

Design the bag of the future

Lesson	Focus	Purpose & Activities
1	Introduction & Inspiration	Explore the evolution of bags, watch short videos, discuss current and future needs. Link to sustainability, movement, digital life.
2	User Needs & Brainstorming	Empathy-based task: who is the bag for? What problems will it solve? Mind-map ideas.
3	Sketching & Concept Design	Students sketch multiple ideas, annotate functions and materials. Peer feedback.
4	Smart Features & Biomimicry	Introduce smart tech (e.g. solar charging, GPS, auto-lock zippers). Nature-inspired design examples. Add to sketches.
5	Material Science & Sustainability	Learn about sustainable and recycled materials, textiles vs other materials. Plan what they'll use in their prototypes.
6-7	Prototype Building (Part 1 & 2)	Build the physical prototype using textiles and other recycled materials. Focus on creativity + function.
8	Testing & changes	Test prototypes (e.g. comfort, usability). Adjust design. Use feedback from classmates.
9	Presentation & Documentation	Prepare a short pitch: function, design, features, materials, sustainability. Optional: posters or slides.
10	Showcase or Submission Prep	Practice presenting. Record videos or photos for submission. Invite parents or other classes.

Name(s): Lijed
Class: CC

Lesson 1: Introduction and Inspiration / Lektion 1: Introduktion och inspiration

1. What is the main goal of the Chalmers competition? / Vad är huvudsyftet med Chalmers tävling?

To let the creativity of kids shine and be noticed.

2. List 3 key things you learned about the history of bags. / Lista 3 viktiga saker du lärde dig om väskors historia.

1. ~~The~~ material used changes according to the technology and
2. The designs were changed ~~from~~ for beauty and efficiency.
3. In the 19th century, the sewing machine led to mass production of bags.

3. Competition Criteria Check-In / Tävlingskriterier:

- Sustainability / Hållbarhet: What is one reason for using recycled materials mentioned in the lesson? / Vad är en anledning till att använda återvunna material som nämndes i lektionen?

To sustain a good and healthy environment. Also many recycled materials can adapt to what's in the bag and change its shape and size.

- Smart Technology / Smart Teknik: Name one "smart" feature a future bag could have. / Nämnen en "smart" funktion en framtida väska kan ha.

They could have fingerprint locks and if the wrong finger gets scanned by the machine a defense mechanism triggers and all valuables get hidden into secret compartments.

4. Reflection (Teknik & SO): How do you think the design of bags has changed because of changes in society or technology? Give one example. / Hur tror du att designen av väskor har förändrats på grund av förändringar i samhället eller tekniken? Ge ett exempel.

The designs were changed due to different tools and technology being used in everyday life. A lot of bags are being made just for beauty. Outside bags that were used to carry tools and weapons, but now there are mini purses being made just for beauty.

Lesson 2: User Needs and Brainstorming / Lektion 2: Användarbehov och idégenerering

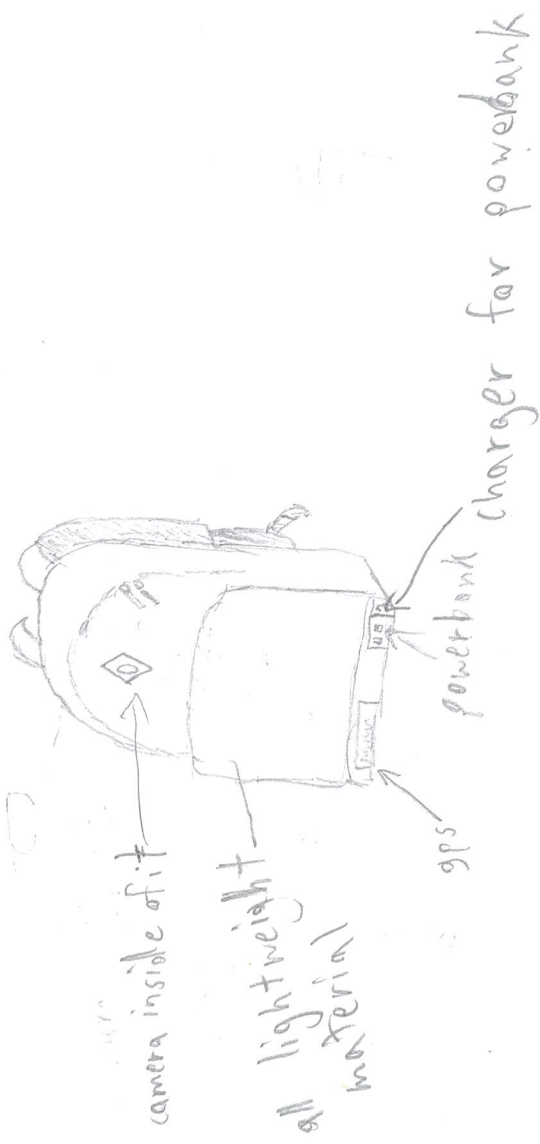
1. Define Your User / Definiera din användare: Who are you designing for? / Vem designar du för?
An athlete that bikes.

2. Empathy Map / Empatikarta:

- Says/Thinks / Säger/Tänker: What does your user say or think about their current bag? / Vad säger eller tänker din användare om sin nuvarande väska?
The bag stinks so if they were was some kind of spray that purifies the smell inside the bag.
- Does/Feels / Gör/Känner: What do they do and how do they feel when carrying their things? / Vad gör de och hur känner de sig när de bär med sig sina saker?
A heavy bag will make it irritating to carry and will mess with their temper.

- Goals/Struggles / Mål/Svårigheter: What is their main goal? What is their biggest struggle? / Vad är deras huvudmål? Vad är deras största svårighet?
They would want to keep it easy to carry and make comfortable having a heavy bag and easy to find their stuff.

3. Initial Ideas / Inledande idéer: Sketch or describe 2-3 different bag ideas for your user. / Skissa eller beskriv 2-3 olika väskaidéer för din användare.



Lesson 3: Sketching and Concept Design / Lektion 3: Skissande och konceptdesign

1. Chosen Idea / Vald idé: Which idea from Lesson 2 will you develop further? Give it a name. / Vilken idé från lektion 2 kommer du att utveckla vidare? Ge den ett namn.

The light bag has lightweight and rich material which makes it the perfect for a biker or even a day to day person.

2. Annotated Sketch / Kommenterad skiss: Draw a detailed sketch of your chosen bag design. Label the following: / Rita en detaljerad skiss av din valda väska. Ange följande:

- What it carries / Vad den bär
- Materials it's made from / Material den är gjord av
- How it works (straps, openings, etc.) / Hur den fungerar (band, öppningar, etc.)
- Its smart features / Dess smarta funktioner

• The light bag is made of lightweight material.

• The handle is made of rich-leather which is comfortable to hold and carry. leather handel

• The hidden camera makes a perfect source of evidence in case of a crash with someone at-fault or such things.

• The gps links to your loved ones phones letting them know where you are if you get lost.

• The powerbank provides sustainable charging for your phone.

3. Peer Feedback / Kamratfeedback: What was one "star" (positive thing) and one "wish" (suggestion) you received from a classmate? / Vad var en "stjärna" (något positivt) och en "önskning" (ett förslag) du fick från en klasskamrat?

- Star / Stjärna: The charger, gps and camera
- Wish / Önskning: The camera inside

Lesson 4: Smart Features / Lektion 4: Smarta funktioner

1. Your Smart Feature / Din smarta funktion: Describe the smart technology feature you are including in your bag. How does it work? / Beskriv den smarta teknikfunktionen du inkluderar i din väska. Hur fungerar den?

There are 3 technological features in the light bag which are: 1. a camera for evidence in case of a crash or such things.

2. A gps that can link to your loved ones phones which can help them find you if you get lost.

3. A power bank that provides reliable charging for phones.

2. What idea from nature inspired part of your design? / Vilken idé från naturen inspirerade en del av din design?

It you get lost in nature and/or you are injured, your loved ones can find you and if you're too far they can call emergency services and tell them exactly where you are.

3. Revised Sketch / Reviderad skiss: How did you improve your design from Lesson 3 based on today's learning? / Hur förbättrade du din design från lektion 3 baserat på dagens lärande?

We didn't.

Lesson 5: Sustainable Materials and Planning / Lektion 5: Hållbara material och planering

1. Material List / Materiallista: List all the materials you plan to use for your prototype. / Lista alla material du planerar att använda till din prototyp.
recycled plastic, leather for the logo, cotton on the inside, foam plastic, cardboard, 25cm leather, 15cm cotton

2. Sustainability Focus / Hållbarhetsfokus: Which of these materials are recycled, upcycled, or otherwise sustainable? / Vilka av dessa material är återvunna, uppcyklade eller på annat sätt hållbara?
the waterproof recycled plastic.

3. Tool List / Verktygslista: What tools will you need to build your prototype? / Vilka verktyg behöver du för att bygga din prototyp?
scissors, glue gun, rulers.

4. Plan Approval / Plan godkänd: My/Our plan has been approved by the teacher. / Min/Vår plan har godkänts av läraren. ☒

Lessons 6 & 7: Prototype Build / Lektion 6 & 7: Prototypbyggande

1. Building Progress (Lesson 6) / Byggförlopp (Lektion 6): Describe what you built today. What was easy? What was challenging? / Beskriv vad du byggde idag. Vad var lätt? Vad var utmanande?

We made the front and sides.

2. Adding Features (Lesson 7) / Lägger till funktioner (Lektion 7): How did you incorporate your smart feature and final details today? / Hur integrerade du din smarta funktion och sista detaljer idag?

We put the gps inside the bag and we put the powerbank in the bottom of the bag and we made ports that are connected to the powerbank so you can charge your device.

3. Troubleshooting / Felsökning: What problem did you face, and how did you solve it? / Vilket problem stötte du på och hur löste du det?

The measuring was a major inconvenience but we eventually solved it by trial and failure.

4. Written Explanation / Skriftlig förklaring: Write a short sentence explaining the purpose of each key feature of your bag. / Skriv en kort mening som förklarar syftet med varje nyckelfunktion i din väska.

- Feature 1 / Funktion 1: camera is for safety.
- Feature 2 / Funktion 2: powerbank is for charging.
- Feature 3 / Funktion 3: gps is for in case you get lost.

Lesson 8: Testing, Feedback and Iteration / Lektion 8: Testning, feedback och förbättring

1. Real-Use Test / Användartest: What happened when you tested your bag? Did it work as expected? / Vad hände när du testade din väska? Funkade den som förväntat?

It was pretty good but it felt weird for my back (it's too straight)

2. Feedback Carousel / Feedbackkarusell:

- Star 1 / Stjärna 1: It has many features.
- Wish 1 / Önskning 1: better space management.
- Star 2 / Stjärna 2: It's the only one that actually looks like a bag.
- Wish 2 / Önskning 2: that it looks good.

3. Changes : Based on the feedback and testing, what is one change you made to improve your prototype? / Baserat på feedback och testning, vilken förändring gjorde du för att förbättra din prototyp?

The back.

Anikaeth 6C

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Lesson 9: Presentation and Documentation / Lektion 9: Presentation och dokumentation

1. Presentation Plan / Presentationsplan: List the 3 most important points you will talk about in your final presentation. / Lista de 3 viktigaste punkterna du kommer att prata om i din slutliga presentation.

-
-
-

2. What is one thing you want to explain very clearly to the audience about your design? / Vad är en sak du vill förklara mycket tydligt för publiken om din design?

Lesson 10: Showcase and Submission / Lektion 10: Uppvisning och inlämning

1. Final Reflection / Slutlig reflektion:

• What are you most proud of in your final design? / Vad är du mest stolt över med din slutliga design?

• If you had more time, what would you improve or add next? / Om du hade mer tid, vad skulle du förbättra eller lägga till nästa gång?

2. Competition Criteria Final Check / Slutlig kontroll av tävlingskriterier:

• Active Life / Aktivt liv: How is your bag suitable for a person on the go? / Hur passar din väska för en person som är ständigt i rörelse?

• Textile Part / Textilkomponent: What textile did you use? / Vilket textil använde du?

• Smart Tech / Smart Teknik: What is your smart feature and how does it work? / Vad är din smarta funktion och hur fungerar den?

• Sustainability / Hållbarhet: How did you make your design sustainable? / Hur gjorde du din design hållbar?

Submission Checklist / Inlämningschecklista:

- This portfolio is complete. / Denna portfolio är fylld.
- Final photos/videos of our prototype are ready. / Slutliga foton/videoer på vår prototyp är klara.
- Our competition entry explanation is written. / Vår tävlingsförklaring är skriven.
- We are ready to present! / Vi är redo att presentera!

Name(s): Aniketh Aashman, Arya Vishwa
Class: 6C

Lesson 1: Introduction and Inspiration / Lektion 1: Introduktion och inspiration

1. What is the main goal of the Chalmers competition? / Vad är huvudsyftet med Chalmers tävling?
One of the main goal of chalmers competition is to inspire students aim to excitement about technology and since also to inspire students about energy.

2. List 3 key things you learned about the history of bags. / Lista 3 viktiga saker du lärde dig om väskors historia.
1. The bag developed because of bag storming and that they were made in a period of time.
2. Going with leather and thread.
3. Bag with leather and thread.

3. Competition Criteria Check-In / Tävlingskriterier:
• Sustainability / Hållbarhet: What is one reason for using recycled materials mentioned in the lesson? / Vad är en anledning till att använda återvunna material som nämndes i lektionen?
One of the reason is that the bag can recycle so not to much bag is what the environment so it does not break and the gose is a little climate change so it can be sustainable bag.

• Smart Technology / Smart Teknik: Name one "smart" feature a future bag could have. / Näm en "smart" funktion en framtida väska kan ha.
A smart feature is charging so it can charge stuff in the bag while walking and a smart charging place.

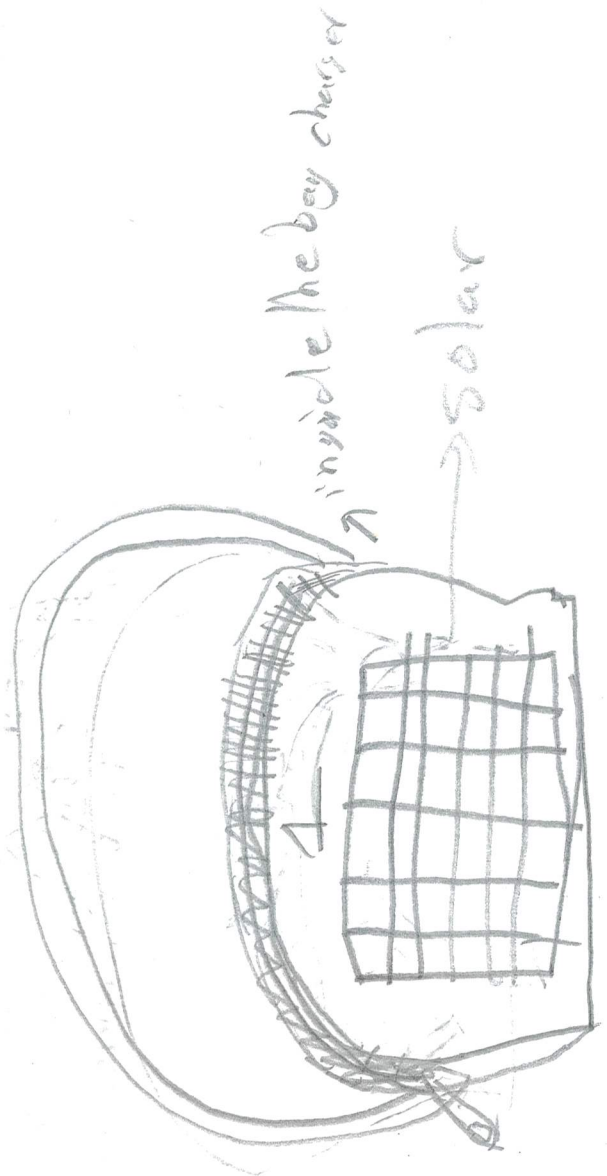
4. Reflection (Teknik & SO): How do you think the design of bags has changed because of changes in society or technology? Give one example. / Hur tror du att designen av väskor har förändrats på grund av förändringar i samhället eller tekniken? Ge ett exempel.
Bags have been made with cotton and leather that you find from the environment from help from technology of sewing machine because from from you could use cotton and leather from the environment from election we make it more sustainable for the environment and to not to make climate change a better example is in the future the technology is more advance so the bag will be also more advance.

Lesson 2: User Needs and Brainstorming / Lektion 2: Användarbehov och idégenerering

1. Define Your User / Definiera din användare: Who are you designing for? / Vem designar du för?
I am 17 years old, I am young, I am because I will have today's phone and stuff, I am very interested in sports, like running so I need a light tech bag.

2. Empathy Map / Empatikarta:
• Says/Thinks / Säger/Tänker: What does your user say or think about their current bag? / Vad säger eller tänker din användare om sin nuvarande väska?
It like this bag because this is light weight it can charge phone and easy to run with because he the gear is a runner.
• Does/Feels / Gör/Känner: What do they do and how do they feel when carrying their things? / Vad gör de och hur känner de sig när de bär med sig sina saker?
They are running a lot and when he is running he is feeling good it is light weight so a charging slot, his phone is always with it, he is struggling to carry it.
• Goals/Struggles / Mål/Svårigheter: What is their main goal? What is their biggest struggle? / Vad är deras huvudmål? Vad är deras största svårighet?
Get a good running bag because it is light and a built in which charges so he can charge his phone. The bag is white less charges before.

3. Initial Ideas / Inledande idéer: Sketch or describe 2-3 different bag ideas for your user. / Skissa eller beskriv 2-3 olika väskaidéer för din användare.



1. A solar charging bag with help of sun radiation the bag gets electricity and charges the phone.

2.

Lesson 3: Sketching and Concept Design / Lektion 3: Skissande och konceptdesign

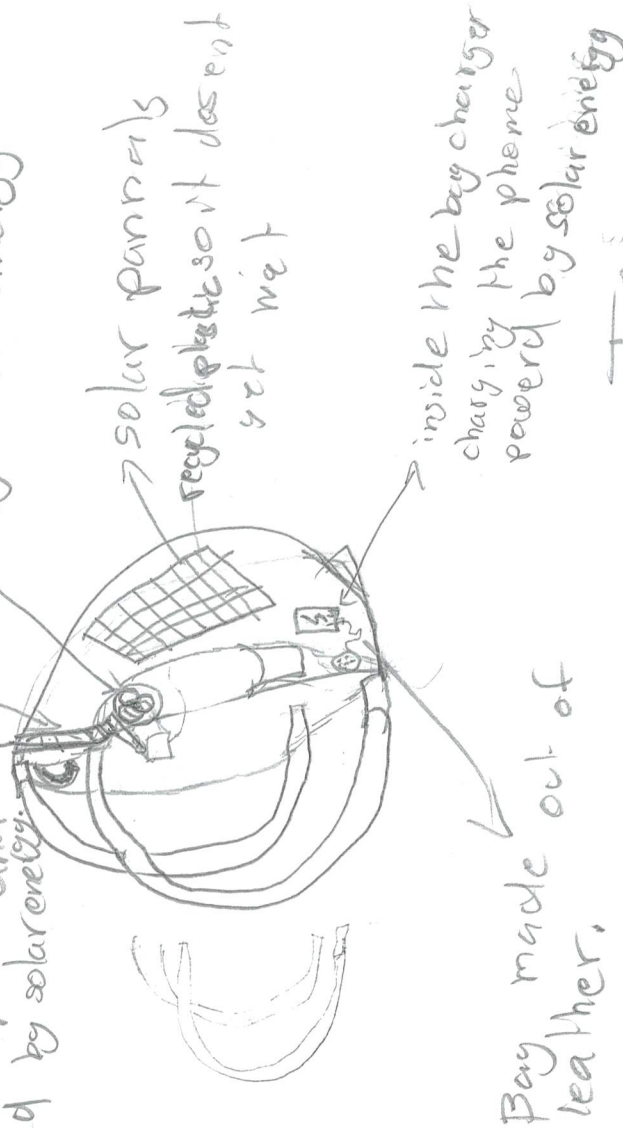
1. Chosen Idea / Vald idé: Which idea from Lesson 2 will you develop further? Give it a name. / Vilken idé från lektion 2 kommer du att utveckla vidare? Ge den ett namn.

Our bag name? Solar cooling bag
Our bag is for a person that runs a lot and lives in a sunny country so the bag has a charger that is powered by solar energy that produces electricity for chargers and fans so when he is hot and the bag distribute with eegly and so it can cool him.

2. Annotated Sketch / Kommenterad skiss: Draw a detailed sketch of your chosen bag design. Label the following: / Rita en detaljerad skiss av din valda väska. Ange följande:

- What it carries / Vad den bär
- Materials it's made from / Material den är gjord av
- How it works (straps, openings, etc.) / Hur den fungerar (band, öppningar, etc.)
- Its smart features / Dess smarta funktioner

It works by opening like a normal bag by zips. It carries a lot of different things perfect for school, field trip, and long running. The smart features are solar panels, a fan, power charger for charge phones and a pump powered by solar energy.



Our bag with 31 cm length 43 cm

3. Peer Feedback / Kamratfeedback: What was one "star" (positive thing) and one "wish" (suggestion) you received from a classmate? / Vad var en "stjärna" (något positivt) och en "önskan" (ett förslag) du fick från en klasskamrat?

- Star / Stjärna: Helps the environment
- Wish / Önskan: Leather is heavy hard to run around / Everything

Lesson 4: Smart Features / Lektion 4: Smarta funktioner

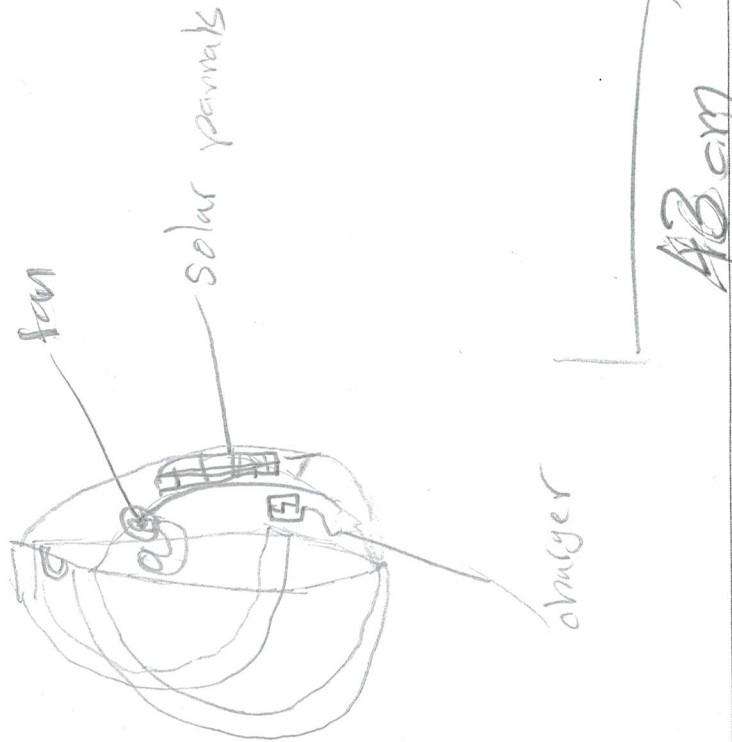
1. Your Smart Feature / Din smarta funktion: Describe the smart technology feature you are including in your bag. How does it work? / Beskriv den smarta teknikfunktionen du inkluderar i din väska. Hur fungerar den?

Our smart feature is solar panels that's a charging capability that's also powered by the solar energy. Also we have a lot of space for several stuff including folders, due to our bags capability for distributing a lot of weight. These 3 are the smart features we have.

2. What idea from nature inspired part of your design? / Vilken idé från naturen inspirerade en del av din design?

Our idea and sun weather is the inspiration so we added solar panels so the solar panels generate electricity so it powers the fan and charges phone.

3. Revised Sketch / Reviderad skiss: How did you improve your design from Lesson 3 based on today's learning? / Hur förbättrade du din design från lektion 3 baserat på dagens lärande?



Lesson 5: Sustainable Materials and Planning / Lektion 5: Hållbara material och planering

1. Material List / Materiallista: List all the materials you plan to use for your prototype. / Lista alla material du planerar att använda till din prototyp.

Leather (recycled), recycled plastic, aluminum foil, Black paper, and white paper.
How much:
1 black paper 14 x 11 cm, white paper 14 x 11 cm, aluminum foil 14 x 11 cm, cardboard box 50 cm x 50 cm x 15 cm, plastic 15 cm x 15 cm, leather and 32 cm width.

2. Sustainability Focus / Hållbarhetsfokus: Which of these materials are recycled, upcycled, or otherwise sustainable? / Vilka av dessa material är återvunna, uppcyklade eller på annat sätt hållbara?

plastic upcycled, cardboard recycled, leather upcycled, aluminum recycled, paper recycled, wicker recycled, fabric recycled, wool recycled, human-made silk new.

3. Tool List / Verktygslista: What tools will you need to build your prototype? / Vilka verktyg behöver du för att bygga din prototyp?

glue gun, scissors, ruler, pencil, eraser, glue.

4. Plan Approval / Plan godkänd: My/Our plan has been approved by the teacher. / Min/Vår plan har godkänts av läraren. ☒ yes

Lessons 6 & 7: Prototype Build / Lektion 6 & 7: Prototypbyggnad

1. Building Progress (Lesson 6) / Byggförlopp (Lektion 6): Describe what you built today. What was easy? What was challenging? / Beskriv vad du byggde idag. Vad var lätt? Vad var utmanande?

We did the phone and the charger and leather and the solar panels.

2. Adding Features (Lesson 7) / Lägger till funktioner (Lektion 7): How did you incorporate your smart feature and final details today? / Hur integrerade du din smarta funktion och sista detaljer idag?

We did Fan, leather for the water bottle holder, straps and the bag.

3. Troubleshooting / Felsökning: What problem did you face, and how did you solve it? / Vilket problem stötte du på och hur löste du det?

Yes we had a problem we couldn't twist the fan and we didn't know we had to have a better part.

4. Written Explanation / Skriftlig förklaring: Write a short sentence explaining the purpose of each key feature of your bag. / Skriv en kort mening som förklarar syftet med varje nyckelfunktion i din väska.

- Feature 1 / Funktion 1: Fan power by solar panels to cool down
- Feature 2 / Funktion 2: charger power by solar panels charge phone
- Feature 3 / Funktion 3: solar panels to power devices

Lesson 8: Testing, Feedback and Iteration / Lektion 8: Testning, feedback och förbättring

1. Real-Use Test / Användartest: What happened when you tested your bag? Did it work as expected? / Vad hände när du testade din väska? Funkade den som förväntat?

and it was really good. I really liked the bag.

2. Feedback Carousel / Feedbackkarusell:

- Star 1 / Stjärna 1: solar panels
- Wish 1 / Önskning 1: the fan
- Star 2 / Stjärna 2: opening
- Wish 2 / Önskning 2: more time

3. Changes : Based on the feedback and testing, what is one change you made to improve your prototype? / Baserat på feedback och testning, vilken förändring gjorde du för att förbättra din prototyp?

the fan should be better and it to be in your face

modul 1 & 2

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Lesson 9: Presentation and Documentation / Lektion 9: Presentation och dokumentation

1. Presentation Plan / Presentationsplan: List the 3 most important points you will talk about in your final presentation. / Lista de 3 viktigaste punkterna du kommer att prata om i din slutliga presentation.
1. _____
2. _____
3. _____
2. What is one thing you want to explain very clearly to the audience about your design? / Vad är en sak du vill förklara mycket tydligt för publiken om din design?
- _____
- _____
- _____
- _____
- _____

Lesson 10: Showcase and Submission / Lektion 10: Uppvisning och inlämning

1. Final Reflection / Slutlig reflektion:
- What are you most proud of in your final design? / Vad är du mest stolt över med din slutliga design? *67 present charger the phone is 67 percent the inside.*
 - If you had more time, what would you improve or add next? / Om du hade mer tid, vad skulle du förbättra eller lägga till nästa gång? *the inside.*
2. Competition Criteria Final Check / Slutlig kontroll av tävlingskriterier:
- Active Life / Aktivt liv: How is your bag suitable for a person on the go? / Hur passar din väska för en person som är ständigt i rörelse? *fore run and be charged with a soft.*
 - Textile Part / Textilkomponent: What textile did you use? / Vilket textil använde du? *textile, fabric, and a fabric.*
 - Smart Tech / Smart Teknik: What is your smart feature and how does it work? / Vad är din smarta funktion och hur fungerar den? *fun, charger and solar.*
 - Sustainability / Hållbarhet: How did you make your design sustainable? / Hur gjorde du din design hållbar? *charged power by solar panels.*

Submission Checklist / Inlämningschecklista:

- This portfolio is complete. / Denna portfolio är fylld.
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- We are ready to present! / Vi är redo att presentera!

Name(s): Maheswetha, Ella, Ashritha, R.ya
Class: 6C

Lesson 1: Introduction and Inspiration / Lektion 1: Introduktion och inspiration

1. What is the main goal of the Chalmers competition? / Vad är huvudsyftet med Chalmers tävling?

to invent a bag that is sustainable and efficient for a person on the go. To create a bag to carry objects and make carrying it around fun and not look thingy.

2. List 3 key things you learned about the history of bags. / Lista 3 viktiga saker du lärde dig om väskors historia.

- 80 animal leather
- 40 metal and textile material
- they used to be made out of bamboo.

3. Competition Criteria Check-In / Tävlingskriterier:

- Sustainability / Hållbarhet: What is one reason for using recycled materials mentioned in the lesson? / Vad är en anledning till att använda återvunna material som nämndes i lektionen?

It is because the non degradable pollutes earth and if we recycle we could possibly decrease the effect. we should use recycled materials like plastic.

- Smart Technology / Smart Teknik: Name one "smart" feature a future bag could have. / Nämnen "smart" funktion en framtida väska kan ha.

it could be water proof and because of that it may be able to hold a plug to carry your phone. It could also be that they are able to have locks

4. Reflection (Teknik & SO): How do you think the design of bags has changed because of changes in society or technology? Give one example. / Hur tror du att designen av väskor har förändrats på grund av förändringar i samhället eller tekniken? Ge ett exempel.

I think it has changed because we found out new materials and the invention of the sewing machine helped us to mass produce and different styles. we got more resources and then where we live gives more opportunity to try new materials so we needed to be able to carry stuff so we make pockets and small purses.

Lesson 2: User Needs and Brainstorming / Lektion 2: Användarbehov och idégenerering

1. Define Your User / Definiera din användare: Who are you designing for? / Vem designar du för?

We are designing for a unemployed teacher's who travels alot

2. Empathy Map / Empatikarta:

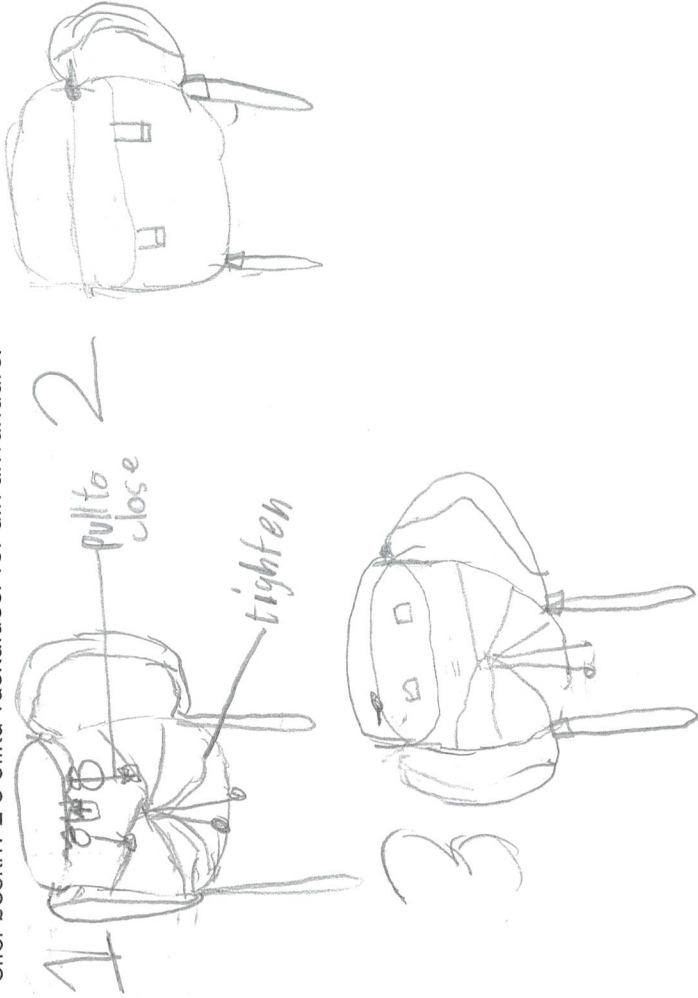
- Says/Thinks / Säger/Tänker: What does your user say or think about their current bag? /

Vad säger eller tänker din användare om sin nuvarande väska? they say that their shoulders hurt because their bags have uncomfortable straps and the bags are weighty

- Does/Feels / Gör/Känner: What do they do and how do they feel when carrying their things? / Vad gör de och hur känner de sig när de bär med sig sina saker? they feel their shoulders hurting and they have unstable weight

- Goals/Struggles / Mål/Svårigheter: What is their main goal? What is their biggest struggle? / Vad är deras huvudmål? Vad är deras största svårighet? to carry things easily and evenly also so their shoulders don't hurt

3. Initial Ideas / Inledande idéer: Sketch or describe 2-3 different bag ideas for your user. / Skissa eller beskriv 2-3 olika väskaidéer för din användare.



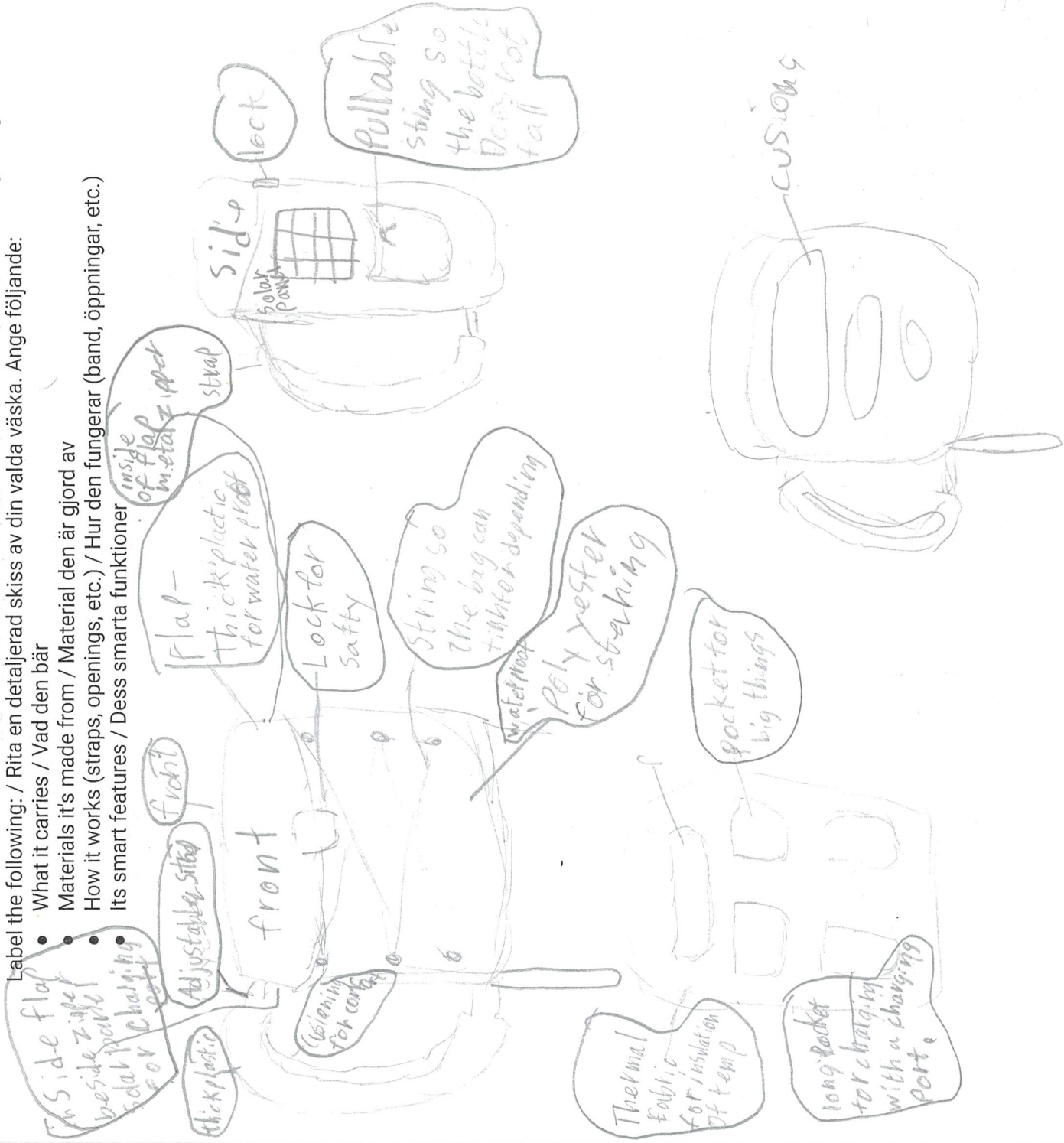
the first one has strings at the front which tighten to make the bag smaller and the straps at the top tighten by having a locking button to the rim becoming smaller so the strap itself can serve the lid of the bag. the bag has a

Lesson 3: Sketching and Concept Design / Lektion 3: Skissande och konceptdesign

1. Chosen Idea / Vald idé: Which idea from Lesson 2 will you develop further? Give it a name. / Vilken idé från lektion 2 kommer du att utveckla vidare? Ge den ett namn.
The travel backpack is the thing I like. We chose my water proof flap to cover the zipper.

2. Annotated Sketch / Kommenterad skiss: Draw a detailed sketch of your chosen bag design. Label the following: / Rita en detaljerad skiss av din valda väska. Ange följande:

- What it carries / Vad den bär
- Materials it's made from / Material den är gjord av
- How it works (straps, openings, etc.) / Hur den fungerar (band, öppningar, etc.)
- Its smart features / Dess smarta funktioner



3. Peer Feedback / Kamratfeedback: What was one "star" (positive thing) and one "wish" (suggestion) you received from a classmate? / Vad var en "stjärna" (något positivt) och en "önskning" (ett förslag) du fick från en klasskamrat?

- Star / Stjärna: poliester
- Wish / Önskning: can you right more clearly,

Lesson 4: Smart Features / Lektion 4: Smarta funktioner

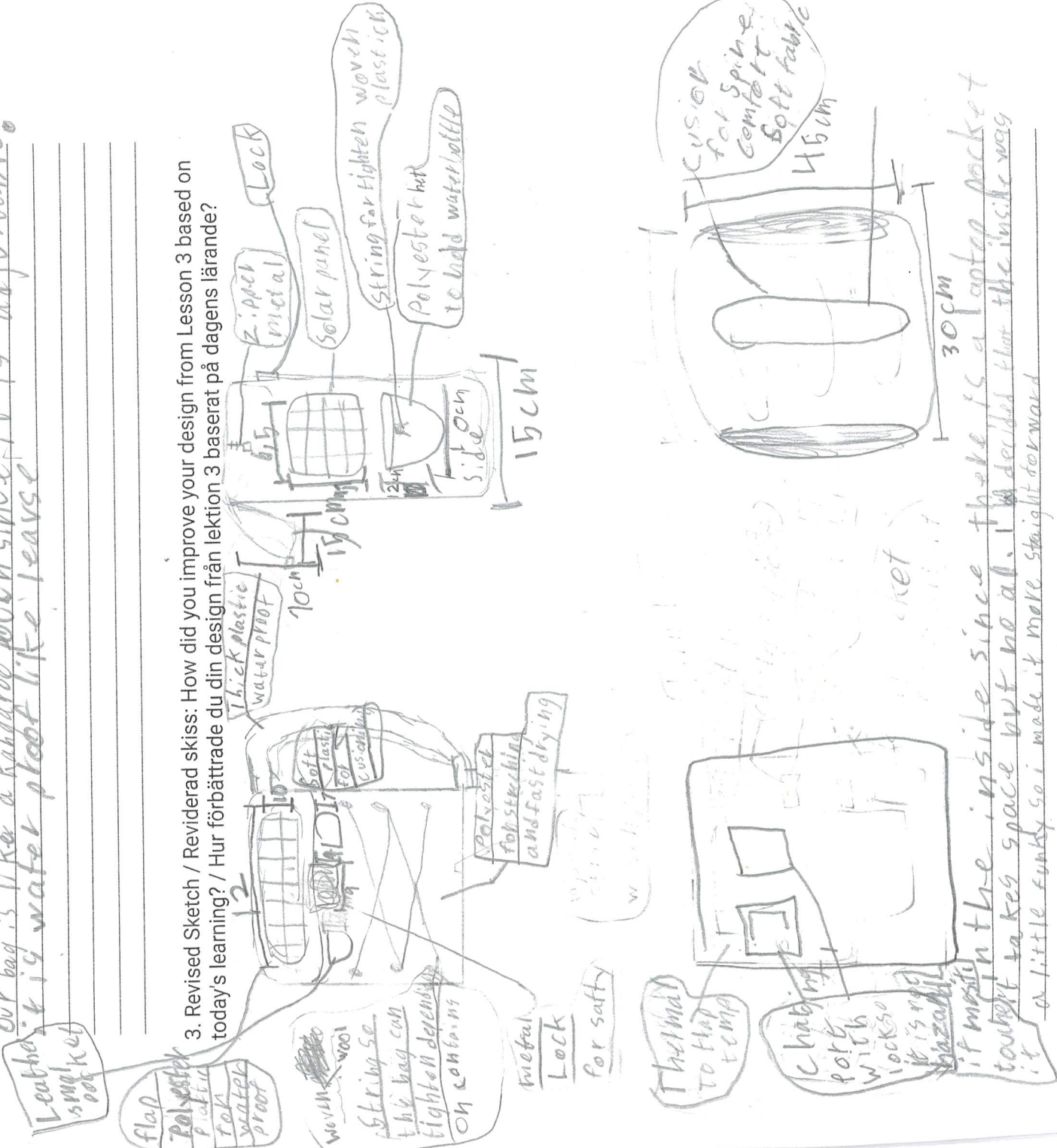
1. Your Smart Feature / Din smarta funktion: Describe the smart technology feature you are including in your bag. How does it work? / Beskriv den smarta teknikfunktionen du inkluderar i din väska. Hur fungerar den?

Our bag is thermal and waterproof. Since it is waterproof we also have a charging port. Our bag is a transformable to different. It has a security pocket so people don't steal it. Our bag has a solar panels to power the charging port.

2. What idea from nature inspired part of your design? / Vilken idé från naturen inspirerade en del av din design?

Our bag is like a kangaroo pouch since it is adjustable. It is water proof like leaves.

3. Revised Sketch / Reviderad skiss: How did you improve your design from Lesson 3 based on today's learning? / Hur förbättrade du din design från lektion 3 baserat på dagens lärande?



if mostly in the inside since there is a laptop pocket tonight takes space but no all. I decided that the inside way it a little funky so I made it more straight forward

Lesson 5: Sustainable Materials and Planning / Lektion 5: Hållbara material och planering

1. Material List / Materiallista: List all the materials you plan to use for your prototype. / Lista alla material du planerar att använda till din prototyp.
Leather, Polyester, Felt, woven plastic strings, plastic fabric, cardboard, Net

polyester 180x90cm, Felt 191x65cm, 12-16, 75x205cm - Thermal, Net 20x36
woven string 167 plastic charging port 5x20 Leather 5x5, string felt
10x15cm every thing is cm Polyester 10x20

2. Sustainability Focus / Hållbarhetsfokus: Which of these materials are recycled, upcycled, or otherwise sustainable? / Vilka av dessa material är återvunna, uppcyklade eller på annat sätt hållbara?
our leather, plastic, cardboard, fabric are upcycled

3. Tool List / Verktygslista: What tools will you need to build your prototype? / Vilka verktyg behöver du för att bygga din prototyp?
sax, pencil, ruler, tape, masking tape, safety blade, sharpener, eraser, glue guns

4. Plan Approval / Plan godkänd: My/Our plan has been approved by the teacher. / Min/Vår plan har godkänts av läraren. ☒ yep, our plan is approved

Lessons 6 & 7: Prototype Build / Lektion 6 & 7: Prototypbyggnad

1. Building Progress (Lesson 6) / Byggförlopp (Lektion 6): Describe what you built today. What was easy? What was challenging? / Beskriv vad du byggde idag. Vad var lätt? Vad var utmanande?
We did the front pockets with leather and side pockets with polyester. We also did the shoulder straps. The hard part was measuring and cutting out the easy part was gluing since ours kept falling off

2. Adding Features (Lesson 7) / Lägger till funktioner (Lektion 7): How did you incorporate your smart feature and final details today? / Hur integrerade du din smarta funktion och sista detaljer idag?
We added our inside as thermal with aluminum foil and we aligned our bag with fluff fabric for comfort. we glued the

3. Troubleshooting / Felsökning: What problem did you face, and how did you solve it? / Vilket problem stötte du på och hur löste du det?

we encountered a problem that is that our straps fell off but because lack of glue. we added more glue so it would stick

4. Written Explanation / Skriftlig förklaring: Write a short sentence explaining the purpose of each key feature of your bag. / Skriv en kort mening som förklarar syftet med varje nyckelfunktion i din väska.

- Feature 1 / Funktion 1: our bag is Thermal so the laptops don't over heat
- Feature 2 / Funktion 2: our bag has a charging port charged by solar panels
- Feature 3 / Funktion 3: our bag could lighten dependent on things inside

Lesson 8: Testing, Feedback and Iteration / Lektion 8: Testning, feedback och förbättring

1. Real-Use Test / Användartest: What happened when you tested your bag? Did it work as expected? / Vad hände när du testade din väska? Funkade den som förväntat?

test one the straps fell off again when walking
test 2 our straps stuck when we knew it was loose
test 3 went we

2. Feedback Carousel / Feedbackkarusell:

- Star 1 / Stjärna 1: we were good at achieving our materials
- Wish 1 / Önskning 1: we should listen more to others and not
- Star 2 / Stjärna 2: we were efficient working
- Wish 2 / Önskning 2: we should answer questions not only do alone.

3. Changes : Based on the feedback and testing, what is one change you made to improve your prototype? / Baserat på feedback och testning, vilken förändring gjorde du för att förbättra din prototyp?

stop stressing and don't do it calmly so it is not stopppg

Navya 6C

u

Design the bag of the future

Lesson	Focus	Purpose & Activities
1	Introduction & Inspiration	Explore the evolution of bags, watch short videos, discuss current and future needs. Link to sustainability, movement, digital life.
2	User Needs & Brainstorming	Empathy-based task: who is the bag for? What problems will it solve? Mind-map ideas.
3	Sketching & Concept Design	Students sketch multiple ideas, annotate functions and materials. Peer feedback.
4	Smart Features & Biomimicry	Introduce smart tech (e.g. solar charging, GPS, auto-lock zippers). Nature-inspired design examples. Add to sketches.
5	Material Science & Sustainability	Learn about sustainable and recycled materials, textiles vs other materials. Plan what they'll use in their prototypes.
6-7	Prototype Building (Part 1 & 2)	Build the physical prototype using textiles and other recycled materials. Focus on creativity + function.
8	Testing & changes	Test prototypes (e.g. comfort, usability). Adjust design. Use feedback from classmates.
9	Presentation & Documentation	Prepare a short pitch: function, design, features, materials, sustainability. Optional: posters or slides.
10	Showcase or Submission Prep	Practice presenting. Record videos or photos for submission. Invite parents or other classes.

Lesson 9: Presentation and Documentation / Lektion 9: Presentation och dokumentation

1. Presentation Plan / Presentationsplan: List the 3 most important points you will talk about in your final presentation. / Lista de 3 viktigaste punkterna du kommer att prata om i din slutliga presentation.

-
-
-

2. What is one thing you want to explain very clearly to the audience about your design? / Vad är en sak du vill förklara mycket tydligt för publiken om din design?

it clear that our bag has context straps
so it won't hurt shoulders
I want to make

Lesson 10: Showcase and Submission / Lektion 10: Uppvisning och inlämning

1. Final Reflection / Slutlig reflektion:

- What are you most proud of in your final design? / Vad är du mest stolt över med din slutliga design?
I am proud of our context strap
the communicate more and not to handle it slowly
 - If you had more time, what would you improve or add next? / Om du hade mer tid, vad skulle du förbättra eller lägga till nästa gång?
we communicate more and not to handle it slowly
2. Competition Criteria Final Check / Slutlig kontroll av tävlingskriterier:
- Active Life / Aktivt liv: How is your bag suitable for a person on the go? / Hur passar din väska för en person som är ständigt i rörelse?
our bag is comfy in the straps and spacious inside
 - Textile Part / Textilkomponent: What textile did you use? / Vilket textil använde du?
we used polyester and fluff
 - Smart Tech / Smart Teknik: What is your smart feature and how does it work? / Vad är din smarta funktion och hur fungerar den?
our bag is thermal and has heat and we have a charging port so we can charge
 - Sustainability / Hållbarhet: How did you make your design sustainable? / Hur gjorde du din design hållbar?
we used old scrap fabric to reuse.

Submission Checklist / Inlämningschecklista:

- This portfolio is complete. / Denna portfolio är fylld.
- Final photos/videos of our prototype are ready. / Slutliga foton/videoer på vår prototyp är klara.
- Our competition entry explanation is written. / Vår tävlingsförklaring är skriven.
- We are ready to present! / Vi är redo att presentera!

Name(s): Navya
Class: 6C

Lesson 1: Introduction and Inspiration / Lektion 1: Introduktion och inspiration

1. What is the main goal of the Chalmers competition? / Vad är huvudsyftet med Chalmers tävling?

The main goal of the Chalmers competition is to make a futuristic bag and to get an idea of future needs. Also for students to be creative about sustainable materials.

2. List 3 key things you learned about the history of bags. / Lista 3 viktiga saker du lärde dig om väskors historia.

1. The design of bags changes over time to adapt to our needs.
2. Different types of bags have been made for different purposes.
3. Different materials were discovered ex animal skin to fabric.

3. Competition Criteria Check-In / Tävlingskriterier:

- Sustainability / Hållbarhet: What is one reason for using recycled materials mentioned in the lesson? / Vad är en anledning till att använda återvunna material som nämndes i lektionen?

Using sustainable materials is not only good for the environment because they have been used before but also they can also be very useful. For example polyester polyester is a material made of recycled plastic and fabric. Polyester is waterproof which makes it a good material to use for bags.

- Smart Technology / Smart Teknik: Name one "smart" feature a future bag could have. / Nämnen "smart" funktion en framtida väska kan ha.

A future bag could have many smart features one that I think could be efficient would be charger outlets inside bags.

4. Reflection (Teknik & SO): How do you think the design of bags has changed because of changes in society or technology? Give one example. / Hur tror du att designen av väskor har förändrats på grund av förändringar i samhället eller tekniken? Ge ett exempel.

The design of bags have changed over time to adapt to our needs. The materials we use today like fabric or cloth are different based on what we used to use (animal skin). Also we have better equipment to make these bags (sewing machines). Not only that but we have developed different types of bags like gym bags and backpacks.

Lesson 2: User Needs and Brainstorming / Lektion 2: Användarbehov och idégenerering

1. Define Your User / Definiera din användare: Who are you designing for? / Vem designar du för?

A person who would deliver food like a delivery man. That is the delivery person would be on a motorcycle for long distances.

2. Empathy Map / Empatikarta:

- Says/Thinks / Säger/Tänker: What does your user say or think about their current bag? /

Vad säger eller tänker din användare om sin nuvarande väska?

Our bag insulating bag is better than their current bag because it can change temperature depending on the product.

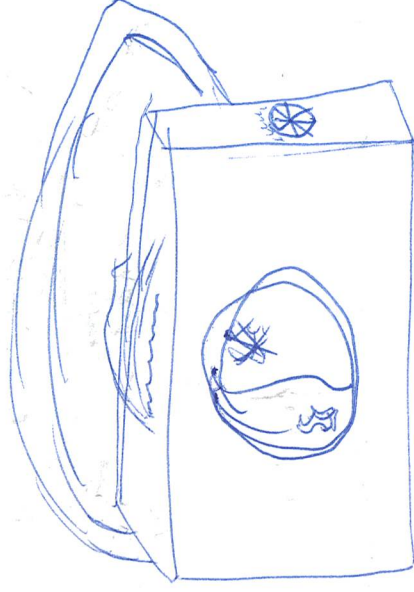
- Does/Feels / Gör/Känner: What do they do and how do they feel when carrying their things? / Vad gör de och hur känner de sig när de bär med sig sina saker?

Before they deliver food to people they feel cautious because the bag might fall off the motorcycle.

- Goals/Struggles / Mål/Svårigheter: What is their main goal? What is their biggest struggle? / Vad är deras huvudmål? Vad är deras största svårighet?

Their struggle before our bag was to keep the food warm/cold. Their main goal is to deliver their food in the right temperature.

3. Initial Ideas / Inledande idéer: Sketch or describe 2-3 different bag ideas for your user. / Skissa eller beskriv 2-3 olika väskaidéer för din användare.



Our bag is an insulating bag that is designed for delivery people on motorcycle. The bag can change temperature can be changed depending on the food product. For example, if they are delivering ice cream they would change the temperature to keep the ice cream cool. The temperature is changed by turning the dial the flap is to secure the bag onto the motorcycle.

Lesson 3: Sketching and Concept Design / Lektion 3: Skissande och konceptdesign

1. Chosen Idea / Vald idé: Which idea from Lesson 2 will you develop further? Give it a name. /

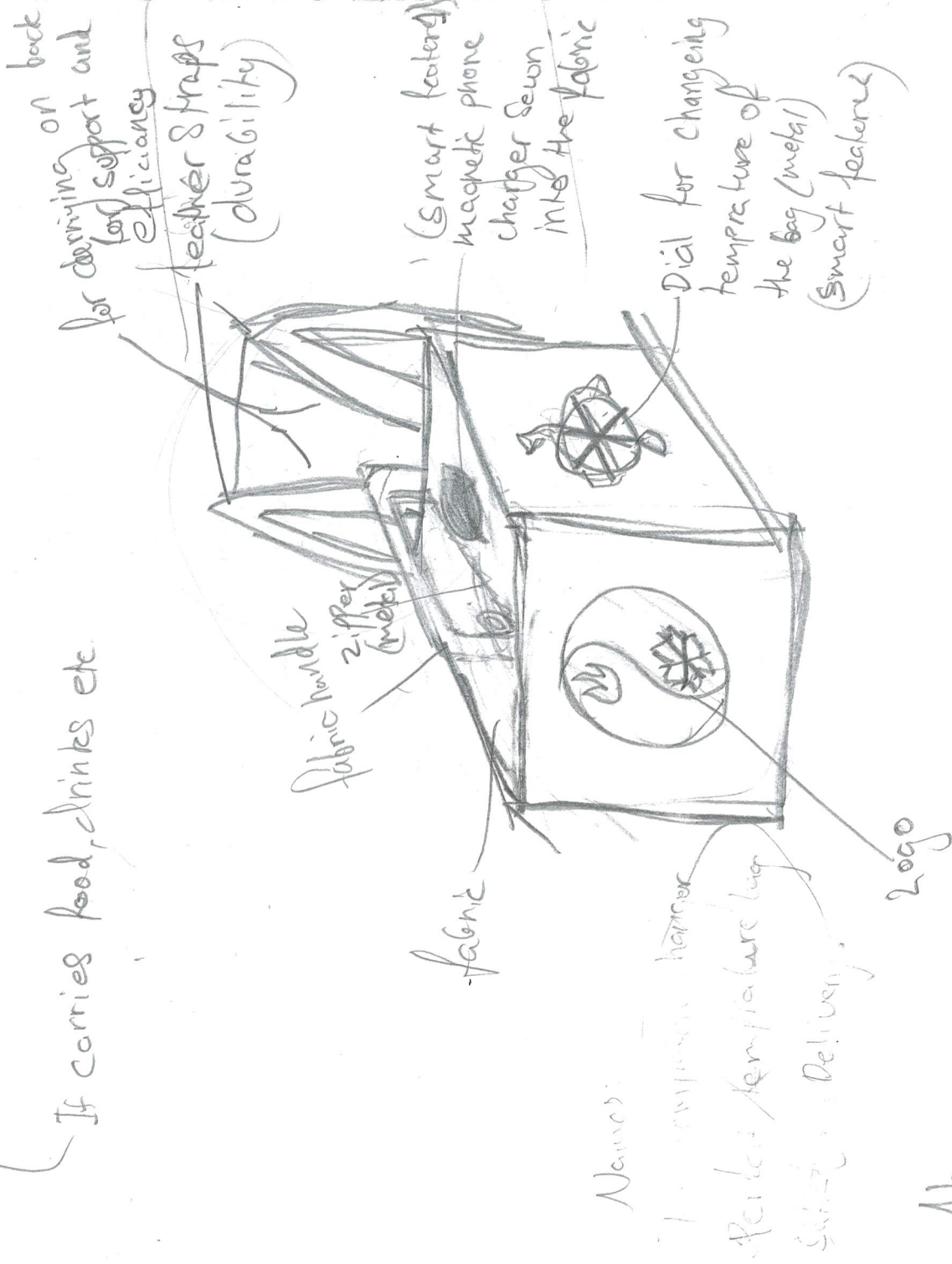
Vilken idé från lektion 2 kommer du att utveckla vidare? Ge den ett namn.
An insulating bag use for delivery drivers on motorcycles that has a dial which they use to change the temperature of the inside of it. It is also equipt with a magnetic charger for phones.

2. Annotated Sketch / Kommenterad skiss: Draw a detailed sketch of your chosen bag design.

Label the following: / Rita en detaljerad skiss av din valda väska. Ange följande:

- What it carries / Vad den bär
- Materials it's made from / Material den är gjord av
- How it works (straps, openings, etc.) / Hur den fungerar (band, öppningar, etc.)
- Its smart features / Dess smarta funktioner

If carries food, drinks etc



3. Peer Feedback / Kamratfeedback: What was one "star" (positive thing) and one "wish" (suggestion) you received from a classmate? / Vad var en "stjärna" (något positivt) och en "önskning" (ett förslag) du fick från en klasskamrat?

- Star / Stjärna: *It can cool food.*
- Wish / Önskning: *Take it more square*

Lesson 4: Smart Features / Lektion 4: Smarta funktioner

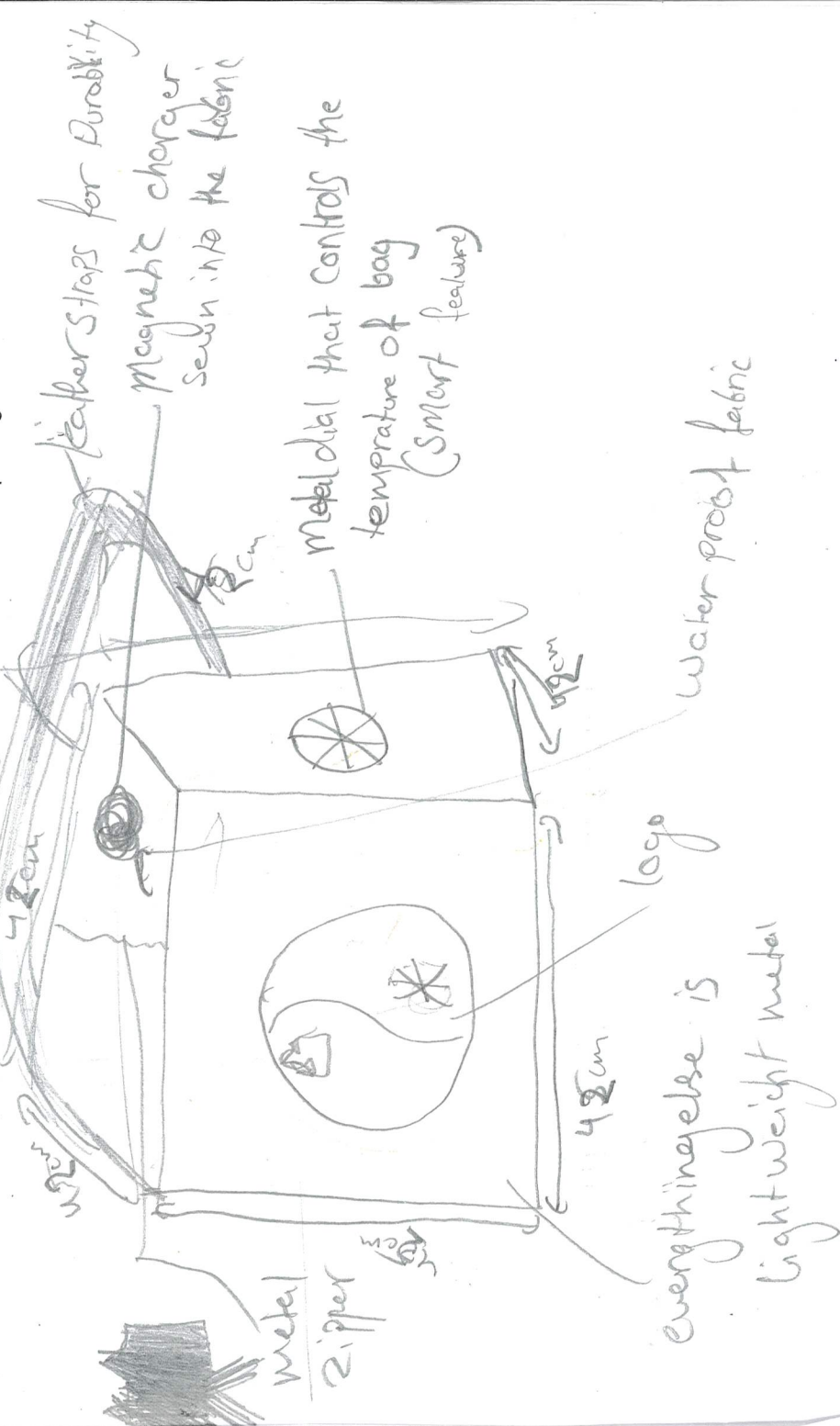
1. Your Smart Feature / Din smarta funktion: Describe the smart technology feature you are including in your bag. How does it work? / Beskriv den smarta teknikfunktionen du inkluderar i din väska. Hur fungerar den?

Our bag has 3 smart features. A dial that controls the temperature of the bag and a magnetic charging outlet sewn in between the fabric. Also the bags textile part is water proof.

2. What idea from nature inspired part of your design? / Vilken idé från naturen inspirerade en del av din design?

Our bags textile part is water proof like bird feathers and green leaves, fresh plants

3. Revised Sketch / Reviderad skiss: How did you improve your design from Lesson 3 based on today's learning? / Hur förbättrade du din design från lektion 3 baserat på dagens lärande?



Lesson 5: Sustainable Materials and Planning / Lektion 5: Hållbara material och planering

1. Material List / Materiallista: List all the materials you plan to use for your prototype. / Lista alla material du planerar att använda till din prototyp.

tail = 8cm
Cardboard box 18,5 x 31,5 cm
waterproof fabric 29,2 cm x 18,5 cm
Zipper
leather strap

2. Sustainability Focus / Hållbarhetsfokus: Which of these materials are recycled, upcycled, or otherwise sustainable? / Vilka av dessa material är återvunna, uppcyklade eller på annat sätt hållbara? The leather straps are upcycled, the water proof fabric is sustainable.

3. Tool List / Verktygslista: What tools will you need to build your prototype? / Vilka verktyg behöver du för att bygga din prototyp? Glue and Scissors

4. Plan Approval / Plan godkänd: My/Our plan has been approved by the teacher. / Min/Vår plan har godkänts av läraren. ✓ yes

Lessons 6 & 7: Prototype Build / Lektion 6 & 7: Prototypbyggnad

1. Building Progress (Lesson 6) / Byggförlopp (Lektion 6): Describe what you built today. What was easy? What was challenging? / Beskriv vad du byggde idag. Vad var lätt? Vad var utmanande? Today we found a box that fit our needs and glued waterproof fabric as an opening. We also made a functioning dial for changing the temperature. Then we made a leather strap.

2. Adding Features (Lesson 7) / Lägger till funktioner (Lektion 7): How did you incorporate your smart feature and final details today? / Hur integrerade du din smarta funktion och sista detaljer idag? We made the magnetic charger actually stickable to the demonstration phone we made. We also made a logo for our 'Infinity Temperature' bag.

3. Troubleshooting / Felsökning: What problem did you face, and how did you solve it? / Vilket problem stötte du på och hur löste du det? When we made the straps we realised they were too short so we cut more leather straps and attached them to our old straps which made them longer, solving our problem.

4. Written Explanation / Skriftlig förklaring: Write a short sentence explaining the purpose of each key feature of your bag. / Skriv en kort mening som förklarar syftet med varje nyckelfunktion i din väska.

- Feature 1 / Funktion 1: Magnetic Shoring port
- Feature 2 / Funktion 2: turning dial for changing temperature
- Feature 3 / Funktion 3: pouch

Lesson 8: Testing, Feedback and Iteration / Lektion 8: Testning, feedback och förbättring

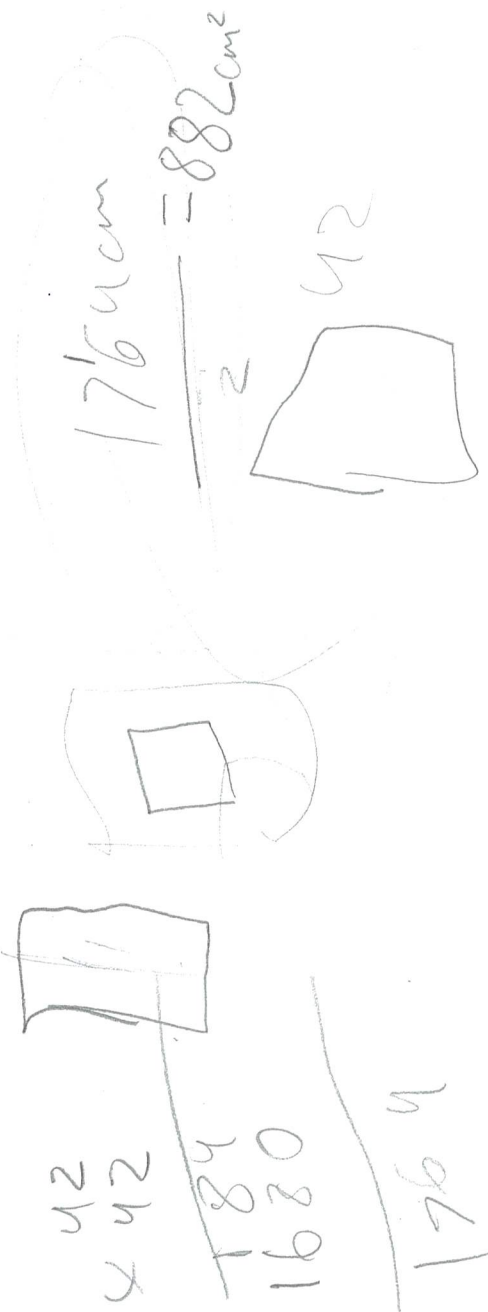
1. Real-Use Test / Användartest: What happened when you tested your bag? Did it work as expected? / Vad hände när du testade din väska? Funkade den som förväntat? We tested the straps durability and it turned out to be sturdy and functional.

2. Feedback Carousel / Feedbackkarusell:

- Star 1 / Stjärna 1: the dial
- Wish 1 / Önskning 1: make a flap instead of zipper
- Star 2 / Stjärna 2: more design
- Wish 2 / Önskning 2: more design

3. Changes : Based on the feedback and testing, what is one change you made to improve your prototype? / Baserat på feedback och testning, vilken förändring gjorde du för att förbättra din prototyp? We added a pouch for the phone to carry the phone if it is charged or for storage of keys, phone etc.

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Lesson 9: Presentation and Documentation / Lektion 9: Presentation och dokumentation

1. Presentation Plan / Presentationsplan: List the 3 most important points you will talk about in your final presentation. / Lista de 3 viktigaste punkterna du kommer att prata om i din slutliga presentation.

- 1.
- 2.
- 3.

2. What is one thing you want to explain very clearly to the audience about your design? / Vad är en sak du vill förklara mycket tydligt för publiken om din design?

Lesson 10: Showcase and Submission / Lektion 10: Uppvisning och inlämning

1. Final Reflection / Slutlig reflektion:

- What are you most proud of in your final design? / Vad är du mest stolt över med din slutliga design? *the logo*
- If you had more time, what would you improve or add next? / Om du hade mer tid, vad skulle du förbättra eller lägga till nästa gång?

2. Competition Criteria Final Check / Slutlig kontroll av tävlingskriterier:

- Active Life / Aktivt liv: How is your bag suitable for a person on the go? / Hur passar din väska för en person som är ständigt i rörelse? *make the bag openable with a flap instead of zipper*
- Textile Part / Textilkomponent: What textile did you use? / Vilket textil använde du? *Pouch for storage*
- Smart Tech / Smart Teknik: What is your smart feature and how does it work? / Vad är din smarta funktion och hur fungerar den? *magnetic charging port, button dial for temperature change*
- Sustainability / Hållbarhet: How did you make your design sustainable? / Hur gjorde du din design hållbar? *recycled fabric and waterproof fabric*

Submission Checklist / Inlämningschecklista:

- This portfolio is complete. / Denna portfolio är fylld.
- Final photos/videos of our prototype are ready. / Slutliga foton/videor på vår prototyp är klara.
- Our competition entry explanation is written. / Vår tävlingsförklaring är skriven.
- We are ready to present! / Vi är redo att presentera!