up with a comprehensive concept design for a travel mug.

Functionality

While aesthetics is important, I made sure that my travel mug was functional and ergonomically designed. The removable cap and build-in straw allow users to easily take a drink without having to unscrew the lid. Ultimately, I decided against having a handle as I didn't think it was necessary and thought it would compromise the aesthetic appeal of the mug. I incorporated a temperature reader, allowing users to identify the exact temperature of their beverage. This was inspired by the travel mug I worked on in Part A, which had a digital display showing the temperature. I also included a non-slip rubber base which prevents the mug from falling over. This also was inspired by my Part A travel mug.



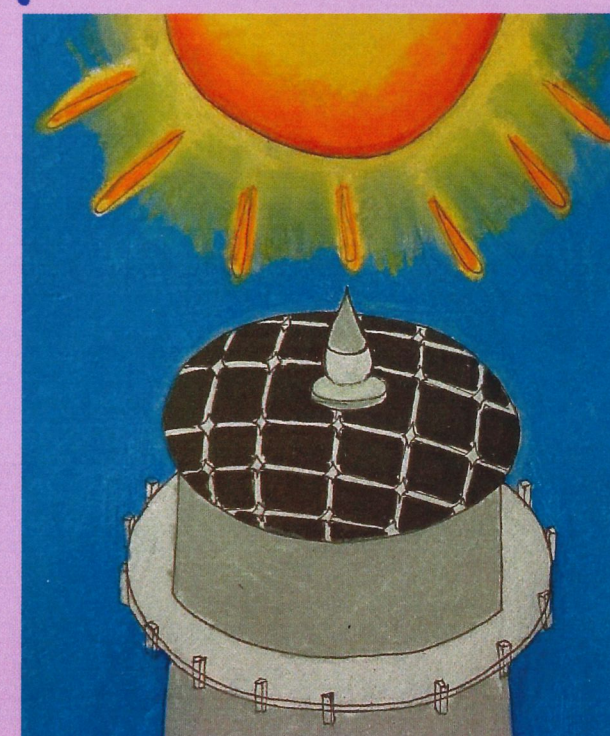
Aesthetics

My final design captures all the necessary elements of a lighthouse. These include a white and red striped body, balcony supports and railing, windows, a recessed door, and a beacon at the top. While the rubber base is functional, I decided to make it in the shape of an anchor for aesthetic reasons. The balcony supports have a very ornate design and I thought they gave the mug great character.

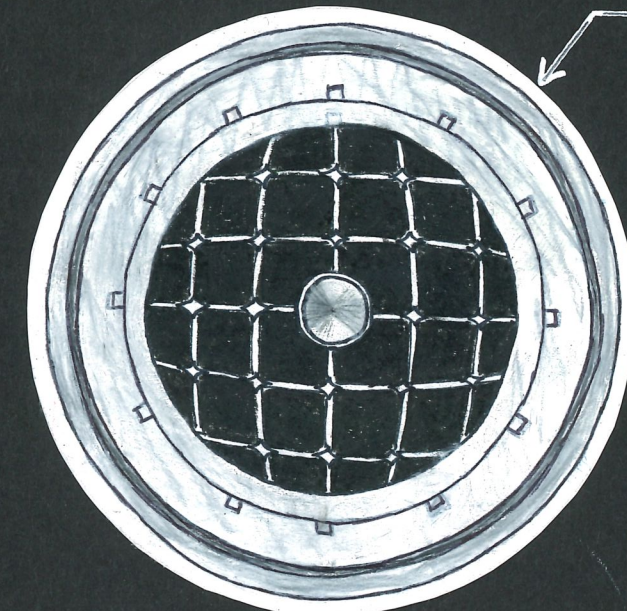
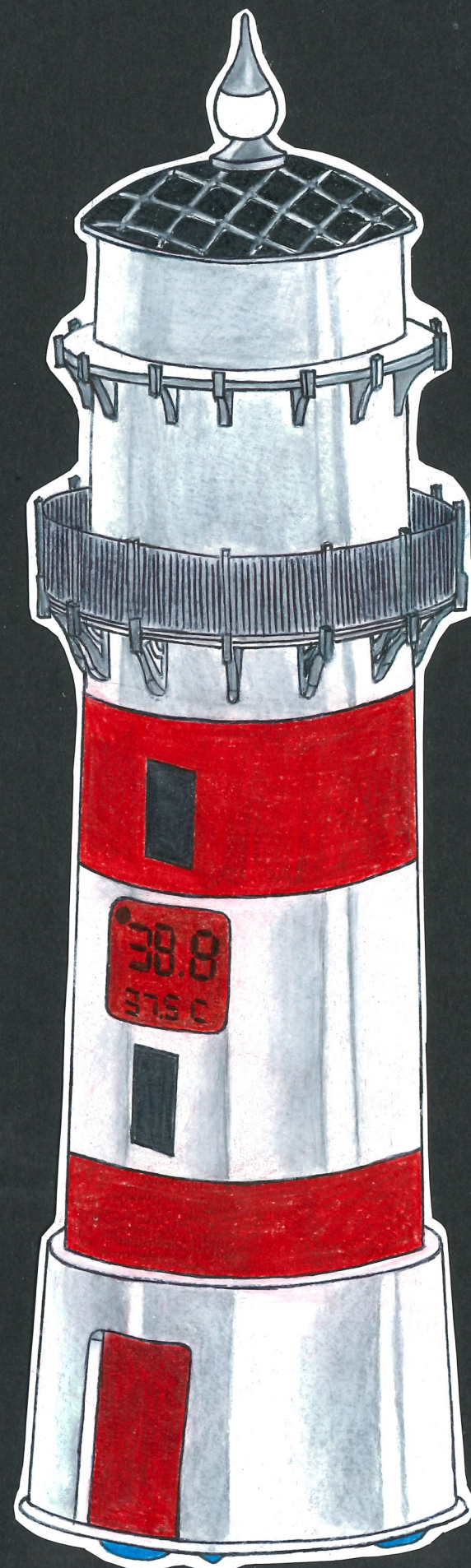
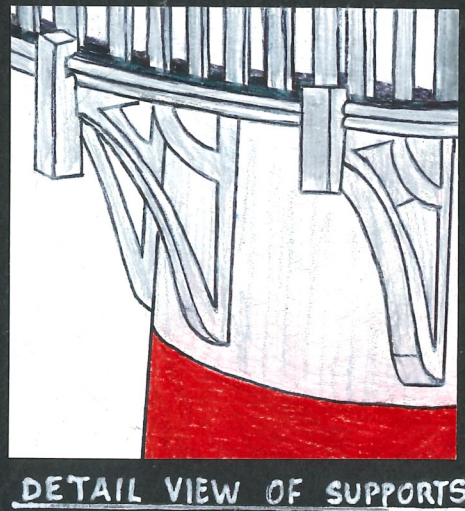
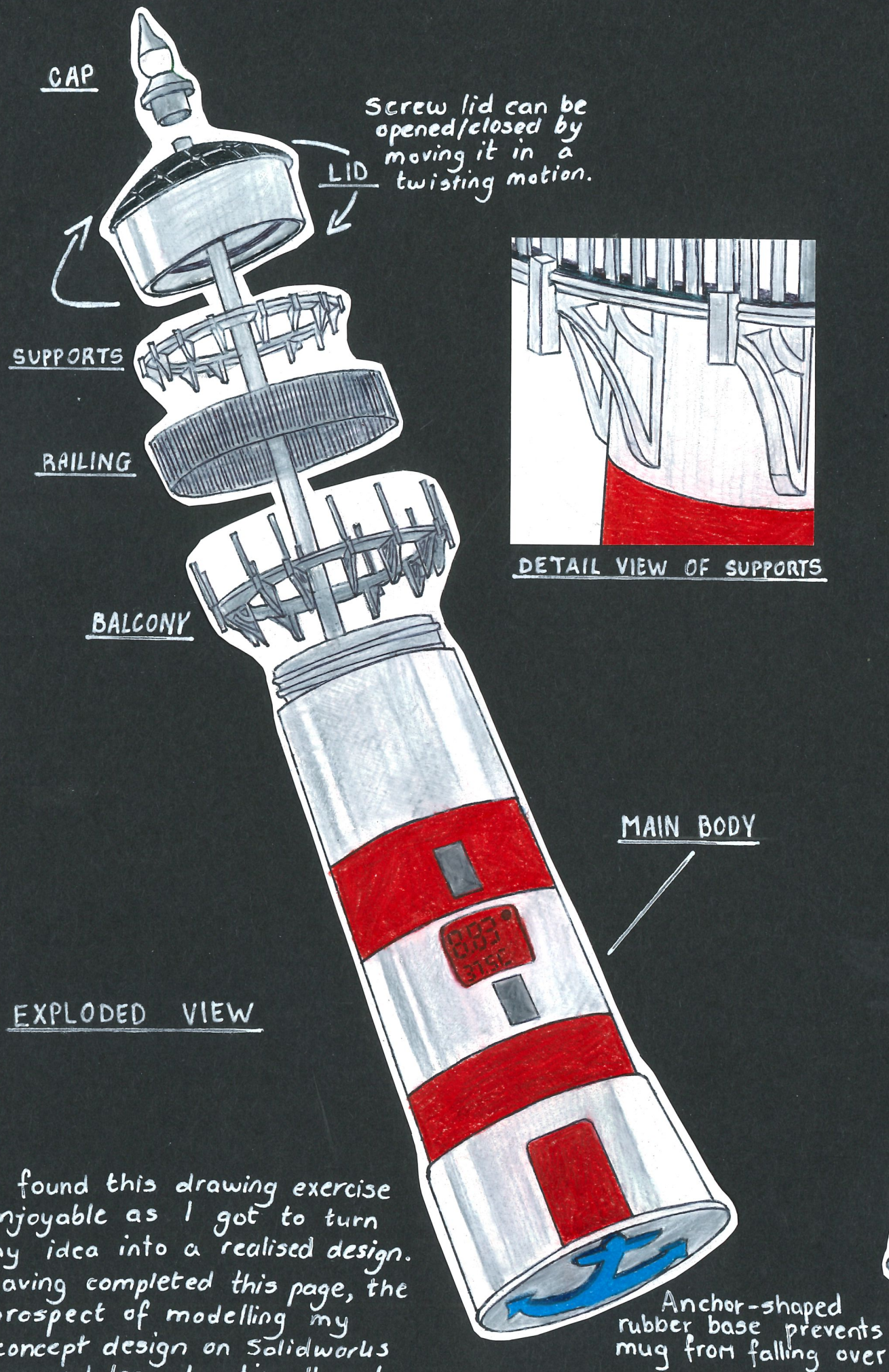


Environmental sustainability

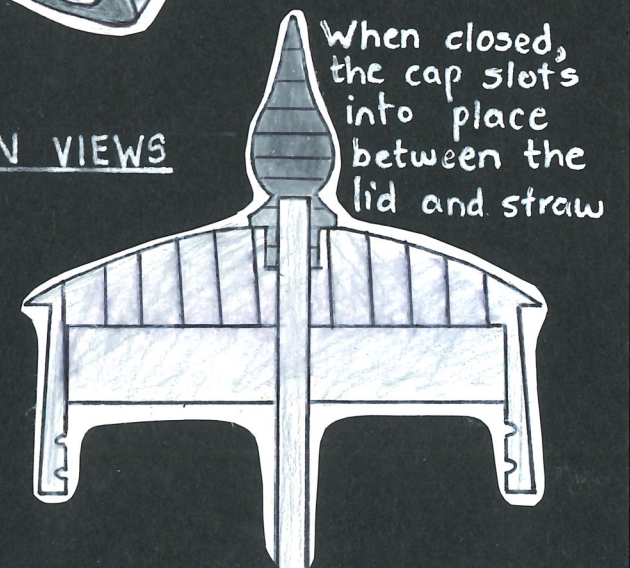
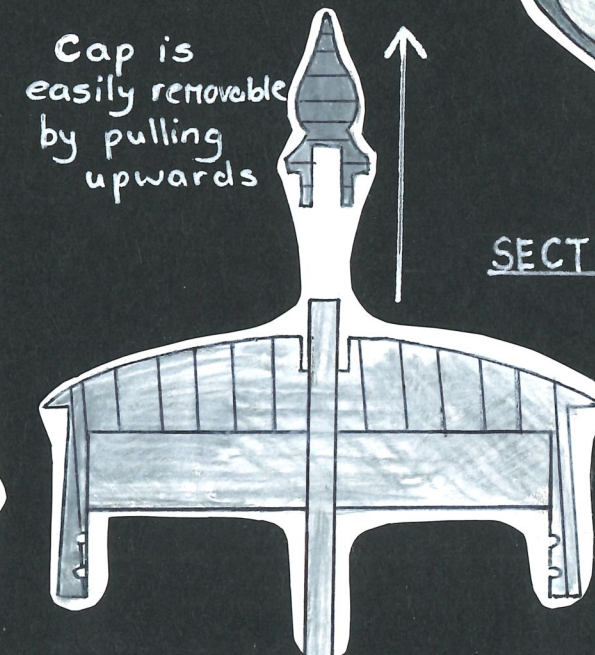
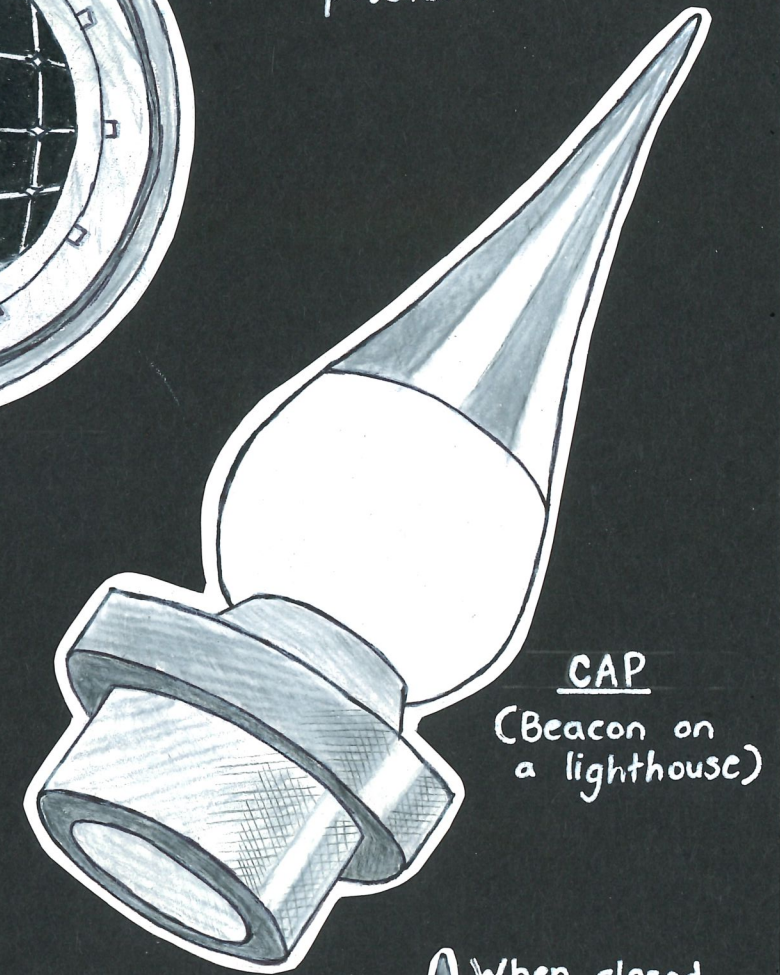
I chose to make my travel mug out of stainless steel, as I learned during my initial research for Part A of the project that metal is the best insulator. This means it can maintain the temperature of a beverage for a long time. I think this would dissuade users from buying disposable coffee cups when they are out and about. I also thought about fishermen out at sea, with possibly no source of electricity at their disposal. For this reason and in addition to being sustainable, I decided to run my mug on **solar energy**. Solar panels are attached to the lid of the travel mug, which is an ideal position to capture sunlight.



PRESENTATION OF CONCEPT DESIGN



Solar panels deliberately placed on the top of the travel mug to capture as much sunlight as possible.



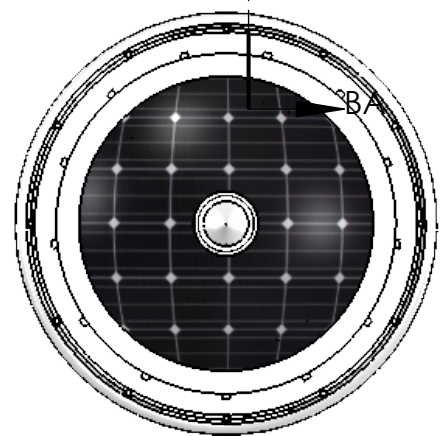
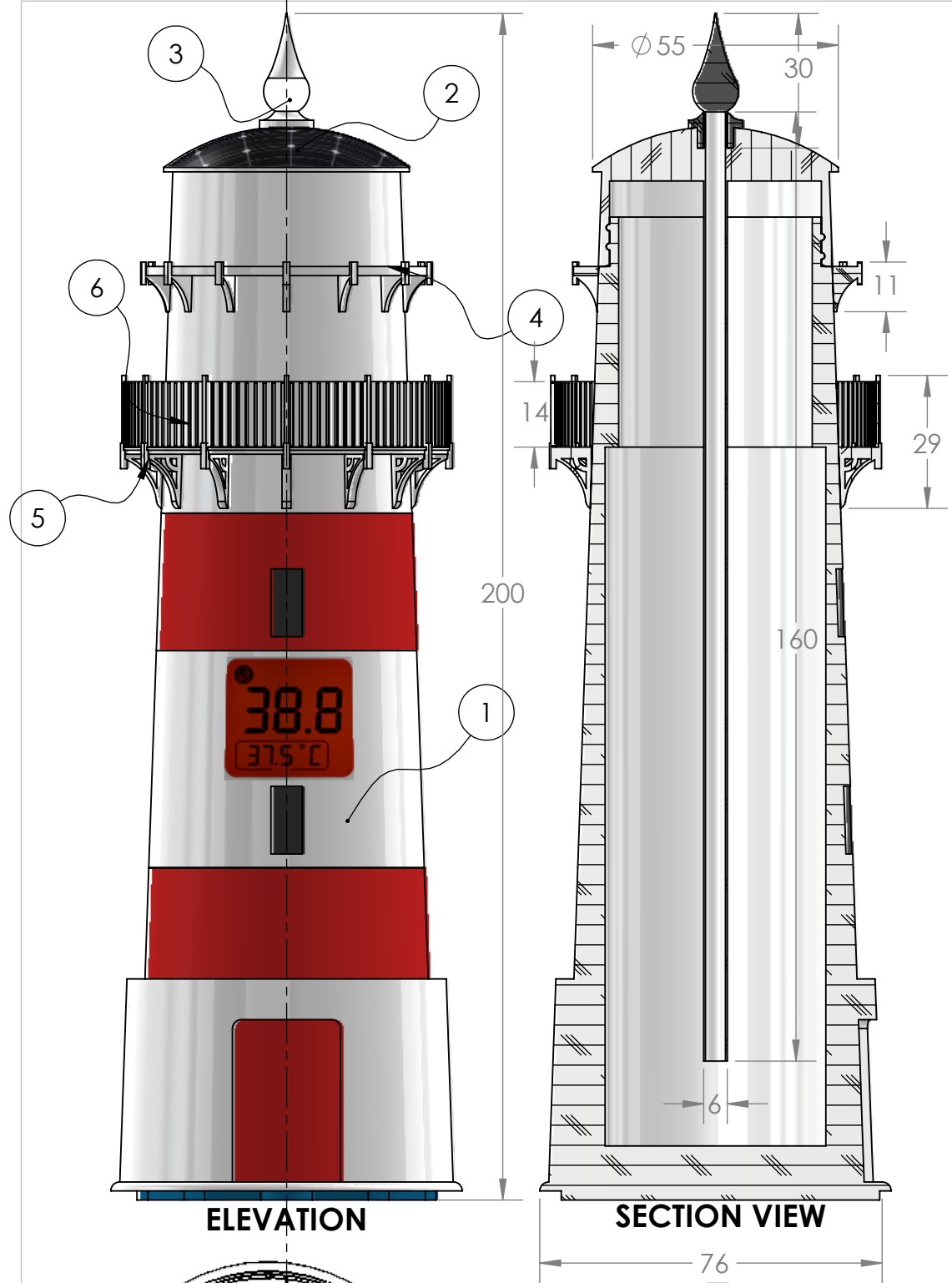
CAP (Beacon on a lighthouse)

Cap is easily removable by pulling upwards

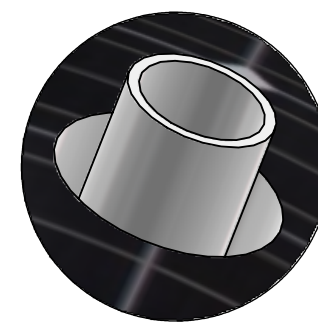
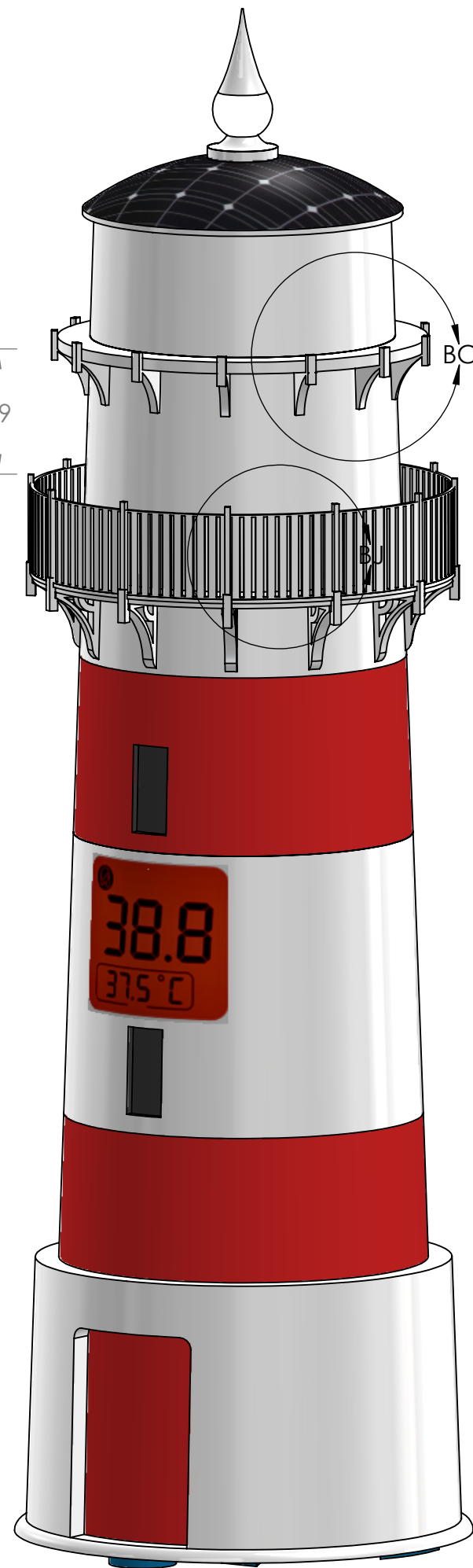
When closed, the cap slots into place between the lid and straw

Anchor-shaped rubber base prevents mug from falling over

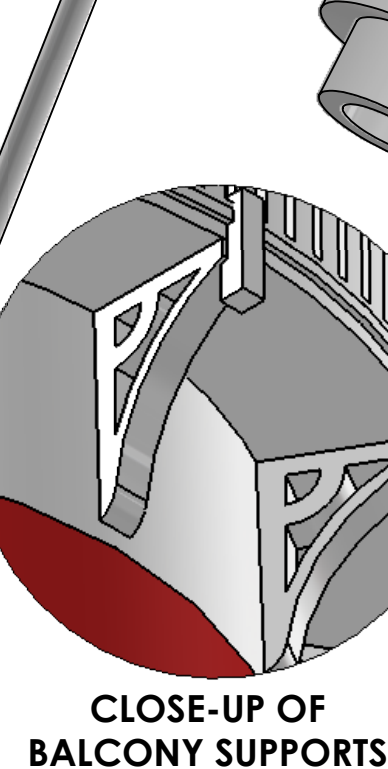
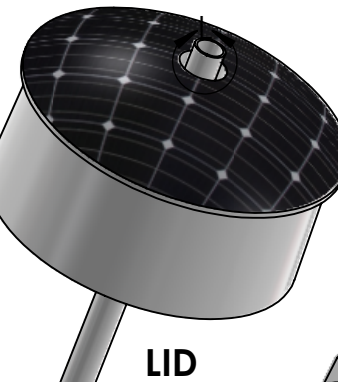
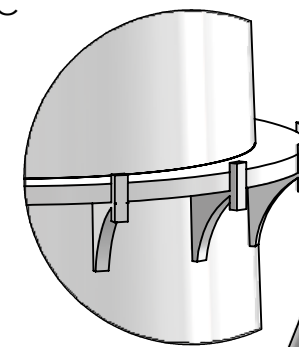
I found this drawing exercise enjoyable as I got to turn my idea into a realised design. Having completed this page, the prospect of modelling my concept design on Solidworks seemed less daunting than I had previously imagined.



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CLOSE-UP OF DRINKING SPOUT



CLOSE-UP OF BALCONY SUPPORTS

CAP

LID

EXPLODED VIEW

CLOSE-UP OF RAILING

ITEM NO.	PART NUMBER	QTY.
1	Main Body	1
2	Lid	1
3	Cap	1
4	Support	1
5	Balcony	1
6	Railing	1



DESIGN & COMMUNICATION GRAPHICS

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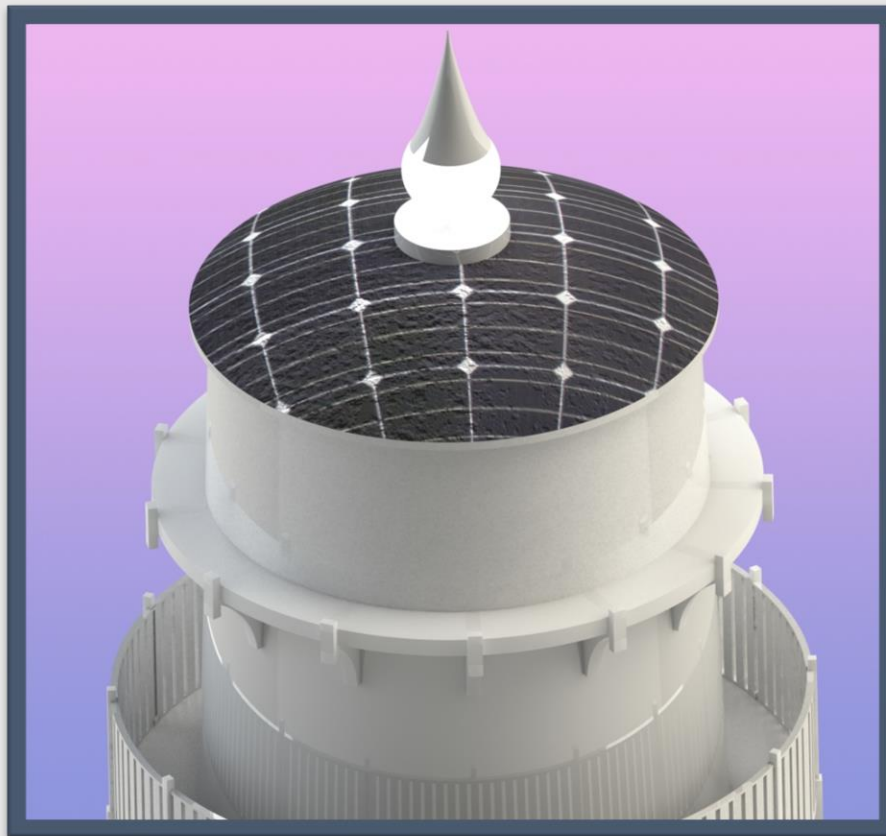
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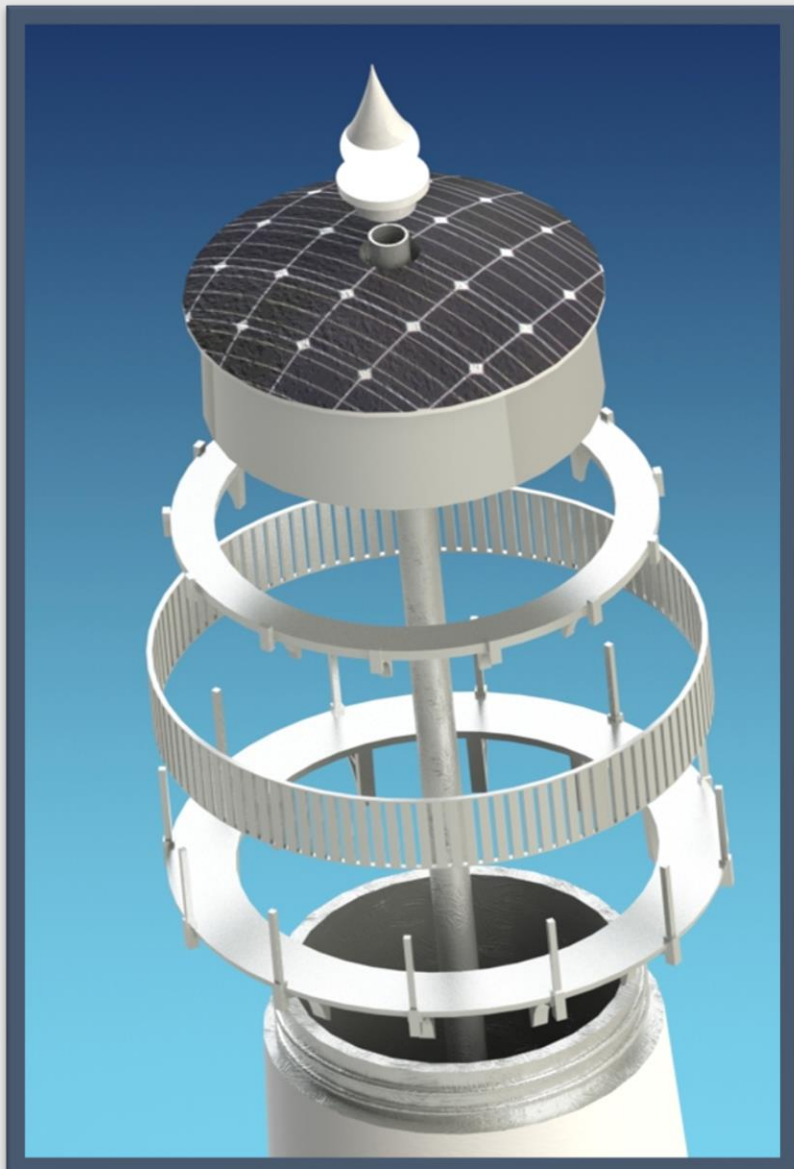
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DIMENSIONS ARE IN mm

SCALE: 2:3

DATE:



PHOTOREALISTIC IMAGES



Bibliography

Original images/sketches scanned – blue dot

Page 1 – Output 1

1. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.wsj.com%2Farticles%2FSB115517248901231705&psig=AOvVaw3Ra_QDQcksQHkp52uHRhx_&ust=1642888085717000&source=images&cd=vfe&ved=OCAsQjRxqFwoTCNiqv6HpW_UCFQAAAAAdAAAAABAD
2. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.amazon.com%2FSwig-Life-Stainless-Insulated-Cocktails%2Fdp%2FB09FRFYRWT&psig=AOvVaw0oDlz6PyQsK0cnNJoVt-ov&ust=1642888793072000&source=images&cd=vfe&ved=OCAsQjRxqFwoTCPC-k-zrw_UCFQAAAAAdAAAAABAJ
3. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.amazon.com%2FBan-do-Floral-Insulated-Thermal-bellini%2Fdp%2FB07D7FQ35Y&psig=AOvVaw0o8j4B_9b096hgm_Q6Wfg4&ust=1642888882328000&source=images&cd=vfe&ved=OCAsQjRxqFwoTCKjkupXsw_UCFQAAAAAdAAAAABAI
4. <https://www.amazon.co.uk/Thermos-Travel-Tumbler-Stainless-Steel/dp/B07HMDXFV?th=1>
5. Argos catalogue
6. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.worthpoint.com%2Fworthopedia%2Fvintage-mcdonalds-travel-coffee-cup-1747926883&psig=AOvVaw0P4H-Wbscrym7ztmDfEdWD&ust=1642889347536000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCPDss_Ltw_UCFQAAAAAdAAAAABAD
7. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.apple.com%2Fie%2Fshop%2Fproduct%2FHNNM2Z%2FA%2Fember-temperature-control-travel-mug-2-12-oz&psig=AOvVaw16ql5GYOmGciygZnsiQ9ao&ust=1642889531697000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCNix6Mnuw_UCFQAAAAAdAAAAABAD
8. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.vectorstock.com%2Froyalty-free-vector%2Fblue-wifi-icon-wireless-symbol-on-isolated-vector-14074725&psig=AOvVaw0Qkj2MMwLwHZT5fdHLdC2&ust=1642889557103000&source=images&cd=vfe&ved=OCAwQjhxqFwoTClial9fuw_UCFQAAAAAdAAAAABAD
9. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.maxpixel.net%2FBluetooth-Icon-Bluetooth-Logo-Bluetooth-Icon-Logo-5306027&psig=AOvVaw1hVYic03HFOiOjOXgzkc12&ust=1642889595868000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCIjZsfHuw_UCFQAAAAAdAAAAABAE
10. https://play.google.com/store/apps/details?id=com.ephcontrols.ember&hl=en_US&gl=US
11. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.amazon.com%2F2022-Vibe-Speaker-Tumbler-Stainless%2Fdp%2FB0984WWVJY&psig=AOvVaw0DZgu8ZVM-XcHqeZC_w70z&ust=1642890160992000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCNCZxPfw_UCFQAAAAAdAAAAABAP

Page 2 – Output 1

12. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.therange.co.uk%2Fcooking-and-dining%2Ftableware-and-dinnerware%2Fmugs-and-cups%2Fmugs%2Ftravel-mugs%2Fheated-travel-mug&psig=AOvVaw2o5dw45gnumUgF4iug_9W0&ust=1642890551658000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCOCloLHw_UCFQAAAAAdAAAAABAO
13. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.amazon.com%2FBan-do-Floral-Insulated-Thermal-bellini%2Fdp%2FB07D7FQ35Y&psig=AOvVaw3e5FZmX-PXIGOELxMQ5EZO&ust=1642890740925000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCMDwvIvzw_UCFQAAAAAdAAAAABAD

Page 6 – Output 5

14. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.imdb.com%2Ftitle%2Ftt0073195%2F&psig=AOvVaw284g-o7uc1gmSYmw15AtU&ust=1642891333564000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCKj726T1w_UCFQAAAAAdAAAAABAG
15. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.dreamstime.com%2Fphotos-images%2Fgrass-carp.html&psig=AOvVaw0Fya43p-BUcN_PxtbSBNGO&ust=1642891403886000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCLjLIsn1w_UCFQAAAAAdAAAAABAD
16. https://www.google.com/url?sa=i&url=https%3A%2F%2Fforums.autodesk.com%2Ft5%2Ffusion-360-design-validate%2Fhow-would-you-model-a-seashell-in-fusion-360%2Ftd-p%2F8089867&psig=AOvVaw2FyiynhaYCKJxb4QvggHJ&ust=1642891458078000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCMCA5eX1w_UCFQAAAAAdAAAAABAE
17. https://www.google.com/url?sa=i&url=https%3A%2F%2Ftoppng.com%2Foctopus-png-PNG-free-PNG-Images_136311&psig=AOvVaw18T6y79g8OhzuK1NpAFDEe&ust=1642891794851000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCMC3yYH3w_UCFQAAAAAdAAAAABAD
18. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.ebay.com%2Fp%2F1192675491&psig=AOvVaw3J9zEGNsIFPEkyjyMcttnZ&ust=1642891865018000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCLiYiqP3w_UCFQAAAAAdAAAAABAD
19. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.shetlandtimes.co.uk%2F2018%2F05%2F24%2Fcrew-of-stricken-fishing-boat-not-prepared-for-flooding&psig=AOvVaw1INuh1zixkhK0wriDkLVqo&ust=1642892051333000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCIDxp_z3w_UCFQAAAAAdAAAAABAI
20. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.globeimports.com%2Fproduct%2Fwooden-anchor-with-rope%2F&psig=AOvVaw22zUF0n5KnUUnMS3Kon5sr&ust=1642892171884000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCIDvOLT4w_UCFQAAAAAdAAAAABAD
21. https://www.google.com/url?sa=i&url=https%3A%2F%2Fpngset.com%2Fdownload-free-png-typag&psig=AOvVaw01JcVmh5xB9KyI05igwNaz&ust=1642892234958000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCNihnNT4w_UCFQAAAAAdAAAAABAD
22. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.thetimes.co.uk%2Farticle%2Fwhy-chefs-love-versatile-crab-dl2c0rxd&psig=AOvVaw2N_iBLMxieP78U0AsTbx8m&ust=1642892289756000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCMjux034w_UCFQAAAAAdAAAAABAD
23. [https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.lankhorst-taselaar.com%2FCatalog%2FSafety%2Band%2BFlags%2FRescue%2BRings%2FTalamex-2%2FLifebuoys%2B\(Besto-Buoy\)%2FProduct.aspx&psig=AOvVaw3G41gJ9P_N2xTANvIzSb1Q&ust=1642892496570000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCICnhdL5w_UCFQAAAAAdAAAAABAD](https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.lankhorst-taselaar.com%2FCatalog%2FSafety%2Band%2BFlags%2FRescue%2BRings%2FTalamex-2%2FLifebuoys%2B(Besto-Buoy)%2FProduct.aspx&psig=AOvVaw3G41gJ9P_N2xTANvIzSb1Q&ust=1642892496570000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCICnhdL5w_UCFQAAAAAdAAAAABAD)
24. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.cleanpng.com%2Fpng-gif-mukho-light-house-lighthouse-clip-art-animatio-6644019%2F&psig=AOvVaw061qbhhQR32OPqUt3ViaAf&ust=1642892600531000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCOiHgoH6w_UCFQAAAAAdAAAAABAD
25. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.britannica.com%2Fanimal%2Fscup&psig=AOvVaw2zbW5jbwKf-7rXVbvoMk4T&ust=1642892651221000&source=images&cd=vfe&ved=OCAsQjRxqFwoTCIDcwpn6w_UCFQAAAAAdAAAAABAD

26. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.istockphoto.com%2Fillustrations%2Fsailor-man&psig=AOvVaw1MKIS9GBuqo6n50VZ9urtT&ust=1642892831233000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCMi_fX6w_UCFQAAAAAdAAAAABAK
27. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.vectorstock.com%2Froyalty-free-vector%2Fboat-handwheel-ship-wheel-helm-vector-25448413&psig=AOvVaw0lyEaVLKXOLoA4LVAQA04y&ust=1643022507132000&source=images&cd=vfe&ved=OCAsQjRxqFwoTCIDTu_ndx_UCFQAAAAAdAAAAABAD

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28. https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.pinterest.com%2Fpin%2F373658100336151508%2F&psig=AOvVaw2j6hZ-Vdo0BYKypi4QnpSq&ust=1642893429563000&source=images&cd=vfe&ved=OCAwQjhxqFwoTCPDwj5b9w_UCFQAAAAAdAAAAABAD