

modul 1 & 2

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.
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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? *leather, fabric, and a fabric bag.*
 - 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.
- 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!

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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
- 90 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? /

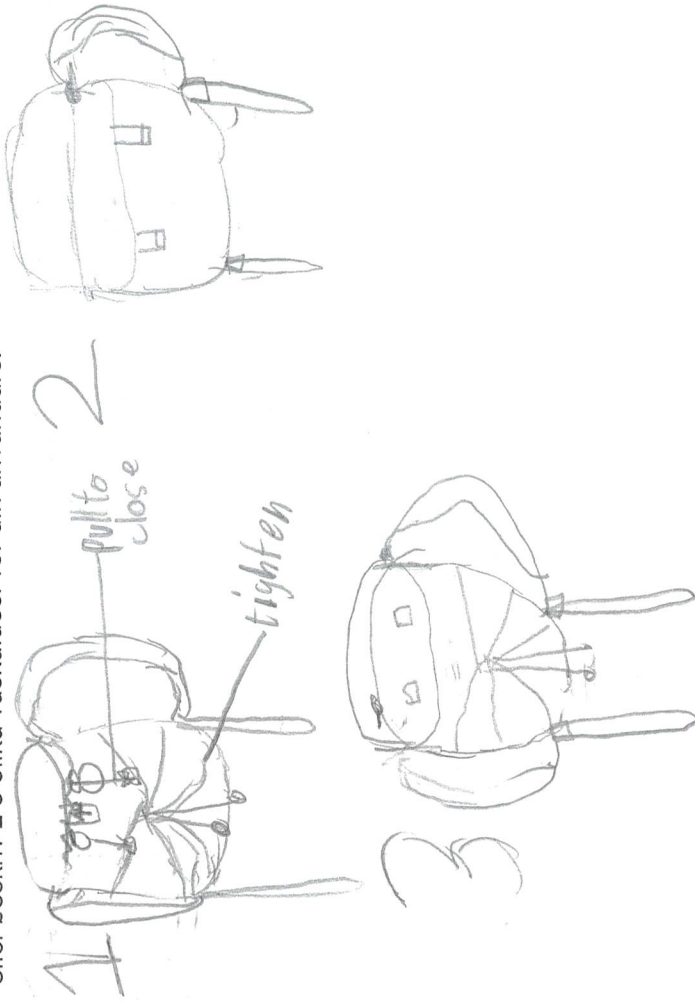
Vad säger eller tänker din användare om sin nuvarande väska?
they say that their shoulders hurt because their bags have uncomfortable straps and the bags are weighty

- 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. /

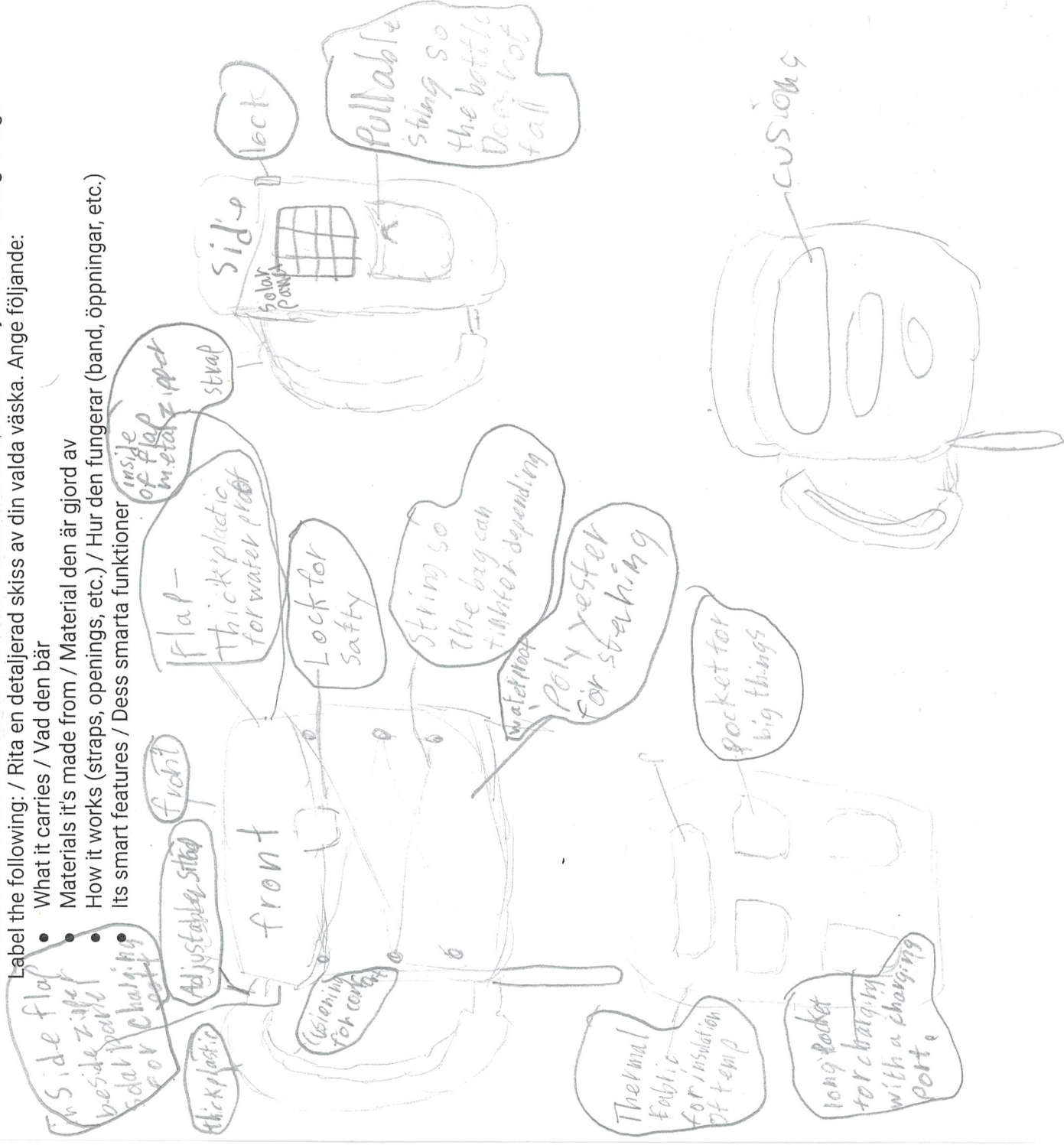
Vilken idé från lektion 2 kommer du att utveckla vidare? Geden ett namn.

The travel whacker is the g.m.f. We chase 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



Lesson 4: Smart Features / Lektion 4: Smarta funktioner

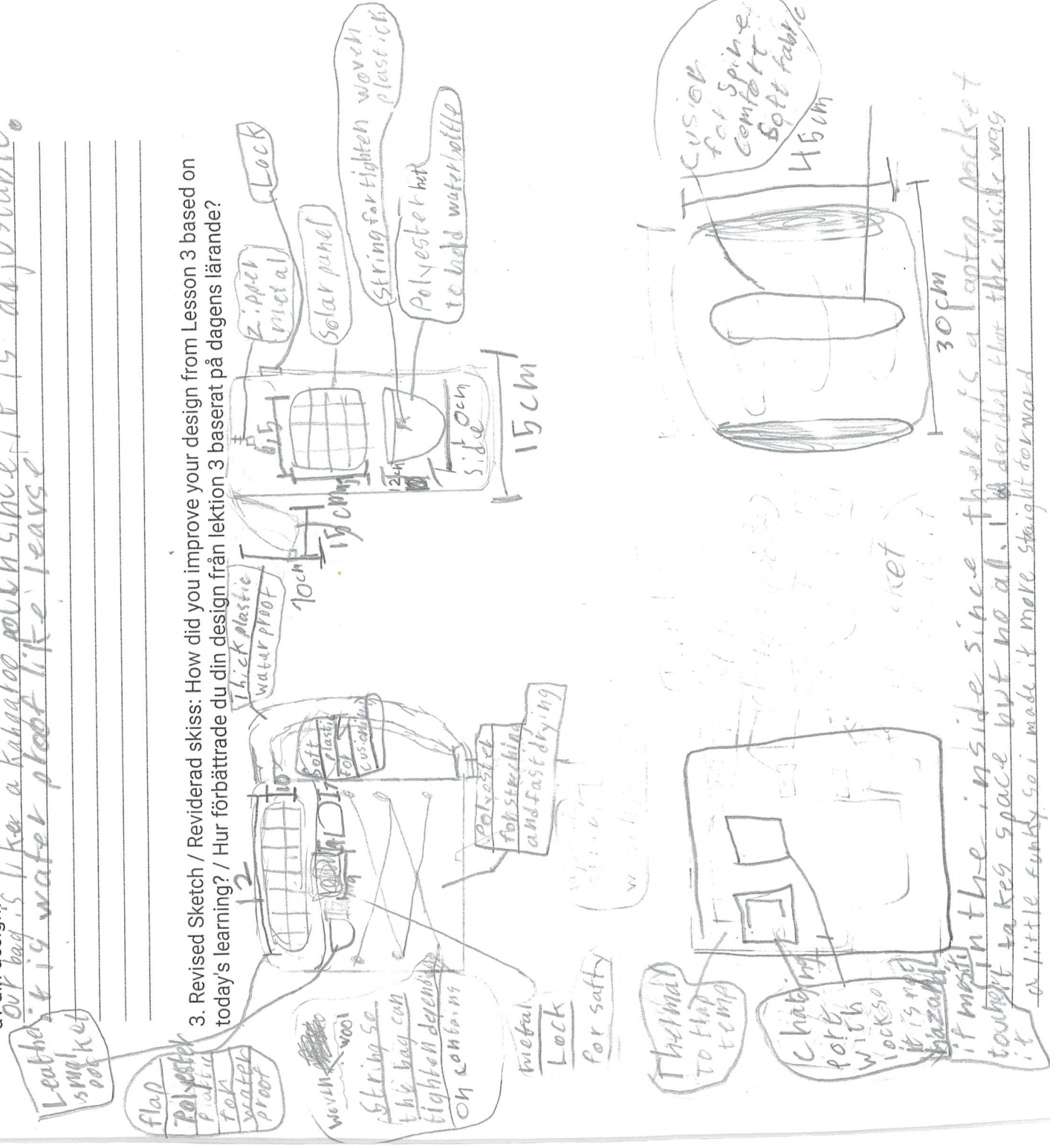
1. Your Smart Feature / Din smarta funktion: Describe the smart technology feature you are including in your bag. How does it work? / Beskriv den smarta teknikfunktionen du inkluderar i din väska. Hur fungerar den?

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?

av din design?
 our bad is like a kangaroo pouch since it is adjustable
 and 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?



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 191x66, 510, 12-1, 1, 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 again when walking. 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 light up depending 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 when 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 in making
- Wish 2 / Önskning 2: we should answer questions and 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