

BEEP BAR

A beeswax kit



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3D prototype

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Guest Presenters

Chez Doris

- Marina Boulos -

About the organization

Chez Doris is a charitable organization providing a variety of services for homeless women in Montreal. It is located in Montreal's west end, near Atwater station. In addition to providing beds and other living amenities, their programs help with finance, legal matters, housing, and physical and mental health. COVID-19 affected Chez Doris in social distancing measures but as they noticed an increase in violence towards homeless women and drug overdoses, the shelter opened their doors on a 24/7 basis as of December 1st, 2020.

- Is there something specific design students can bring to your organizations?

Call the charity first! See what their needs are. For Chez Doris, as it opened its door to homeless women, the needs are basic now. For financially unequipped people, activities and clothes are an important aspect to be provided; for homeless people, organizing activities is not really helpful, shelters, residences are the main concern.

- What are the issues your clientele is facing?

Women visiting Chez Doris have a lot of undiagnosed psychiatric behaviours, and because of their behaviours, they are being kicked out of their housing. For some, they have been chronically homeless for more than 10 years, and they loose lifeskills needed for living a stable lifestyle.

- Who are the people who need your help?

The average age of clientele is 56y/o plus. Some are indigenous women, many have lost their children, some others are dealing with divorce or health problems. Women with divorce payment every year are more vulnerable to homelessness when they lost their job. As affordable housings are rare, many women end up returning to the center again.

Guest Presenters

Resilience

- Nakuset -

- Is there something specific design students can bring to your organizations?

Those coming to resilience don't have much, accessories such as slippers are not really helpful. However, Resilience gives importance for architecture sans frontiere and interior design in order to provide an inviting experience for Indigenous people to make them feel at home.

- Is there help for children suffering homelessness in shelters?

Children are welcome, youth protection regulations sometimes mandate the shelter to keep the kids because it's a safer place and services are immediate.

- Does the government help more than just helping with collateral damage? What guides the process?

It has never been easy to deal with this genre of problem, especially as an Indigenous woman. The shelters always state what they need, then they need to go to Justice Canada or other private foundations for funding regarding issues with missing and murdered Indigenous people. They have to go outside the box to get the job done, the government usually follows certain standard and regulation. As the community is particularly vulnerable, Nakuset says she doesn't care who joins or not, she just works with what she has to help anyone.

About the organization

Resilience Montreal is a day shelter situated on Sainte Catherine street near Cabot Square in downtown Montreal. It serves a predominantly indigenous clientele, focusing on offering visitors food, access to showers, a place to sleep, access to relevant resources, and medical and mental support.

The center welcome people as they are, whether they are drunk or not, and advocates on police tickets or violence to fight back systemic racism on Indigenous group while also providing child protection services.

Guest Presenters

St-James

- Alain -

About the organization

The center was founded with the goal to offer a supportive environment for homeless people or those who are struggling with drug addiction and mentally ill people. It is situated on 1442 rue Panet in Montreal near Beaudry metro station. Services offered at the center include hot meals, showers and clothing for exchange. The center does not provide on site housing however, but can help people in need find a shelter to stay and provide assistance counselling.

They work with a fixed number of 250 people who can choose to work in the center or affiliated business.

-Where would you need more help?

Eventually, in the domain of creative arts they have always welcomed guests to demonstrate new methods of art and craft. Some past projects for example have been focused on tote bag-making with invited silkscreen artists to spread awareness for streetsuds while giving the members a useful product (Carolyn also mentions it was one of the most cool projects for them). Otherwise, help and volunteering need to be an add-on, i.e. bettering the menu through a workshop for the staff, not to replace them completely

- How do they get funding?

It's a combination – it started off from Qc government help, art supplies are funded by the government too; otherwise there are large money foundations, individual donors, walk for money and laundry business that help to bring in funds (offer service for 25 different clients). They have also created "la mixite" which is a connecting space of homeless people and "richer" people to provide connection for them.

- Biggest challenges members face because of covid?

It is stressful for everyone, but is even worse for people dealing with so many challenges. Montreal used to be super affordable, but it has become somewhat unliveable now. With the welfare of 690\$, tents appeared in Notre Dame, which used to be a signature in bigger cities.

Guest Presenters

GIAP

-What do you think of the Concordia Grey Nun petition?

It would be really nice to have a place providing warmth and comfort. Melodie on her hand have experience difficulties of homelessness, she was in the streets at 16, when her boyfriend died. She started using opiates, did shoplifting and panhandling to pay for drugs without getting a withdrawal but got caught, did jail multiple times, then she had the option to go to therapy once and did, it allowed her to work on a job and get an apartment. She wants to give people the chance that her friends didn't have and use what she lived as a tool to help others.

- What are aspects of the city on homelessness do we ignore? Is there anything about urban design that needs to be changed to be more welcoming to homeless people?

Anti-homeless benches in metro, bus stops, and other public space design are hostile to this population especially when a lot of these benches are not used. Because of this, hiding in underground areas is ideal for shelter but it promotes isolation which can be deadly in case of overdose or violence. What is needed is maybe a legal squatting area, an old building with no rules that allows to bring partners or animals. Public shelters are not helpful for all because sometimes being on street is their own choice. An option of a safe space should be available.

- Melodie and Carolyn -

About the organization

GIAP (Groupe d'intervention alternative par les pairs) is an organization aiming to prevent sexually transmitted diseases such as VIH, ITSS, and hépatitis among young people living in the streets and limit the bad influences of drug injection and nomadic lifestyle. Melodie works especially with youth involved in sex work and who have difficulty to get out of homelessness because of the stigmatization and marginalization; often people have to commit small crime to survive.

Guest Presenters

GIAP

- Melodie and Carolyn -

- The government is in denial regarding curfew measures saying that there are enough shelters. But what is the reality?

Shelters are all full, it's the same people going back every night. The number of beds only covers about 10% of the population, and this is because capacity has been reduced due to social distancing (no more bunk beds). Thousands pf people still need a place to stay while every slightly aggressive behaviour can be used as an excuse to kick the person out. Most homeless population deal with drugs but shelters have zero tolerance to it; also they need to have a place to go when tested positive.

- What needs to be changed in public's opinion about homeless people?

Re-educating: people are not bad, but the way they are raised can skew the reality and lies are propelled, affecting public opinion. No one plans on living in the streets, everyone can end up there, some people don't like living in society so they try living on the streets but they can't get out of the situation once they are in. As long as people don't realize how un-different the homeless are from us, the population will remain under dark areas.

Alain further commented:

Shelter systems are problematic because of rules contributing to rank the value of people who live on the street. So many conditions affect them and some don't deserve to stay while others deserve it. This is a huge issue because shelters are unable to address these issues even though there is a lot of will for certain things. Everything is reactionary and problems are so complex. So, we need to address the internal issues (Airbnb taking-up vacancies, condos that are barely used by foreigners that rarely come to mtl, etc.) Montreal's mayor Valerie Plante suggested making an ice ring next to a condo building so that the owner could connect with the homeless population that is living in the parc.

Guest Presenters

GIAP

Carolyn also commented:

There are people making changes: some kids are going to Dans La Rue and getting education and there are also some programs to help them. We need to understand the negativity especially because of covid, 300 people are stuck in 1 space, but can't get the attention and compassion needed. The goal now is to feed and give shower to the clientele and then let them leave because the amount to handle is too much. In order to reduce the harm, the person themselves needs to be ready to make change.

- Any thought on the SPVM? Have you faced situation where police officer abused their power?

It happened to Melodie many times but now the situation is getting better as the mindset changes. Education in this context is needed to demystify the life of the homeless. The fact that you cant have a meltdown anywhere but in the public areas is hard because you will always look crazy or dangerous to the police.

The hippocampus part of your brain is always on during uneasy survival situation which has bad affection in the long term.

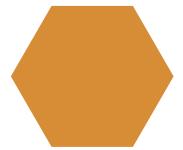
Some people get trauma from police officer that abused them and that causes defensive reactions to anyone in uniform.

1

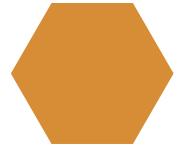
Socks and PPE: is there a place to wash them?

There are not many options to wash reusable items (masks and socks). Thus, socks, boots or soles are really useful to the population. It would be very appreciated to design one that wouldn't get wet and that would repel fungus.

Keywords



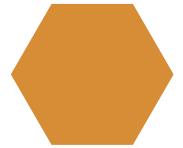
Community Support



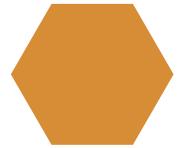
Independence



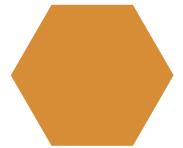
Homelessness



Arctic Design



Human-Centric Design



Do-It-Yourself



Seasonality



Co-creation



Hybrid culture



Context sensitivity



Human scale



Soft Surface

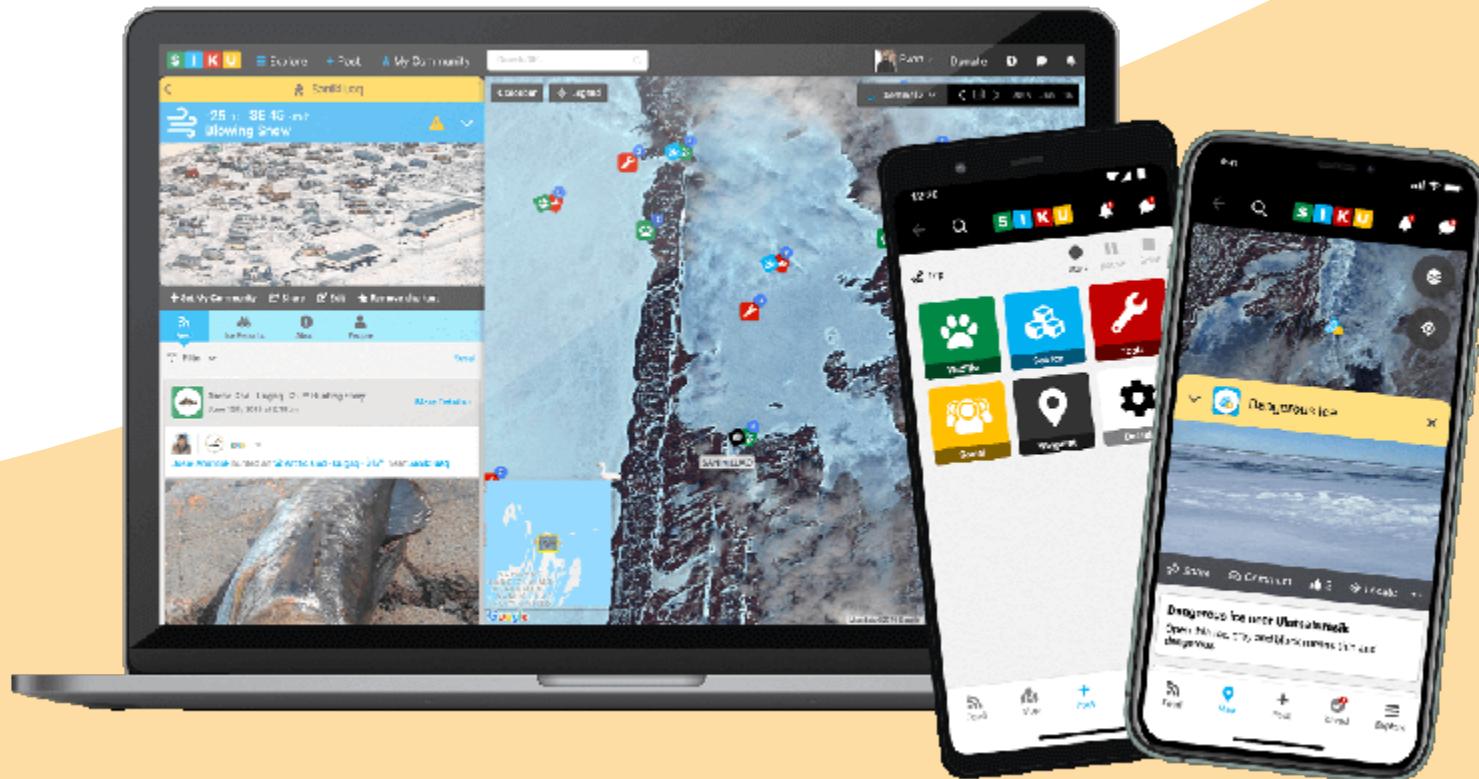
Productive Question/ One Line Description

How

can we choose locally-made raw materials to design useful products for both the homeless community and general public while aiming at minimal consumption waste in the context of sustainability?

Research/Inspiration

Topics on homelessness



Arctic Eider Society

Founded in 2011, the Arctic Eider society is a non-profit organization committed to study and education of the Indigenous Arctic issues. As of 2021 it has several ongoing projects including monitoring of sea ice and contaminants in the Hudson's Bay, a project in collaboration with indigenous hunter's and community associations to define an approach to protected areas on the Belcher Islands, and SIKU (a web and mobile based social network for Arctic communities allowing them to keep control of their data and use their knowledge towards community organization and development).

Iglou

Iglou is a Czech organization that makes emergency temporary shelters for homeless people that cannot sleep in night shelters. These shelters are made out of sheets of foam and insulating material. They are collapsible and easily constructed.



Research/Inspiration

Topics on homelessness

Rapid Re-Housing

Solutions for homelessness principally target systematic approaches to end this situation. One possible assistance is the Rapid Re-housing program that provides short term rental services without preconditions, thus open to anyone limited by criminal record, employment status or credentials. Proven more effective than shelters, having a home facilitates people to prepare for a reintegration into workplaces and to treat substance abuse which are some of the homelessness factors.

There are three core components for a re-housing program: "housing identification", "rent assistance", and "case management". The program should be responsible to reach landlords and resources to build a partnership to offer rent services at an affordable price, lower than the market standards, that will be provided to people in need.

Interview with expert

Our teammate Camila did an interview with Marie-Ève who works as a nurse for homeless help center. Here are the correspondances.

Camila Cormier:

J'aimerais entendre ton avis sur l'approche que mon équipe prend pour répondre aux contraintes et au but du projet. Voici quelques notes sur le projet:

- Le but est de produire un bien qui pourra être vendu à travers une levée de fonds virtuelle. Les fonds iront aux associations à but non lucratif mentionnés dans le 3e point
- L'objet doit être assez petit (idéalement moins de 2cm en épaisseur) pour être livré par la poste sans avoir à payer de frais supplémentaires
- Nous avons eu une conférence avec les représentants de Dans La Rue, du Centre St-James, de Chez Doris et de Résilience Montréal.

Interview with expert

Camila Cormier:

Voici la direction dans laquelle mon équipe s'enligne:

- Nous allons produire kit qui inclura une barre de cire d'abeille, un livret avec des instructions/suggestions sur comment l'utiliser et un outil pour faciliter la production de ces projets
- La cire d'abeille a plusieurs propriétés: non toxique, émollient, peut être appliquée sur des tissus pour les rendre imperméables, peut être utilisé pour les produits de beauté, peut lubrifier, peut sceller, peut être transformé en allume-feu, peut être utilisé pour faire des bougies... etc.

De plus, nous envisageons fabriquer un produit secondaire qu'on donnerait aux associations pour sans-abri que nous soutenons. Alors, mes questions pour toi seraient les suivantes:

1. Quels types de produits sont les plus nécessaires aux sans-abri?
2. Quelles propriétés de la cire d'abeille leur seraient les plus utiles?
3. As-tu des idées de produits utiles qu'on peut créer pour les sans-abri en utilisant de la cire d'abeille? N'hésite pas à me poser des questions si tu as besoin de clarification.

Interview with expert

Marie-Ève Fournelle:

L'idée d'utiliser la cire est intéressante (et écolo!). À mon avis, si cela peut permettre de garder les effets personnels et quelques vêtements au sec en cas de pluie, ça peut être une bonne idée . Est-ce que ça serait efficace pour rendre étanche des bottes qui fuient ou colmater des gants troués l'hiver? Si oui, pourquoi pas? Ça peut être un bon outil de dépannage pour réparer un vêtement ou imperméabiliser un sac à dos qu'on aime particulièrement, voire une tente ou un sleeping bag pour ceux qui couchent dehors.

Les usages en tant que bougie, lubrifiant ou produit de beauté ne seront probablement pas très populaires. Aussi, les personnes qui vivent dans la rue doivent traîner toutes leurs possessions avec eux toute la journée, ils s'en tiennent généralement au strict minimum. Un produit destiné aux sans abris doit être le plus léger, le moins spacieux et le plus simple d'usage possible.

Si cela demande beaucoup d'effort et de patience, ou qu'il faut avoir un environnement particulier pour être en mesure de travailler la cire il se peut que le produit n'ait pas beaucoup de succès. On cherche à ce que ce soit simple et rapide. De même le livret d'instructions devrait être réduit au minimum, quitte à ce que ce soient les intervenants des organismes qui expliquent aux gens comment s'en servir.

Interview with expert

Marie-Ève Fournelle:

Les produits nécessaires aux sans abris:

- Produits permettant de **conserver la chaleur** dans les bottes, dans les mitaines et dans les manteaux en hiver.
- **Couvertures**, sac de couchage.
- **Sac à dos**
- Produits permettant de se mettre à **l'abri du soleil** l'été, chapeaux, casquettes (parasol ... mais c'est moi qui trouve ça. Dans les faits personne ne traîne de parasol et nombreux sont ceux qui font des insolations).
- **Bottes imperméables** mais qui ne conservent pas l'humidité.
- **Semelles** avec coussins confortables au talon et à l'avant du pied, semelles anti-humidité, poudre anti-humidité et antifongique ... (beaucoup d'infections graves sont déclenchées à l'origine par des souliers trop humides)
- Brosses à dents, **produits d'hygiène**, et particulièrement d'hygiène féminine; certaines femmes prennent du papier de toilette en guise de serviette sanitaire parce que ça coûte trop cher d'en acheter au moment où elles en ont besoin
- Des **crèmes** pour la peau gercée.

Interview with expert

Marie-Ève Fournelle:

Pour ce qui est des produits secondaires en cire d'abeille qui pourraient être distribués qui me viennent à l'esprit:

- Produits permettant d'**emballer**/de sceller de la nourriture pour qu'elle reste fraîche (ben oui ça existe déjà des saran wrap à la cire d'abeille, mais c'est vrai que c'est pratique! Et c'est probablement bon aussi pour empêcher les cigarettes de sécher et de s'effriter dans le fond d'une poche...)
- Vêtements isolés et/ou **imperméables**, comme des mitaines par exemple, si le rendu est assez souple. (Si ça donne un produit rigide et d'apparence bizarre, personne n'en voudra).
- Sacs à dos, **poches bananes imperméables**
- **Crème hydratante** pour les mains, et pourquoi pas? le corps et le visage. Le froid et le soleil sèchent la peau et les gens qui vivent l'itinérance ont presque tous des carences alimentaires qui affectent le renouvellement et l'élasticité de la peau, ce qui fait que plusieurs se retrouvent avec des mains et des pieds gercés et crevassés. Ça peut être très douloureux. Sans compter que la peau sèche et squameuse peut fendiller et devenir le point d'entrée d'infections dangereuses, voire mortelles (comme la fasciite nécrosante, la fameuse "maladie mangeuse de chair").

Research/Inspiration

Topics on beeswax

Use of beeswax

Beeswax is a versatile material, here are a couple methods to proceed them and to use them.

Source:
beeswrap.com



Source:
cleanipedia.com



Source:
amazon.ca



Source:
honestlywtf.com



Source:
momtastic.com



Source:
organic-beau-
ty-recipes.com



Source:
jerszyseymourdesignworkshop.com

1. Food wraps

Fabric coated in beeswax to replace glad wrap; it can last up to 5 years.

2. Waterproofing canvas/shoes/leather/furnitures

The waterproofing and anti-rusting properties of beeswax can be useful for finishing.

3. Candle making

Beeswax candles are air purifying agents, they are renewable and natural.

4. Wax as a seal

Beeswax can be an option to replace wax seal for mail.

5. Balm for hand/foot

DIY hydrating balm can be easily made at home with beeswax and coconut oil.

6. Cosmetics

In addition, beeswax can also be used for lipstick DIY.

7. Wax as a glue

The designer Jerszy Seymour used wax as a construction material to bind parts of a chair.

Research/Inspiration

Topics on beeswax

Composition

The approximate chemical formula for beeswax is $C_{15}H_{31}COOC_{30}H_{61}$; it generally includes hydrocarbons, monoesters, diesters, triesters, hydroxy monoesters, hydroxy polyesters, acid, alcohols, etc.

Source:
babycinokids.
com



Source:
carolinahoney-
bees.com



Source:
carolinahoney-
bees.com

Source:
thehouseand-
homestead.com



Source:
poblex.info



Source:
.humblebeeand-
me.com

8. Crayon

Colour pigments can be added to beeswax and molded into colour crayon.

9. Firestarter

Combined with cotton or other flammable material, beeswax can be used as a firestarter.

10. Alternative for resin

Beeswax is a moldable and solid material that can replace resin or other bio-plastics.

11. Hair pomade

Beeswax combined with shea butter, jojoba oil, and essential oil can make a hair pomade.

12. Earplugs

Beeswax can be molded in to form of earplugs and be used in the same way.

13. Lubrification for joints

Lubrification can be applied to joints, namely on zippers, wheels, etc.

Proposal Description

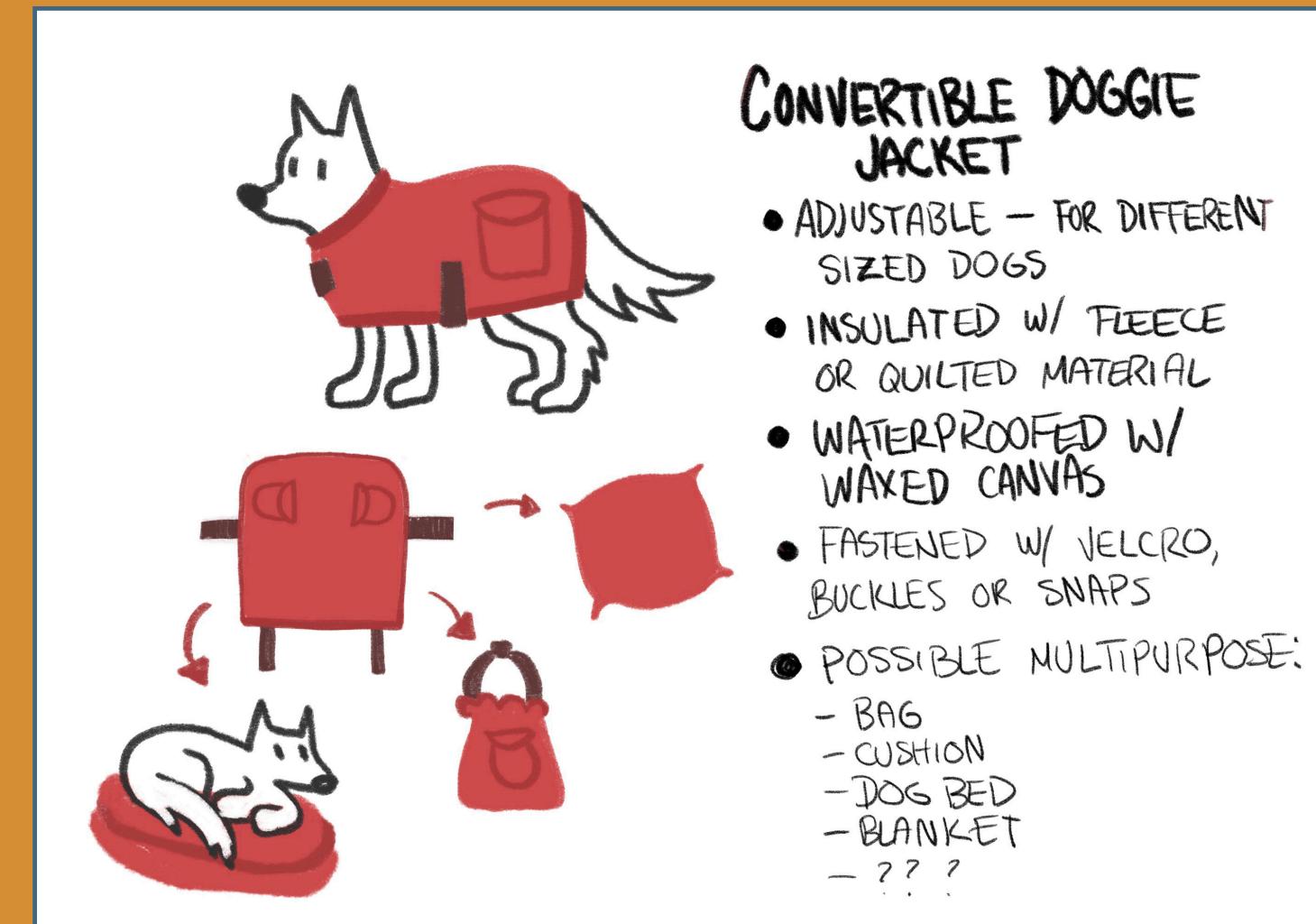


Identification of main direction

Following our research and interviews, our team agreed on focusing on making a survival/living kit that could be primarily beneficial to people living in the streets. The main targeted problems to solve are waterproofing, heat-conservation, hygiene and skin hydration.

Each one of us developed three product concepts, that are narrowed down to two presented concepts.

EMILY'S SKETCHES



M A N ' S S K E T C H E S

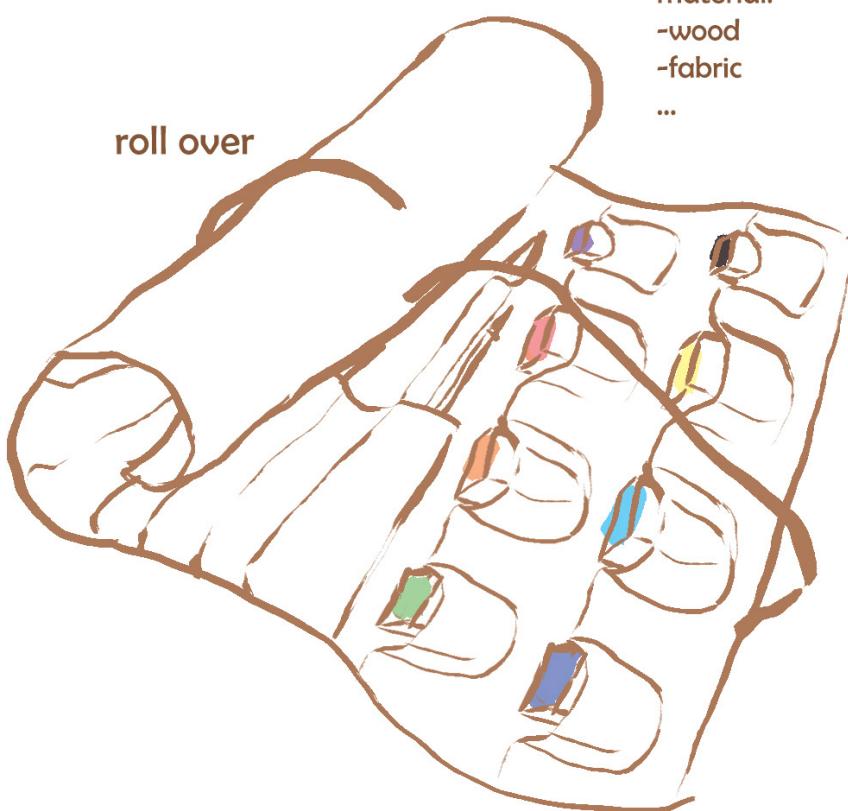
Isothermal Bag

- foldable into cushion
- wearable (to keep warm)



DIY Natural Paint & painting kit

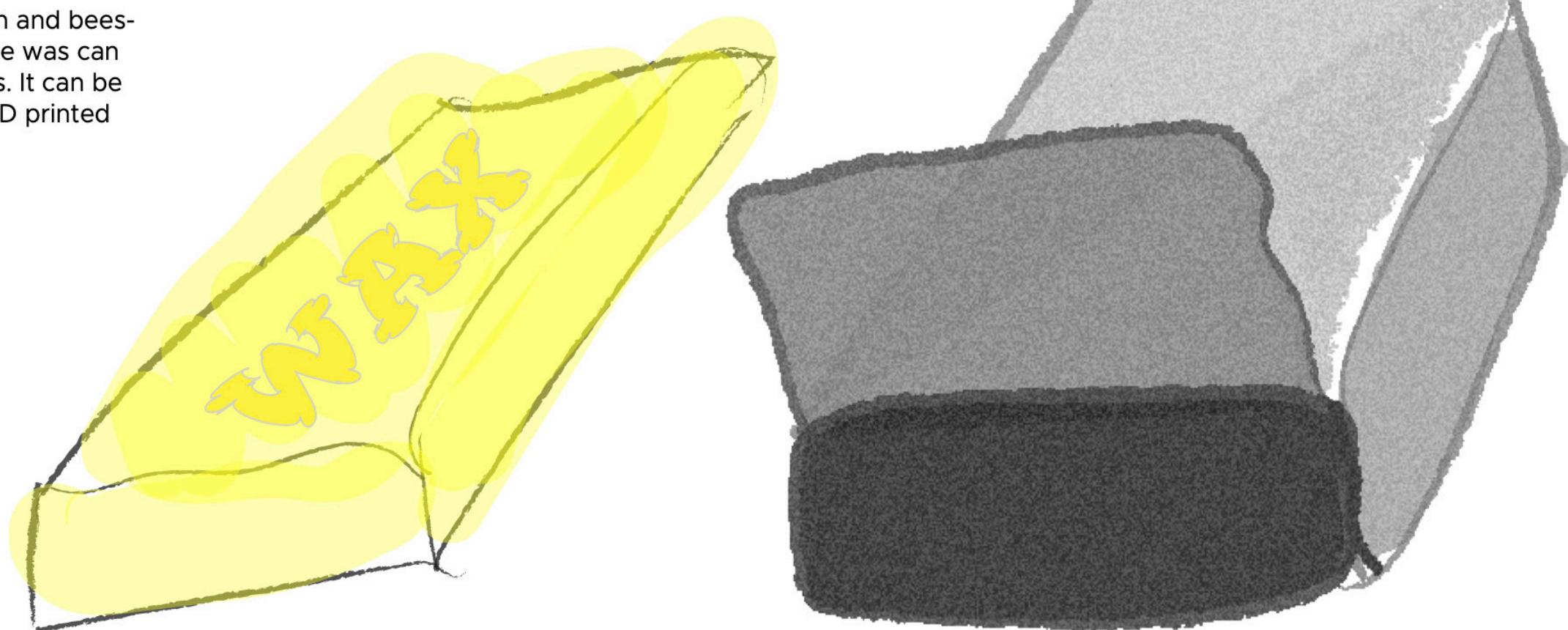
material:
-wood
-fabric
...



PHIL'S SKETCHES

WAX WATERPROOFING KIT

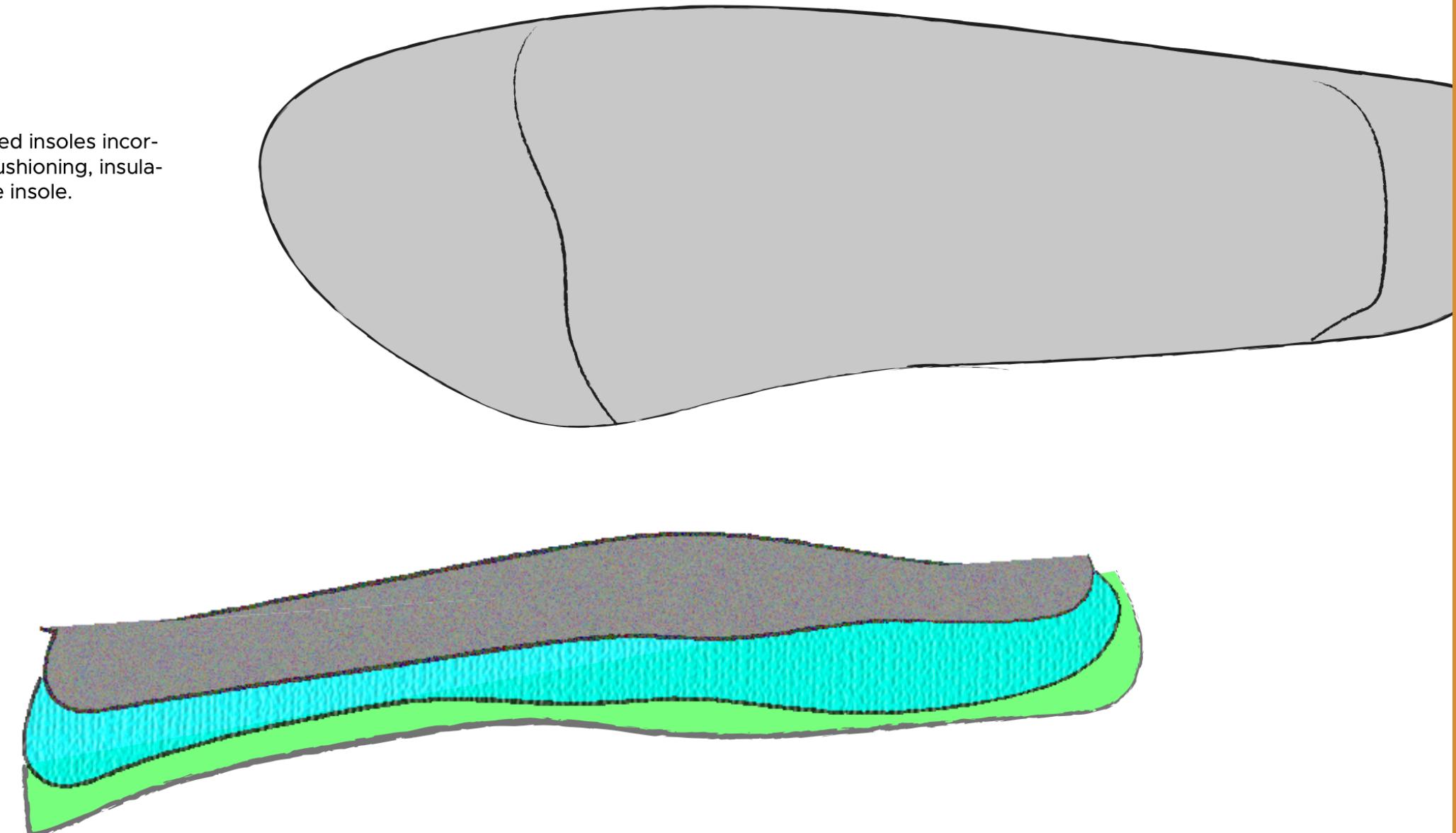
A wax bar, made of a combination of paraffin and beeswax, stored in a waterproofed felt pouch. The was can be used to waterproof all types of textiles. It can be produced cheaply and easily using custom 3D printed moulds.



LAYERED INSOLES

Using felt as a base, creating multi-layered insoles incorporating bioplastics to add additional cushioning, insulative and waterproof properties to a shoe insole.

Felt top layer
Agar-based foam
Waterproof biplastic lining



CAMILA'S SKETCHES

Convertible waxed bag

Could be used as a backpack, tote or gym bag, lunchbox, storage, planter, fruit bowl...

Would come with 1 interior slip with pocket. This slip would have a felted side and a canvas side (for backpack/tote)

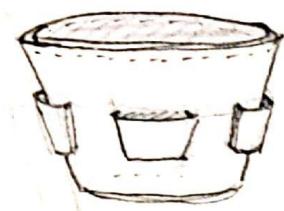
The lunchbox and planter options would not need a slip.

Screenprinting: outer pattern of the planter, would include a theme to relate the cause to the product

IDEA 1: CONVERTIBLE BAG

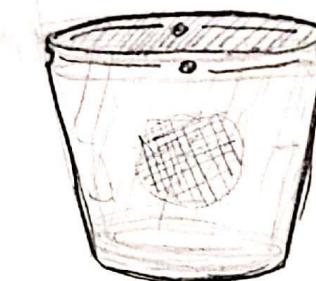
2 layers:

[LAYER 1]



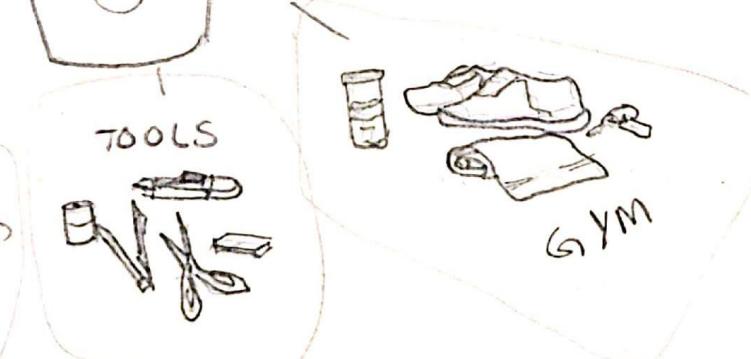
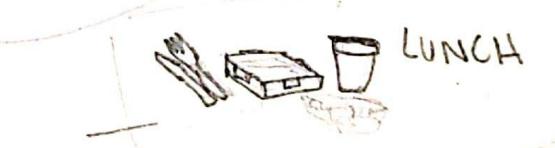
- canvas exterior with 4 pockets
- felted interior

[LAYER 2]

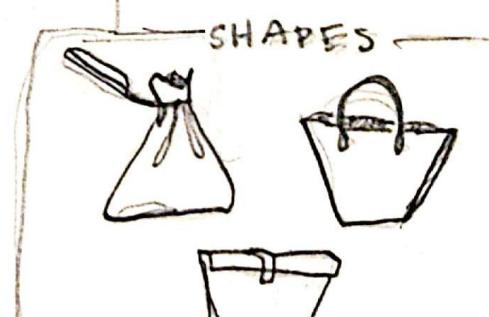


- canvas only
- one waxed side, one natural
- 4 holes to accommodate external handles
- layer 1 can be inserted
- upper lip would have reinforcement to be able to roll

BAG CAN BE USED FOR...



ATTACHMENTS:
CANVAS + HOOKS
x4 + x8
x4



A medium-sized piece of fabric that would have adjustable layers and would keep its shape

Layers would include:

1 plastic (bioplastic, for gentle use like wrapping food items or using for mouse pad?)

1 felt (for heat retention)

1 waxed canvas (for outdoors, covering backpack or shield from rain)

One or all of these would keep its shape through:

embedded moldable wiring (aluminum, could be recycled from masks?)

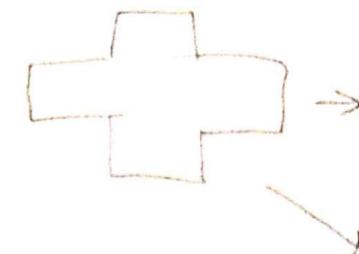
external elastic grid with hooks (bungee chord style) through use of wax

They could be zipped all together, used in combination or alone.

Size would be around 12x12in, with maybe one larger one? not sure.

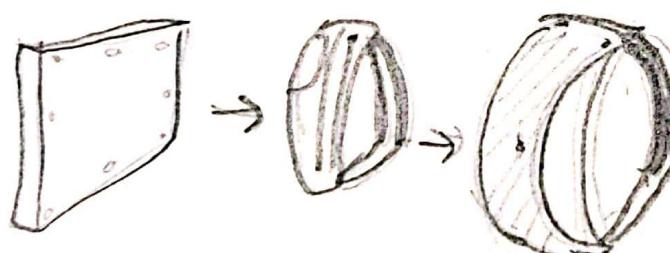
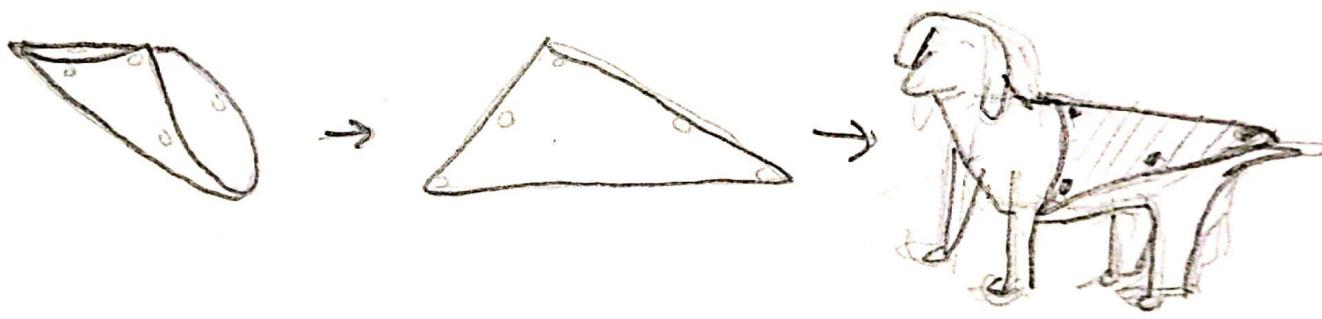
IDEA 2: CONVERTIBLE "TARP"

3 LAYERS

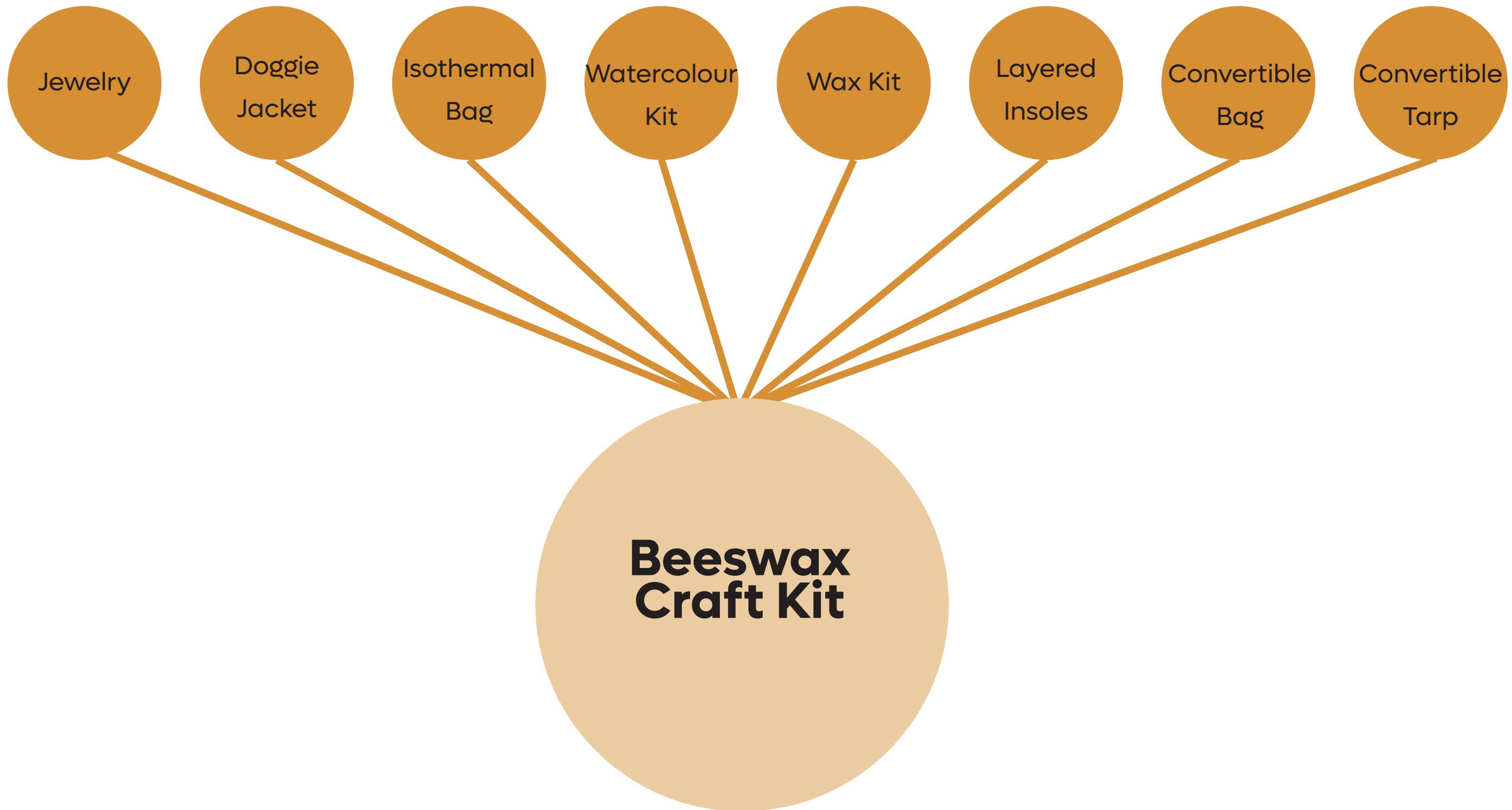


BECOME 1 (or interchangeable)

CAN BE FOLDED & HOLD
SHAPE



SHAPE SECURED USING
ELASTICS OR embedded
wire (aluminum)



BEE SWAX DIY KIT

- **Beeswax bar**

The main product, this will be a bar that can be used for a variety of projects. We are exploring options of other materials to include in the bar.

Material: Beeswax, Lanolin, Soy Oil

- **Tool to shave off pieces of wax**

Similar to a grater or comb, this tool will allow the user to get small shavings of wax for more even application.

Material: Wood, Bioplastic

- **Booklet of wax-based projects**

A guide including a variety of practical projects that can be made with the kit (e.g. lip balm, firestarter, waterproofing).

This could be printed or simply a pdf that is accessible by QR code in the kit.

Material: Paper, Ink

- **Cloth packaging**

This will double as a sheet that can turn into a beeswax food wrap when wax is applied.

Materials: Cotton, Ink, Thread

- **Felted bumblebee**

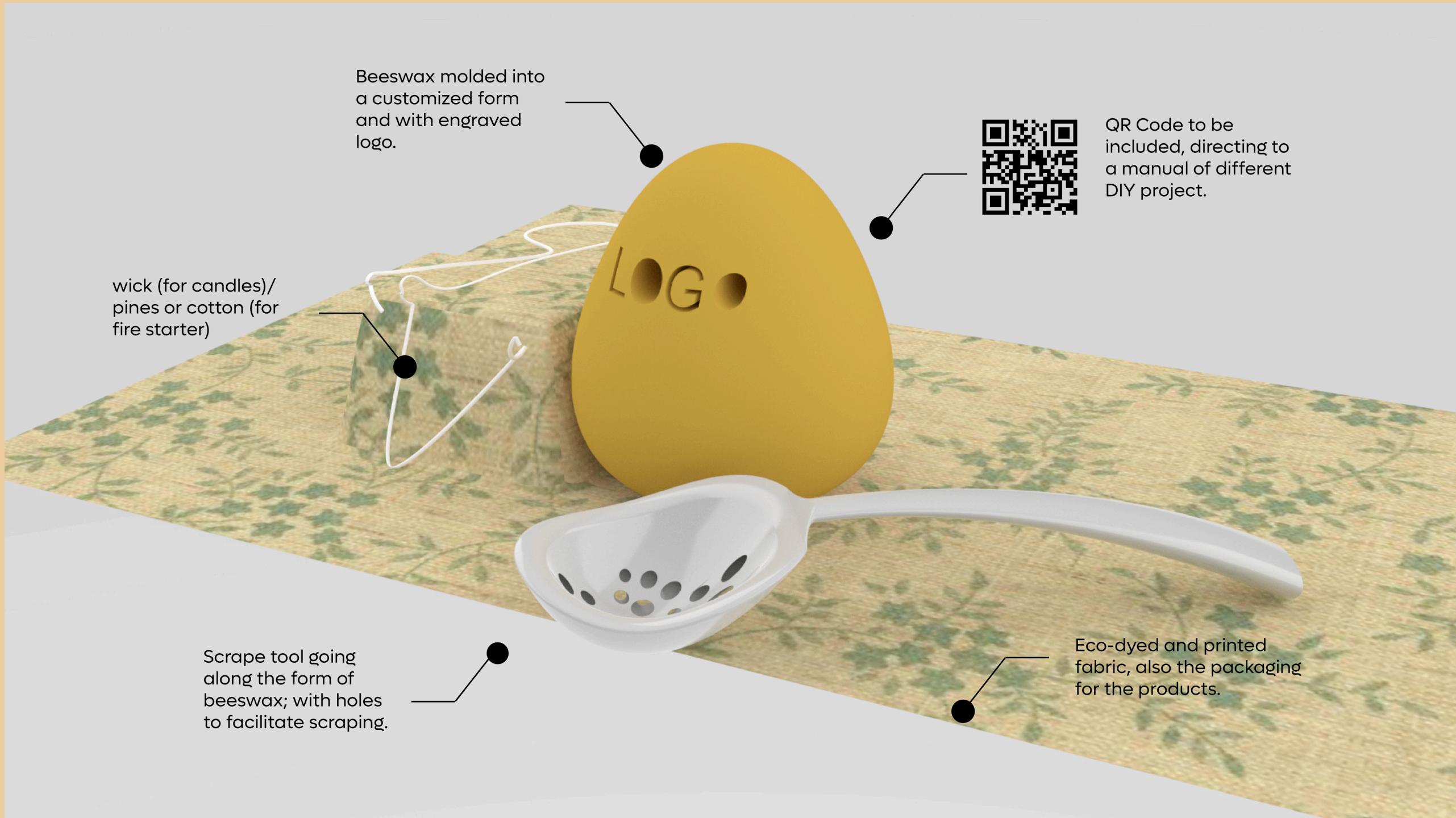
An extra item to add a little whimsy to the project. This could be made as a toy, piece of jewelry, or keychain.

Materials: Wool, Ink

INSPIRATION



RENDERING



Prototypes and Changes

Scrape tool

After experiments done with the wax, we concluded that 3D printed plastic is not an option as the wax is hard to peel off. Since we don't have access to metal or wood workshops, it is better to withdraw the idea.

Wooden tag

The instruction document is decided to be online only, initially the QR code is thought to be printed on a piece of paper, but after careful reflection we decided to laser engrave it on wood to allow better durability and it also can be a decorative item.

New elements in the kit:

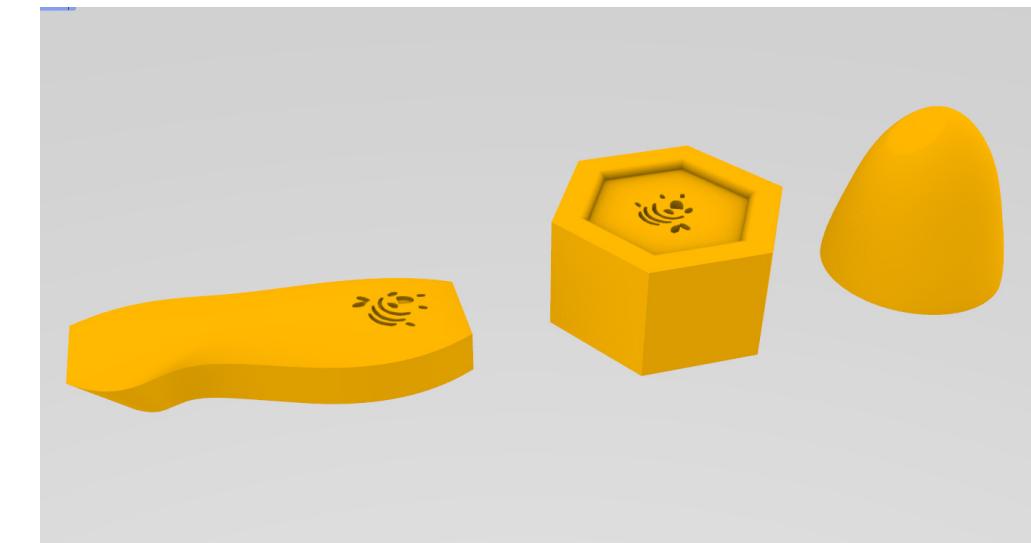
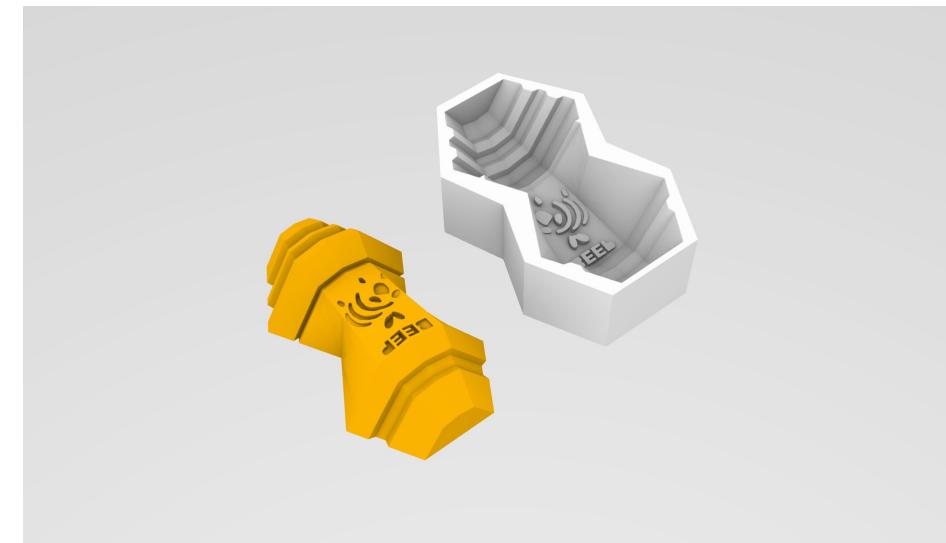
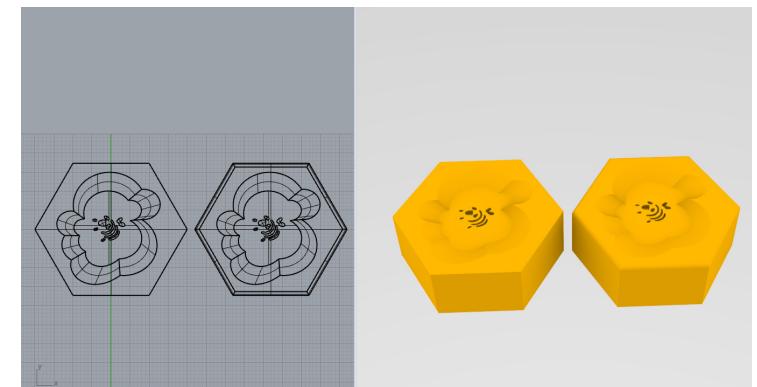
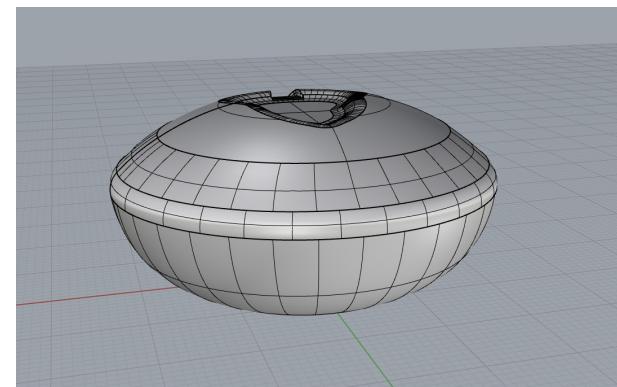
- A block of beeswax
- Three printed pieces of fabric
- A pouch
- A felted Beep
- A wood tag with QR code
- Online instruction pdf



Prototypes Beeswax

Preliminary models

A few modifications have to be made as we are aiming to make an one-part printable mold. Due to the sticky nature of beeswax, we have to minimize the contact area with the mold. All the ideas below ended up being eliminated.



Testing Beeswax

Process

A few modifications have to be made on the molds. We started with a cubic mold to discover soon that the stiffness makes it very hard to get the beeswax out, and deep small engravings stay stucked in the wax. After some iterations, we ended up with a flexible mold with larger engravings.



Testing Beeswax



Unmolding Beeswax

Solution

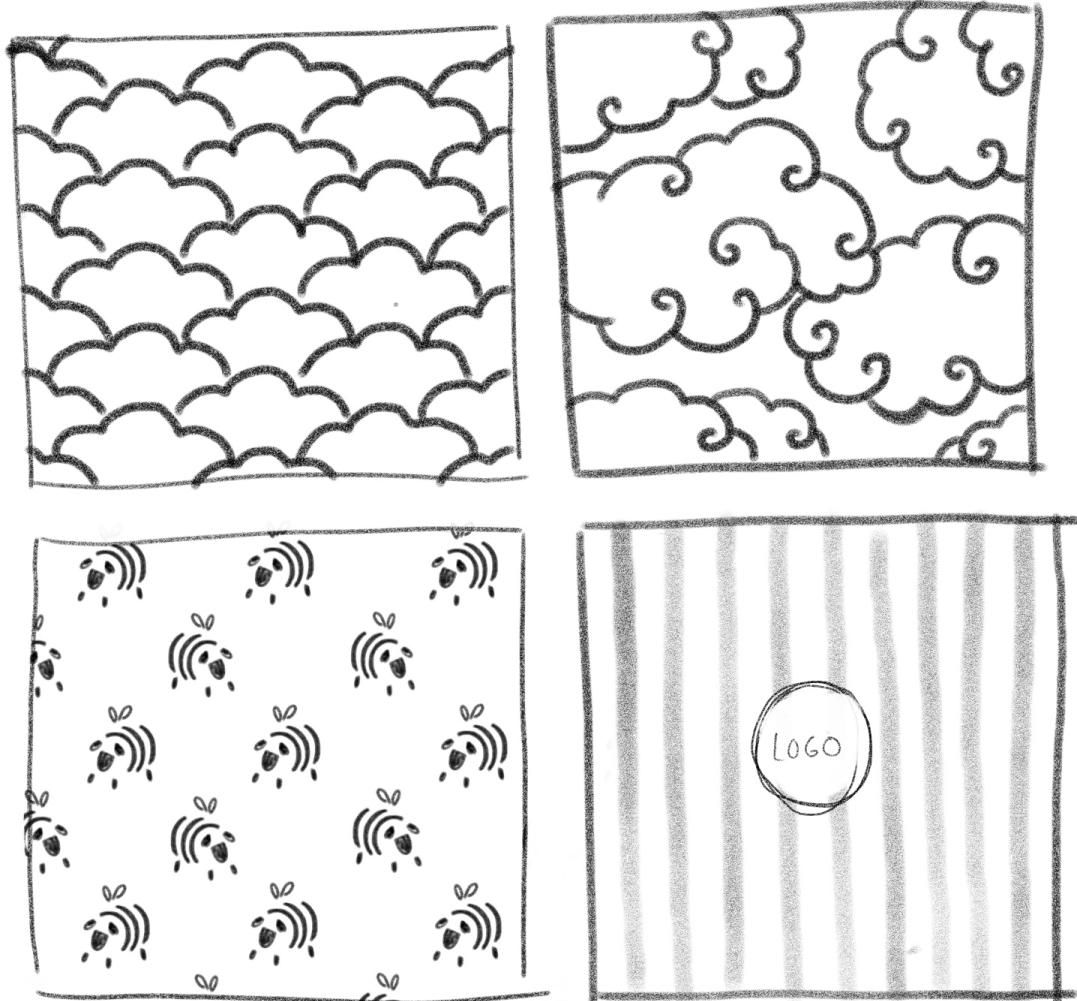
As the beeswax is highly sticky, we had to destroy the mold everytime we take it out. To solve the problem, after careful research we decided to put oil between the mold and the beeswax. Fortunately, this solution worked.



Pattern Development and Branding

Fabric wrap patterns

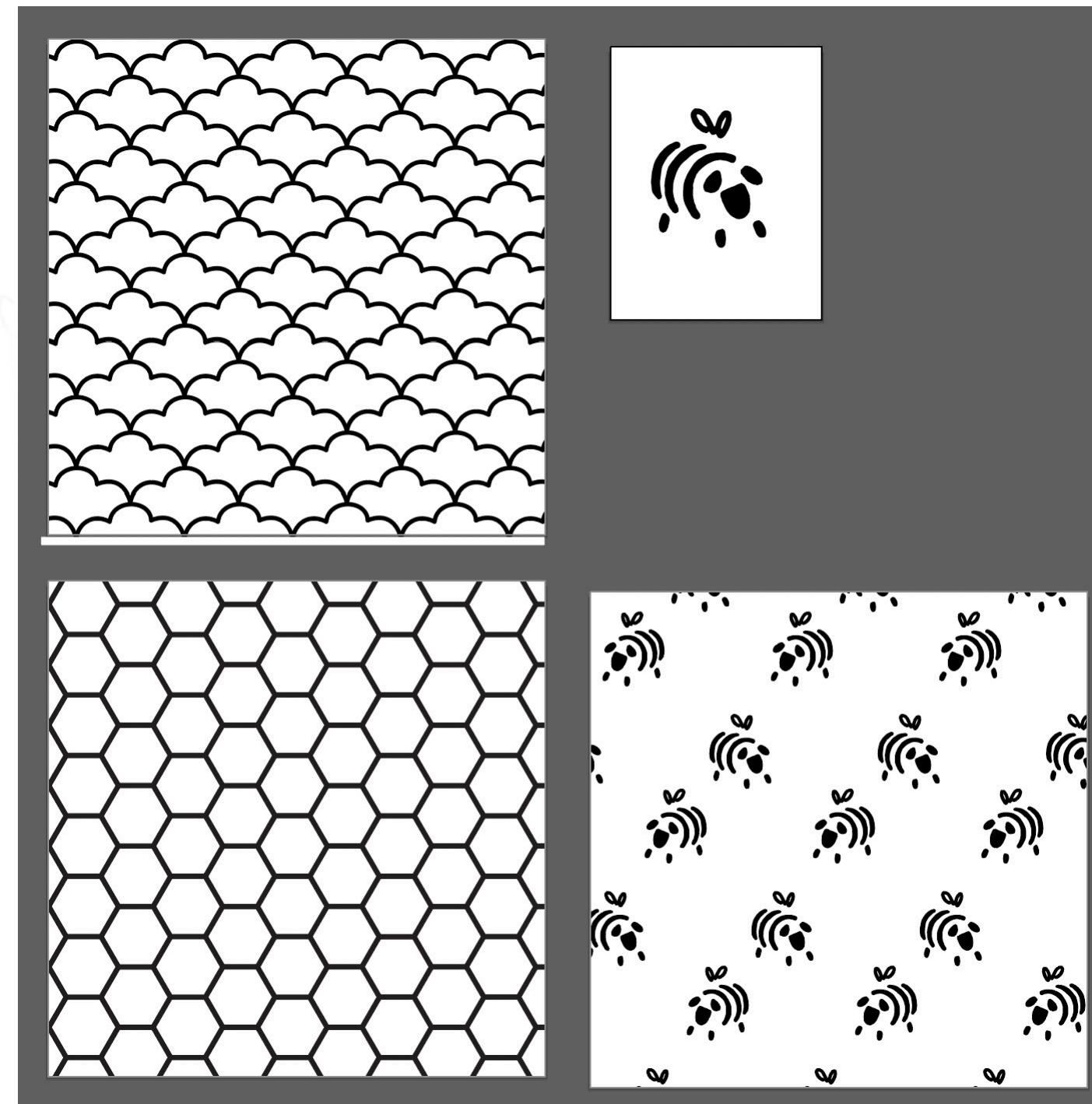
Themes centered on bees and wool.



Felted toy "Beep" and product logo



"BEEP" VARIATIONS



Pattern Development and Branding

A) beep bar

Made of 100% beeswax and lanolin

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B) beep bar

Made of 100% natural beeswax and lanolin

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Option 1



A) Beep Bar

Made of 100% natural beeswax and lanolin

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Option 3



A) Beep Bar

Made of 100% beeswax and lanolin

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Option 2



A) Beep Bar

Made of 100% beeswax and lanolin

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Option 4

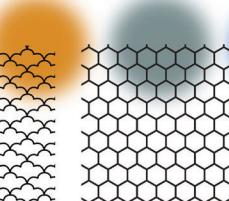


B) Beep Bar

Made of 100% beeswax and lanolin

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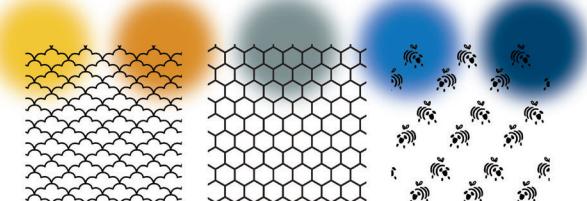


B) Beep Bar

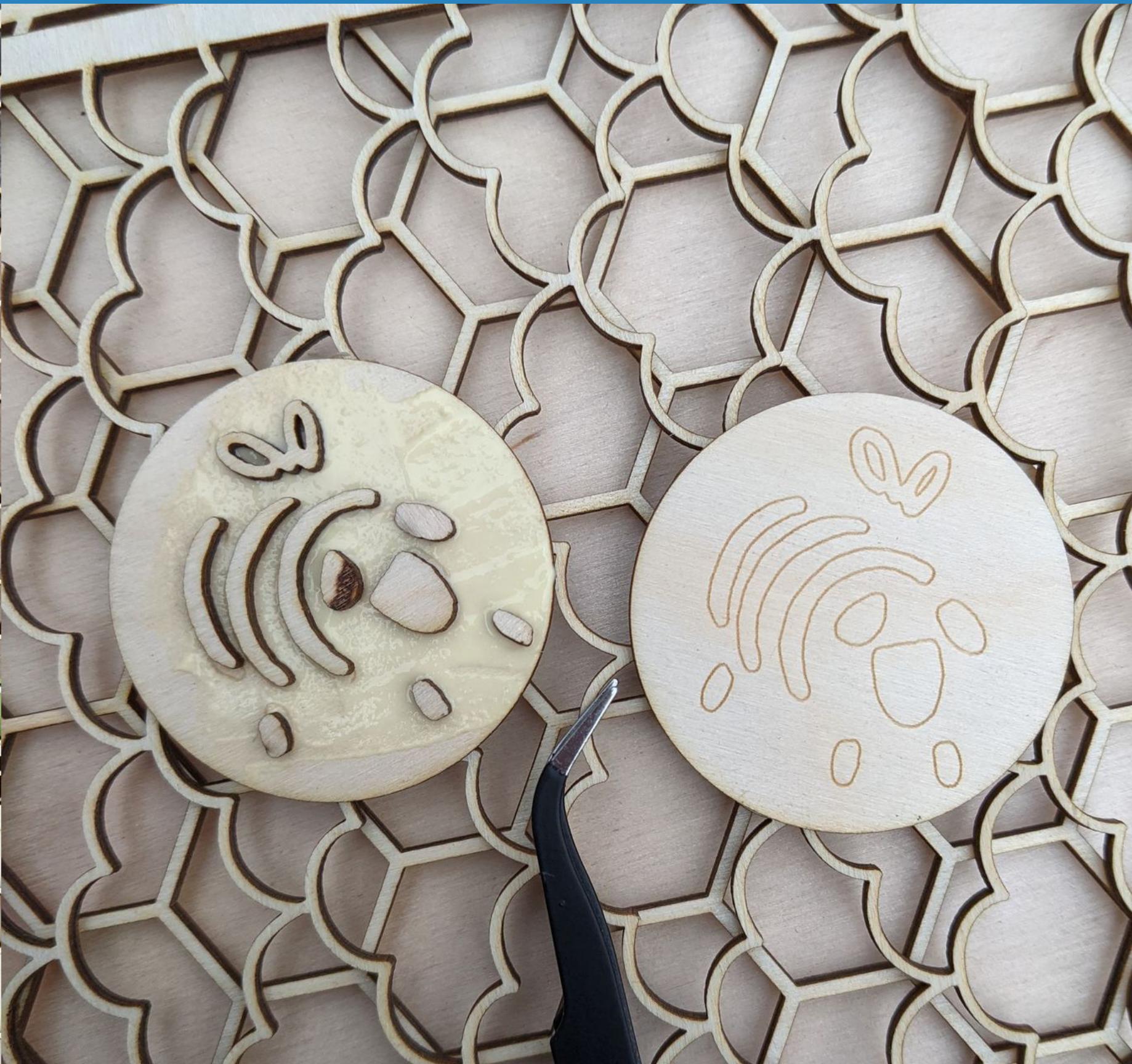
Made of 100% beeswax and lanolin

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Pattern Development for Food Wrap



Pattern Development for Food Wrap



Sewing Development

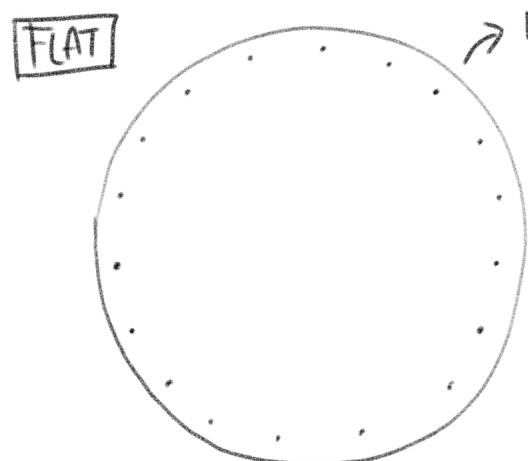
Prototype for pouch

Chosen design:

Design 1.

As we need to consider the presentation of the food wraps, we decided that the first design direction offers a cleaner organisation (the food wraps will remain unfolded and unsquished).

DESIGN 2: POUCH



NEEDLE & THREAD*
GO THROUGH
THE DOTS.

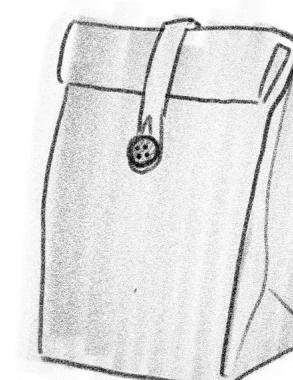
CLOSED

THREAD IS PULLED
THROUGH & TIED.



*NOTE: THE THREAD USED
HERE SHOULD BE THIN
SO IT DOESN'T LEAVE
LARGE HOLES IN THE FABRIC.

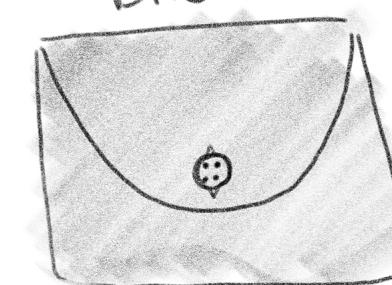
DESIGN 3 : POUCH + FLAT FABRIC



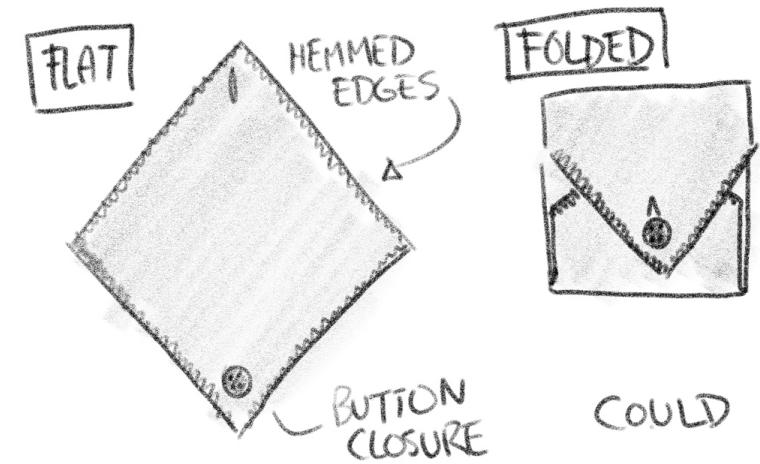
LUNCHBAG
STYLE

OR

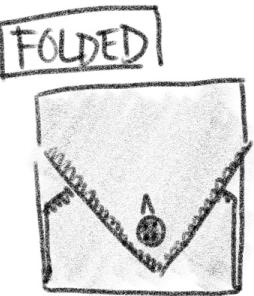
ENVELOPE
BAG



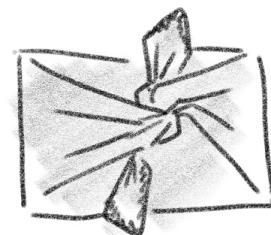
PLUS, WE INCLUDE
A REGULAR FLAT
PIECE OF FABRIC
FOR THE WRAP



DESIGN 1 : FOLDED



COULD ALSO BE TIED :



Prototype for pouch



Material/Method

1

Material -Beeswax



When looking at sourcing our beeswax, we decided to focus on local options only and bought 2 different kinds from the same store to test out their quality. We chose to buy our beeswax in the form of refined pellets instead of raw blocks from the eco friendly, zero waste store Terre à Soi in Montreal that sources their beeswax from Canadian apothecaries. We chose pellets because they were filtered to a cosmetic grade, were easier to manipulate during the molding process, and were easier to work with when waxing fabrics because they were less dense.

Methods

Melting and Molding

We are able to melt the wax by heating it, then we let it cool down a bit before pouring the liquid in the mold. We then left it sit in the fridge to let it solidify.

2

Material -Canvas



We sourced our canvas fabric through old or unwanted material we have at home. We made sure that they are cotton-based and are made with compostable organic fibers.

Methods

Sewing

In order to make the container, we sew the borders of the fabric piece to have a clean cut. Then we cut out a hole for the button and sew by hand the border. Finally, we passed the thread in the holes of the button and sew it to the pouch.

Material/Method

3

Material

-Wool



There were two sources for this. First, the merino wool we received in our course kits. Secondly, the black wool is natural and was purchased at Deserres.

Methods

Felting

To complete the beep, we relied on both wet-felting and dry-felting with needles. We did the bigger parts of the body by wet-felting and attached everything together with felting needles.

4

Material

-Plywood



We were able to partially source our printing plywood from scrap material at digifab, another part was purchased from digifab.

Methods

Laser Cutting

In order to make to printing patterns, we choose to rely on lasercut. We first did our pattern on illustrator, then we have the pattern cut out or engraved by the laser machine at the school.

5

Material

-Plastic



For 3D printing of the mold, we choose to use PLA plastic which is a polymer made from renewable resources. Some of the raw materials used to make PLA include corn starch, tapioca roots, and sugar-cane.

Methods

3D Printing

We first modelled the print with rhino, then we exported the file as a stl file for the printer to print.

Material/Method

6

Material

-Lanolin



The lanolin used for the beep bars is natural and was also bought at Terre à Soi. The company that produces it is Quebec-based and only sells natural and biodegradable products and ingredients.

Methods

Melting

We mixed lanolin with beeswax to improve the skin-hydration aspect of the product as lanolin acts as an emollient to preserve the moisturized skin.

7

Material

-Turmeric



Turmeric and mustard (already owned) were used to dye the wool yellow for the "beep" toys.

Methods

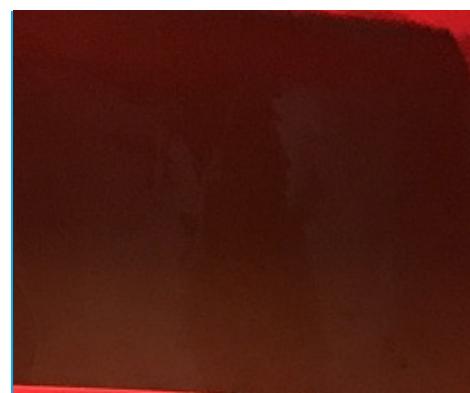
Eco-Dyeing

To dye the felted beeps, we used turmeric powder and mixed it with boiling water. Then we painted the felted balls with a paint brush. The liquid stained the wool very well and offered a bright yellow.

8

Material

-Onion/Black Tea



Onion skin and black tea (already owned) were used to create printing ink for the fabric. Potato starch was used to thicken the dye.

Methods

Eco-Dyeing

Onion skin and black tea are boiled with water for about 20 min. Potato starch was used to thicken the dye. We left it to dry and passed the iron to fix everything.

Material Sourcing

Store	URL	\$ per 100g (approx)	Description	Amount sold by	Format	Shipping methods & price	Location
Canada Candle Co.	https://canadacandles.com	\$3	Our 100% pure Canadian beeswax is filtered to 1 micron, suitable for candle making, high quality cosmetics or for adding to existing beeswax candles to extend burn time.	1lb	Bar, natural yellow	Paid shipping, 12\$ min. Free shipping for orders 125\$+	Ontario, Canada
Coop COCO	https://coopcoco.com	\$3	Quality: Food grade Origin: China Fusion point: 61-66 celsius "This is a co-emulsifying wax that needs the addition of one or more waxes."	250g 500g 1kg	Pastilles, natural yellow	Paid shipping Free in-store pickup	273 St-Zotique East, Montréal, Québec H2S 1L4 Metro Beaubien or Jean-Talon
Intermiel	https://intermiel.ca	\$3	Origin: Quebec "Used to make candles, cosmetics, prized by cabinetmakers and artists to treat and feed the wood. Also used to dread hair into dreadlocks."	250g 400g 600g 900g 25lb	Bar, natural yellow	Paid shipping, 13\$ min Free in-store pickup Free shipping for orders 100\$+	10291, rang de la Fresnière, Mirabel, Saint-Benoît QC J7N 3M3 From MTL: approx 40min
EastVan Bees	https://www.etsy.com	\$3	Origin: Canada Filtered to 1 micron Type: Capping wax (the newest and cleanest wax in the hive) "Great wax to use for making cosmetics and candles. Your cosmetics will feel better and your candles will burn cleaner and longer."	600g (1.3lb)	Bar, natural yellow	Paid shipping, 16\$ min.	Vancouver, BC Online shopping: Website & Etsy
Coop COCO	https://coopcoco.com	\$3	Quality: Food grade Origin: China Fusion point: 60-65 celsius "This is a co-emulsifying wax that needs the addition of one or more waxes."	250g 500g 1kg	Pastilles, white	Paid shipping Free in-store pickup	273 St-Zotique East, Montréal, Québec H2S 1L4 Metro Beaubien or Jean-Talon
Terre à soi	https://boutique.terre-a-soi.com	\$4	Canadian Attention: la surchauffe de ce produit aura un impact sur son parfum délicat. Veuillez faire fondre à une chaleur aussi basse que possible tout en remuant doucement, et utiliser dès qu'il est fondu.	100g 250g 500g 1kg	Pastilles, natural yellow	Paid shipping ?	3580 Rue Ontario E, Montréal or 8748 rue Hochelaga, Montréal
EastVan Bees	https://www.etsy.com	\$4	Origin: Canada Filtered to 1 micron Type: Capping wax (the newest and cleanest wax in the hive) "Great wax to use for making cosmetics and candles. Your cosmetics will feel better and your candles will burn cleaner and longer."	270g (0.6lb)	Bar, natural yellow	Paid shipping, 16\$ min.	Vancouver, BC Online shopping: Website & Etsy

Material Sourcing

EastVan Bees	https://www.eastvanbees.com	\$4	Origin: Canada Filtered to 1 micron Type: Capping wax (the newest and cleanest wax in the hive) "Great wax to use for making cosmetics and candles. Your cosmetics will feel better and your candles will burn cleaner and longer."	200g	Bar, natural yellow	Paid shipping, 16\$ min.	Vancouver, BC Online shopping: Website & Etsy
Well.ca	https://well.ca/products/beeswax	\$4	Origin: Canada	500g	Bar, natural yellow	Paid shipping ?	ONLINE (need to make account?)
Coop COCO	https://coopcoco.com	\$7	Origin: Quebec Fusion point: 61-66 celsius "Hand Filtered. Artisanal beeswax with a strong scent of honey. Perfect for making candles with no added fragrance"	250g 500g 1kg 5kg	Bar, natural yellow	Paid shipping Free in-store pickup	273 St-Zotique East, Montréal, Québec H2S 1L4 Metro Beaubien or Jean-Talon
Etsy: True North Apieries	https://www.etsy.com/listing/1000000000000000000	\$7	Origin: Alberta Good for cosmetics & crafts	8oz	Bar, natural yellow	Free Shipping	Etsy seller, from Alberta
Etsy: HivelyProducts	https://www.etsy.com/listing/1000000000000000000	\$8	Origin: BC Quality: gently filtered 4X to 40micron "high level of filtration that our wax undergoes makes this cosmetic-grade and safe for use on the skin."	1oz 2oz 4oz 6oz 8oz 10oz 12oz 14oz 16oz	Bar, natural yellow	Free Shipping	Etsy seller, from BC
Etsy: HivelyProducts	https://www.etsy.com/listing/1000000000000000000	\$8	Origin: BC Quality: gently filtered 4X to 40micron "high level of filtration that our wax undergoes makes this cosmetic-grade and safe for use on the skin."	1oz 2oz 4oz 6oz 8oz 10oz 12oz 14oz 16oz	Bar, white	Free Shipping	Etsy seller, from BC
Les Mauvaises Herbes	https://les-mauvaisesherbes.com	\$9	Notre cire d'abeille est brute. Elle a été filtrée pour enlever les impuretés et résidus, puis solidifiée et lingots Son point de fusion se situe entre 61 °C et 66 °C.	125g	Bar, natural yellow	Paid shipping ?	6260 rue Saint-Hubert Montréal, QC, H2S 2M2
Merveilles d'abeilles	https://www.merveilles-dabeilles.com	\$9	Origin: Quebec Lightly filtered Can be used for pharmaceuticals, cosmetics, candles.	30g 450g	Bar, natural yellow	Paid shipping ?	1310 Chemin de Lanaudière, Saint-Didace, QC J0K 2G0 From MTL: approx. 1h34min by car

Production Material Sheet

Material Costs					
Item	Amount	Price	Price/Quantity	Person who paid	Date
wax samples	154g	4.03	\$2.79/100g	camila	14 March
lanolin	300g	25.86	\$8.62/100g	camila	26 March
beeswax pellets	1300g	45.42	\$3.49/100g	camila	27 March
fabric	1.6m ²	12	\$7.5/m	Man	1 January
black wool	100g (approx)	11	\$11/100g	Emily	
felting needles	3	13	\$4.33/needle	Emily	
Plastic filaments for mold	?	10	-	Phil	

Other Incurred Costs			
	Hours	Wage	Total
Labour cost:	10h per teammate	15\$/hr	600

Totals	
Total Material Costs	121.31
Total Labour Costs	600
Total Costs	721.31
Material Cost Per Teammate	30.3275
Material Cost Per Bar	6.0655
Labour Cost Per Bar	30
Total Cost Per Bar	36.0655

Waste analysis

Material

-Wool



Material

-Plywood



Material

-Plastic



Waste

0 kg

Although we did not finish all the wool we have, we do not consider the leftover to be wasted since they are very likely to be used for our future projects.

Material

-Beeswax



Waste

0 kg

We were able to keep our beeswax waste near zero because it was meltable and re-moldable. Thus, the different types of beeswax we ordered for testing were melted down with our chosen beeswax and molded to make our prototype.

Waste

170 inch²

Due to constraints in size and the available material at the Digi-fab, a strip of 1x20 inch and another one 25x6 inch are left. The waste is stored for future use as well.

Material

-Canvas



Waste

20% in scrap pile

Cutting the squares of fabric inevitably leads to some waste because the measurements didn't completely match the entire sheet of fabric. This scrap fabric was used to test out printing and stitching.

Waste

5 molds

Some PLA plastic is wasted from experimental mold; but we are considering to give it to CP3 (Concordia Precious Plastic) to recycle new printing filament from it.

Material

-Threads, dye, etc.



Waste

Making the dye required 30 tea bags, all of which were thrown away when used. The unused threads are stored in place for future use.

Documentation of Final Project

-Pouch



Documentation of Final Project

-Wraps

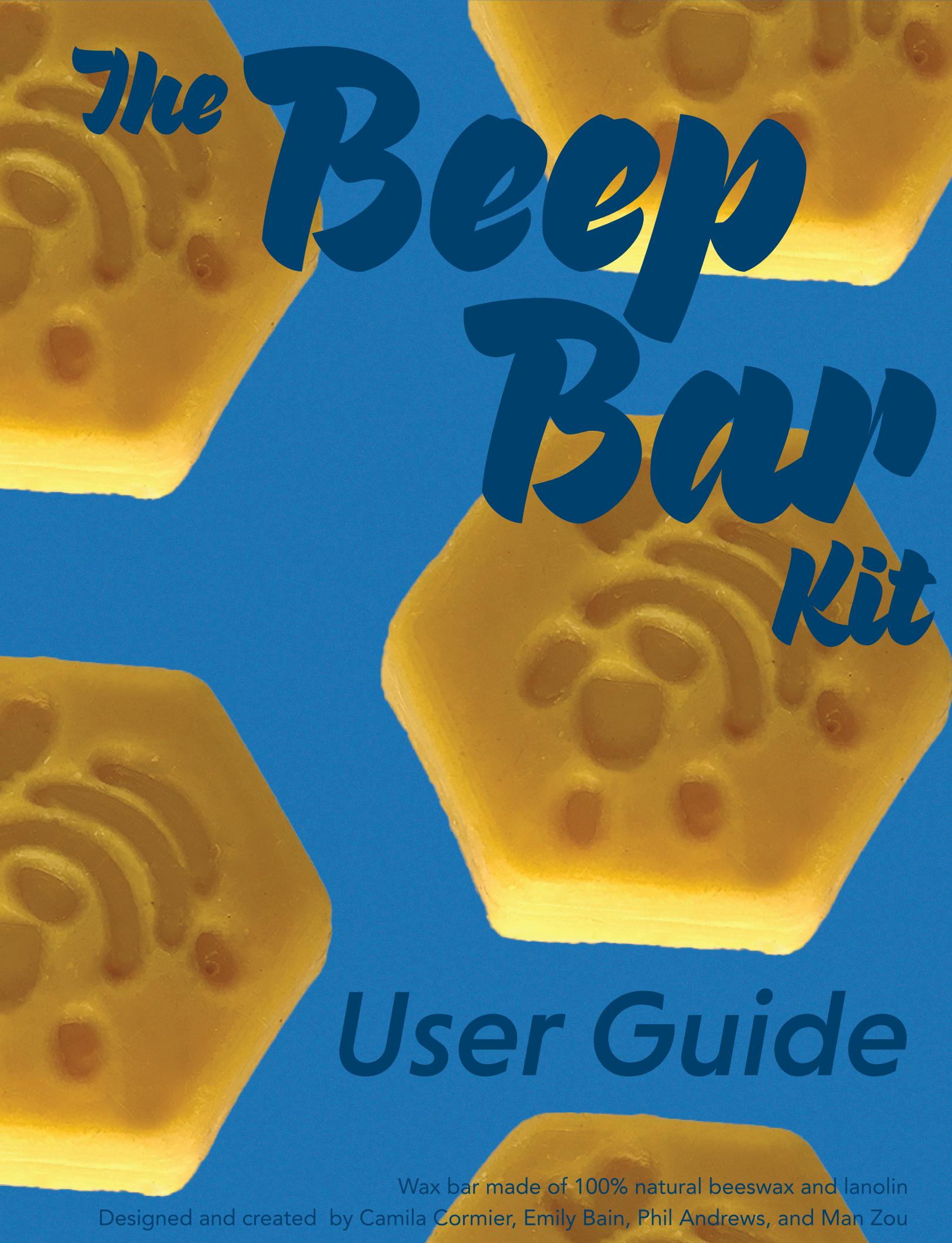


Documentation of Final Project

-Beeswax and
Beep







Wax bar made of 100% natural beeswax and lanolin

Designed and created by Camila Cormier, Emily Bain, Phil Andrews, and Man Zou



About the product

THE KIT

Beeswax and lanolin have very versatile characteristics: they are non-toxic, natural waxes with rich hydrating and antibacterial properties.

The Beep Bar kit comes with the supplies needed for 3 eco food wraps (1 pre-waxed organic cotton wrap and 2 to wax at home), for hydrating skin and for waterproofing apparel.

However, the bar's properties make it a great purchase for:

- Creatives looking to work with a new medium
- People looking to swap to more sustainable habits
- fans of makeup who want to make their own products
- People looking for a great hydrating balm
- Hikers looking for non-toxic solutions to condition their boots
- Campers looking for on-the-go sealant to carry on adventures

MORE INFO

For more information, give our Instagram page a visit!

@beep_concordia

Care instructions

**DO NOT WASH
WAX-COATED
PRODUCTS WITH HOT
WATER**

CLEANING WAXED FABRIC

If your waxed item is dirty, be sure to use COLD water only and avoid hot surfaces at all times. Using heat will cause the wax to melt and clump.

CLEANING A FOOD WRAP

Beeswax and lanolin have antibacterial properties. This means that regular food bits can be washed away with water.

If your wrap is substantially dirty, use regular dish soap or any alcohol-free soap and cold water to clean it.

FIXING MELTED OR CLUMPED WAX

If your waxed surface is separating and clumping, use a heating tool of choice to melt it back in place.

For waxed food wraps, follow these steps for the best results:

STEP 1:

Layer a piece of parchment paper under your food wrap and put any loose wax clumps in place.

STEP 2:

Layer another piece of parchment paper over your food wrap

STEP 3:

Run an iron over the top layer until the wax is melted.

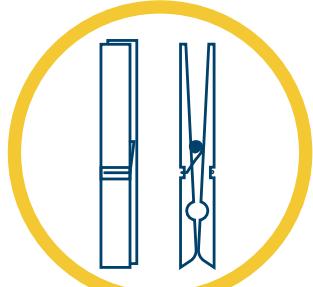
STEP 4:

Wait for the wax to dry. Peel off the layers and use!

To make food wraps

STEP 1:

Take your piece of fabric and secure it to a surface.



STEP 2:

Take your bar and rub it against your fabric while applying a firm pressure. Apply 1 layer of wax over your piece of fabric, rubbing in all directions.



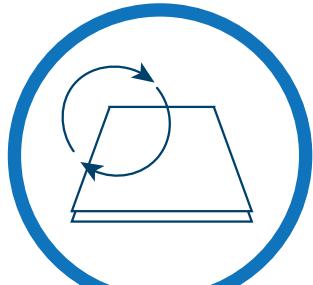
STEP 3:

Use a heating tool of your choice and warm the surface. This will melt the wax into the fibres of your square.



STEP 4:

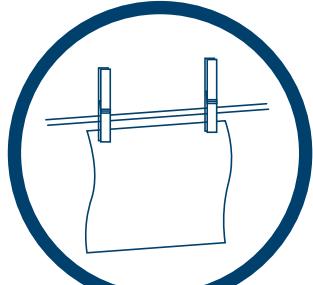
Repeat this process 1-3 times until your fabric is evenly coated.



STEP 5:

Once dry, your square of fabric is ready to be used!

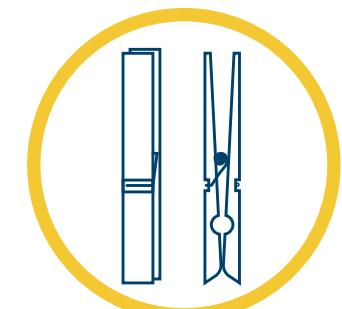
QUICK TIP: Using the heat of your hands can help the waxed fabric stay in place.



To waterproof fabrics & leather

STEP 1

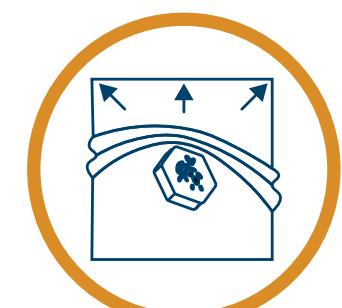
Take your item of choice and secure it to a surface.



STEP 2

Take your bar and rub it against your fabric while applying a firm pressure. Apply 1 layer of wax over your item, rubbing in all directions.

QUICK TIP: if you are waxing a large surface, start in one corner and work your way out.



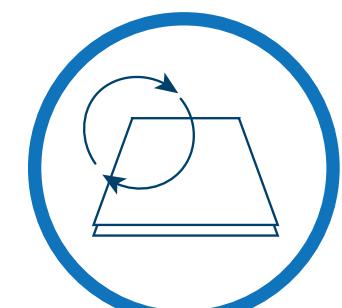
STEP 3

Use a heating tool of your choice and warm the surface. This will melt the wax into the fibres or surface you are waxing.



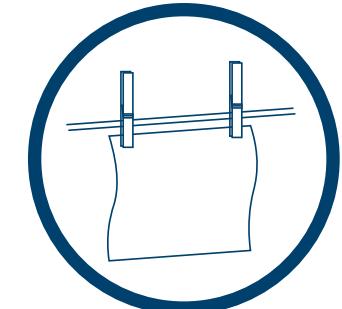
STEP 4

Repeat this process until your fabric is evenly coated. To make an item fully waterproof, apply multiple layers and be sure to test for leaks along the way.



STEP 5

Let dry and use!



To hydrate skin

STEP 1:

Cleanse the skin you will be hydrating. Then, cleanse your hands or the applicator tool.



STEP 2:

Collect some of the product from the bar.

QUICK TIP: cutting or shaving off the amount needed and warming it up will help spread the wax and lanolin solution.



STEP 3:

Use your fingers to spread.



Marketing Strategy

beep_concordia [Edit Profile](#)

7 posts 24 followers 42 following

BEEP BAR Waxing Kit!
Wax bar kit made of natural beeswax and lanolin
Great for:
• Making food wraps
• Hydrating skin
• Waterproofing apparel
And more!
www.shopnordicity.design

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Swipe to see some Process pics! →
A shiny metallic boot with a small yellow hexagonal wax bar on it.
The wait is over! →
A large yellow hexagonal wax bar with a bee embossed on it.

1 Day Until Product Release!
Stay tuned for the link to the virtual pop-up shop

The Beep Bar
What is it?
How to use it?

Camila Cormier April 9 at 12:23 AM ·

Hello everyone!
My team and I created a versatile wax bar kit for one of my courses that is now for sale!
It's called the Beep Bar kit (bee+sheep) and it's made of 100% natural beeswax and lanolin. The kit includes all you'll need for... See More

VIEW ITEM Ask the seller for more details [Message](#)

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Emily Bain 18h ·

Hey pals 😊 My design program is holding a popup shop for charity at www.shopnordicity.design - feel free to take a look! Our team made a beeswax wrap kit 🐝

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Calendar

Sustainable and socio-cultural analysis/reflection

Our **proposal** was to create an object that was centered on resourcefulness, versatility and respect for the planet. These elements are core to living sustainably because they require using what you have, encourage buying products that serve multiple uses and require buying products that enrich our environment.

The **final project** is also sustainable because it falls in line with our proposal. The Beep Bar is marketed as an alternative to saran wrap, a waterproofing tool, a hydrating bar and a general multi-use tool with amazing sealing, antibacterial, lubricating and hydrating properties. This gives concrete alternatives to more toxic products (seran wrap, waxing bars and skin care products composed of toxic ingredients, etc). More importantly, it encourages the user to think outside the box of the explicit purpose of the bar and use the product to upcycle items at home, to use the product in multiple ways, and to look at sustainable living as a creative and fun process. Thus, the direct and indirect purposes of our product make it sustainable.

The materiality of our product is also sustainable. The **fabric** we used is organic and were leftovers of an older project, which signifies that we reduced our costs in time and money and minimized waste. The squares of fabric were **printed** using natural dyes and our **beeswax and lanolin** were 100% natural and sourced from a local zero waste store, meaning that we chose products that would not harm the environment, bought local and reduced the need for shipping. Finally, our block printing material was made out of wood and we kept the designs to 3 patterns to minimize the amount of wood needed. All together, these decisions in sourcing our materials lowered our carbon footprint and followed the Design for Disassembly and cradle to cradle philosophies. The Beep Bar's materiality demonstrates that our product is built to be harmless for the environment when disposed of and is created to have properties that can be applied to many different things which allows it to be used more thoroughly.

While our product has many strong points, there is some room for improvement in its production method. Errors were made during the measuring and cutting of the fabric, which resulted in some wasted fabric. In addition, we chose to use 3D printing with PLA plastic pellets to make our wax molds and there were many iterations that failed, resulting in some plastic waste.

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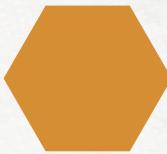
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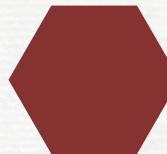
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Colophon / Typeface information



Colours used

- Orange (#d98f26)
- Green (#accf7b)
- Blue (#2781c0)



Colours used

- Red (#8d332d)
- Beige (#efd3a8)
- Black (#000000)

Lufga (pdf typeface)

Lufga is a geometric sans serif font family with unique characters for a touch of distinction. We choose the font for its readability and its resemblance to the typeface used for our branding. Most notably, the distinct double-story g and stemless u make it recognizable for our branding applications, and there are also stylistic alternates to help give a little different presentation when needed.

Pique (instruction pdf typeface)

Pique is an open typeface designed by Nicole Dotin in 2014 made for headlines. The typeface offers an unique semi-cursive style and aligns with the joyful brand message we want to transmit. The line weight makes it an ideal font for headlines, not too formal not too crazy, just the right amount of creative design to make it the perfect fit for our product.