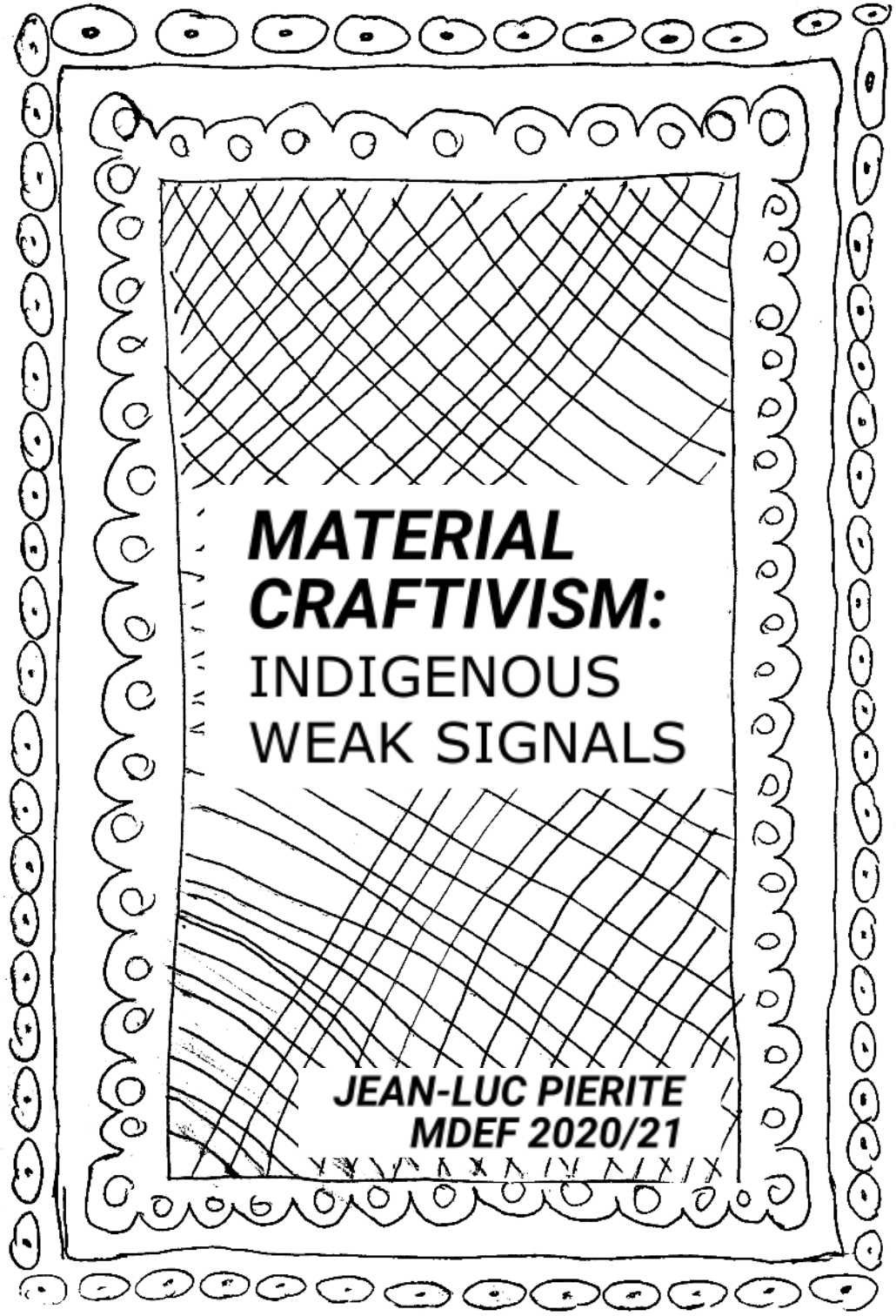

MATERIAL
CRAFTIVISM:
INDIGENOUS
WEAK SIGNALS
JEAN-LUC PIERITE
MDEF 2020/21

Profile of Jean-Luc Pierite

Language Documentation
Fieldworks Language Exporter
EUDICO Linguistic Annotator
Oral Historian & Singer

Game Design
C++
Javascript

Digital Design
Rhino
Inkscape
Gimp

Digital Fabrication
Laser cutting
3D Printing
Vinyl Cutting
NC milling
CNC machining
Molding & casting
Compositing

Advocacy
Organizing direct actions
Public speaking
Drafting legislation
Serving on community advisory committees

Hobbies & Interests
Creative writing
Tarot readings
Video games
Hiking
Travel
Cooking

Thinking on who I am as a designer as I come into the exercise, my background along with strengths and weaknesses inform how I go forward with developing this handbook. Further, the resources and recipes are based on my environment and issues relevant to my overall design vision which is to bring forward traditional ecological knowlege of my own culture and to provide a toolkit for other communities.

Weak Signals based on, "walking the clouds" edited by Grace Dillon

After leading an Indigenous Futurism book reading series at the North American Indian Center of Boston from Fall 2019, I found that the themes discussed in this book could be explored in the physical world based on the definitions developed from science fiction writing.

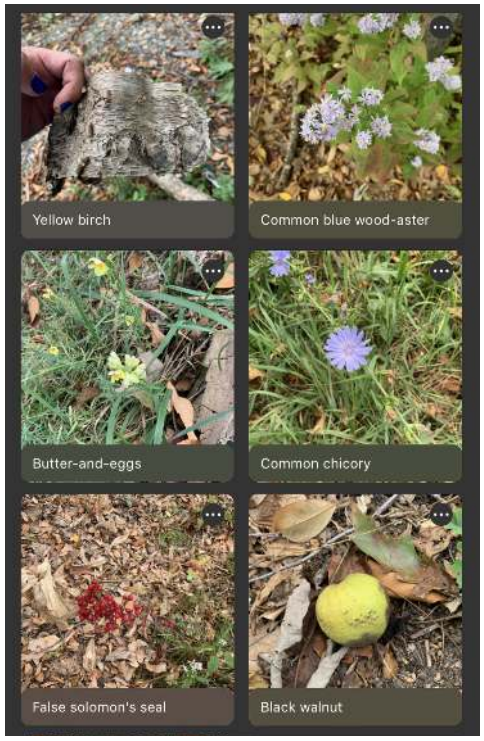
Native Slipstream
non-linear thinking about space-time. navigating pasts, presents, and futures in one stream.

Native Apocalypse
transition from a state of imbalance to a state of balance by illustrating trauma to provide healing.

Contact
reframing resistance and oppression in a way that inplicates the part of individuals in larger realities.

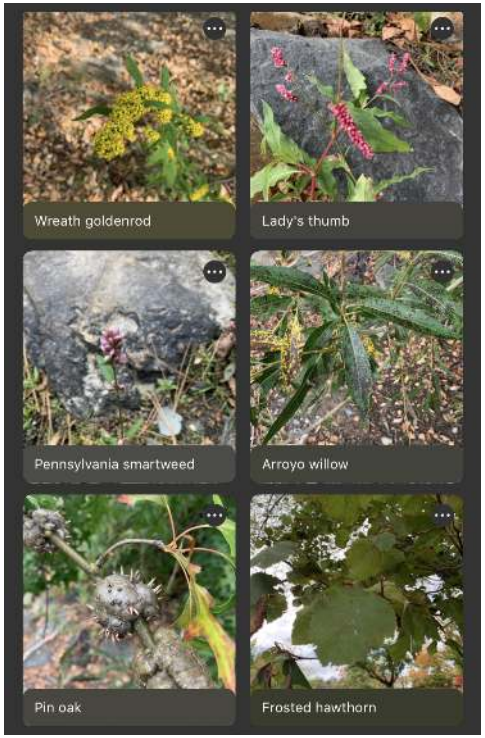
Indigenous Science and Sustainability
traditional sustainable pracitices constitute a science, despite a lack of an analogous taxonomy to western science.

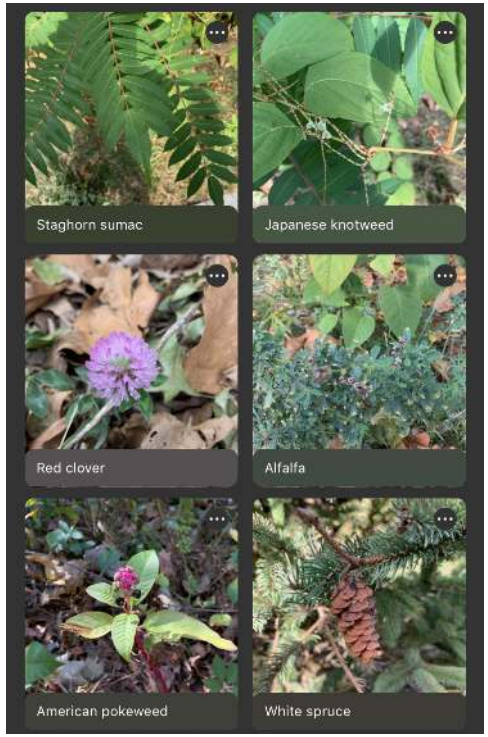
Biskaabiiyang, "Returning to Ourselves"
investigating how one is affected by colonization, discarding emotional and psychological baggage, and adapting to a post-Native Apocalypse world.

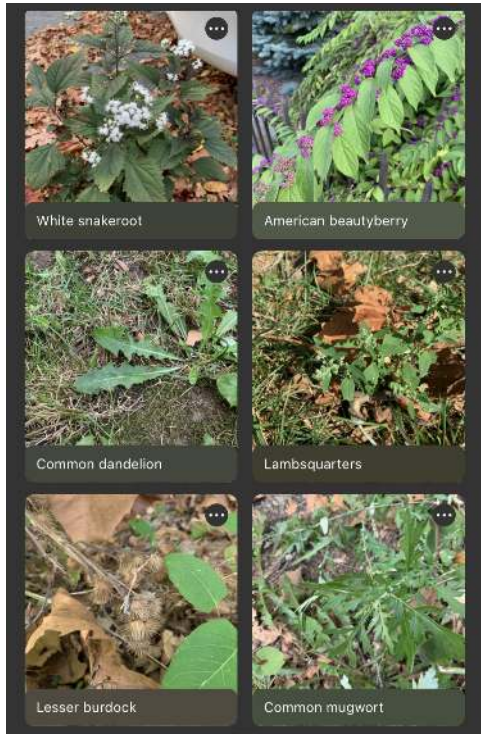


Cataloguing natural materials

As a response to scarcity mentality brought on by the quarantine and the COVID-19 pandemic, I added a routine of indexing the plants local to me on my morning walks. I was able to capture over 35 species towards the selection of recipes in this booklet. With the change of seasons after the first snowfall, I expect the available species to change. A need for food waste such as coffee grinds, fruit peels, and seeds have encouraged me to adjust my own consumption habits. This form of adaptation to seasonal wild plants affected by climate change and a global supply chain can be evidence of **Biskaabiiyang**.





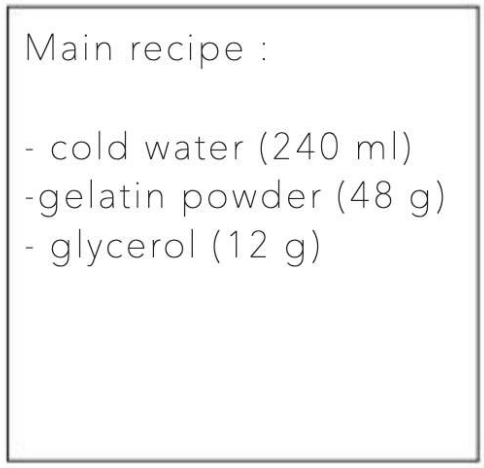


Cataloguing natural materials

Plants	Reference
Polymer	
American Beautyberry	TyrantFarms. (2019, December 01). How to use American Beautyberries as food and mosquito repellent. Retrieved November 09, 2020, from https://www.tyrantfarms.com/how-to-use-american-beautyberries-as-food-and-mosquito-repellent/
Dandelion	Elvidge, S. (2017, June 13). Make a Rubber Band from a Dandelion. Retrieved November 09, 2020, from http://www.scienceprojectideas.co.uk/make-rubber-band-from-dandelion.html
Japanese Knotweed	Luchtman, L. (2020, October 18). Japanese Knotweed. Retrieved November 09, 2020, from https://www.kukka.nl/en/portfolio/japanese-knotweed-biomaterials/
Pine	Sharif, Faiza & Muhammad, Nawshad & Zafar, Tahera. (2020). Cellulose Based Biomaterials: Benefits and Challenges. 10.1007/978-3-030-40301-0_11.
Green foxtail	Rosseto M, Rigueto CVT, Krein DDC, Balbé NP, Massuda LA, Dettmer A. Biodegradable polymers: opportunities and challenges. In: Sand A, Zaki E, Zaki E, editors. Bio-based polymers. London: IntechOpen; 2019.
Banana	Hossain, A., Ibrahim, N., & AlEissa, M. (2016, May 25). Nano-cellulose derived bioplastic biomaterial data for vehicle bio-bumper from banana peel waste biomass. Retrieved November 09, 2020, from https://www.sciencedirect.com/science/article/pii/S2352340916303171
Coffee	Phung, A. (2019, November 20). Recycling Coffee Grounds for Science. Retrieved November 09, 2020, from https://www.discovermagazine.com/the-sciences/recycling-coffee-grounds-for-science
Natural Dye	
Pokeberry	McLaughlin, C. (2018, January). Pokeberry Dye Recipe. Retrieved November 09, 2020, from https://www.motherearthnews.com/diy/crafting/pokeberry-dye-recipe-ze0z1801zmos
Goldenrod	Leitner, Peter & Fitz-Binder, Christa & Mahmud-Ali, Amalid & Bechtold, Thomas. (2012). Production of a concentrated natural dye from Canadian Goldenrod (Solidago canadensis) extracts. Dyes and Pigments. 93. 1416–1421. 10.1016/j.dyepig.2011.10.008.
Black walnut	Browning, A. (2020, October 09). How to Naturally Dye Yarn with Black Walnuts (update). Retrieved November 09, 2020, from https://www.fiberartsy.com/how-to-naturally-dye-yarn-with-black-walnuts-update/
Avocado	Mirzaeva, L. (2020, August 10). Tutorial: Natural Dyeing With Avocado Skins. Retrieved November 09, 2020, from https://www.mochni.com/tutorial-natural-dyeing-with-avocado-skins/
Onion Peel	McLaughlin, C. (2020, July 15). How to Make a Natural Onion Skin Dye for Yarns and Textiles. Retrieved November 09, 2020, from https://www.thesprucecrafts.com/diy-onion-skin-natural-dye-1835662

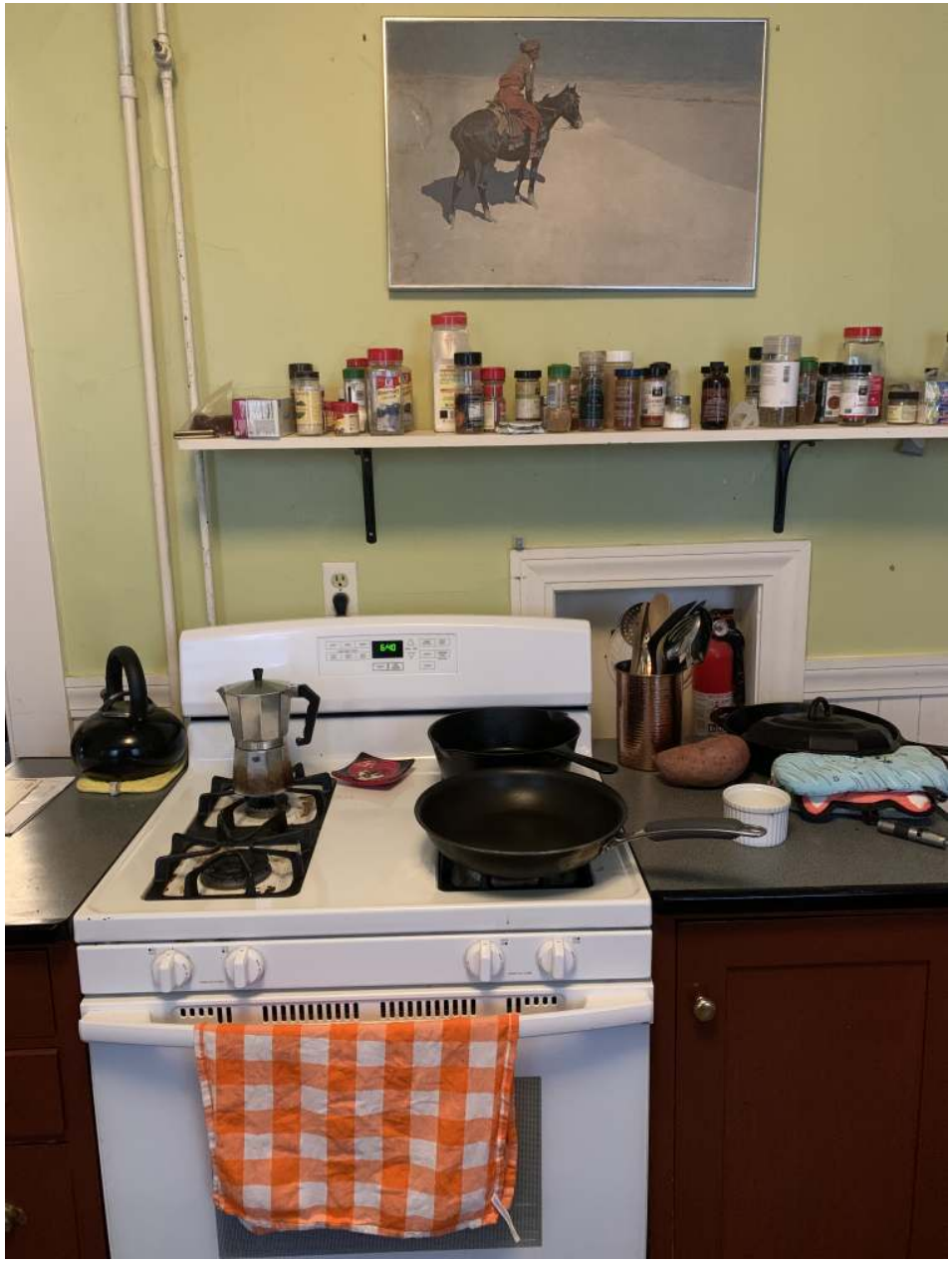
Plants	Reference
Flour	
Red Oak	Roatch, T. (2019, February 27). How to Make Acorn Flour. Retrieved November 09, 2020, from https://www.askaprepper.com/make-acorn-flour/
Birch bark	Adamant, A. (2019, September 19). How to Make Birch Bark Flour (Plus Birch Shortbread Cookies). Retrieved November 09, 2020, from https://practicalselfreliance.com/birch-bark-flour/
Misc.	
White Snakeroot	Barotz, S., & Bilodeau, C. (2004). White Snakeroot Ageratina altissima. Retrieved November 09, 2020, from http://www.bio.brandeis.edu/fieldbio/medicinal_plants/pages/White_Snakeroot.html
Alfalfa and Pine Resign	Renault, S., Brandell, D., & Edström, K. (2014, August 29). Environmentally‐Friendly Lithium Recycling From a Spent Organic Li‐Ion Battery. Retrieved November 09, 2020, from https://chemistry-europe.onlinelibrary.wiley.com/doi/abs/10.1002/cssc.201402440
White Spruce	Jean-Marie Hachey & Sandra Simard (1987) Extraction and Analysis of the Essential Oil of the Needles and Twigs of White Spruce Picea Glauca (Moench) Voss, Journal of Wood Chemistry and Technology, 7:3, 333-341, DOI: 10.1080/02773818708085272
Sweetfern	Docaitta. (2011, October 12). Foraging 31: Sweetfern. Retrieved November 09, 2020, from http://www.docaitta.com/2011/10/foraging-31-sweetfern.html

With the ingredients found, I search for sources to categorize the uses of the plants. I also verify if the plants are edible, toxic, or used primarily for medicinal purposes. The essentials needed are below.



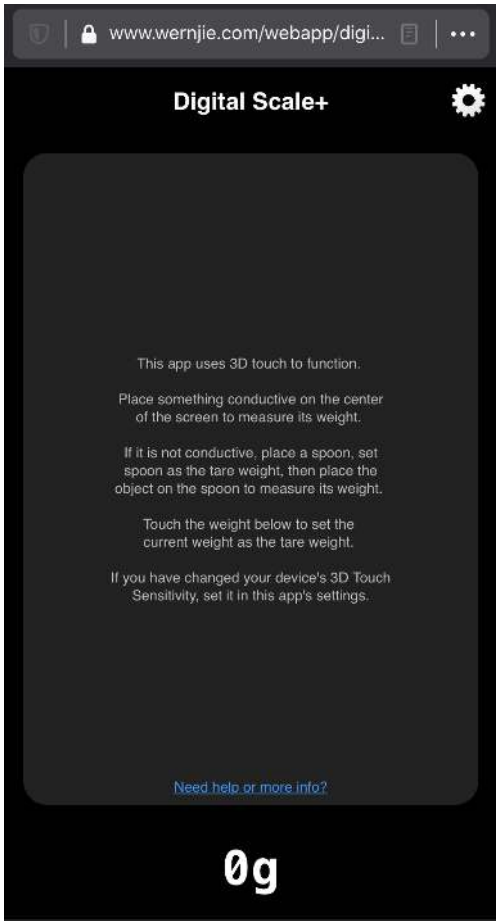
Pistofidou, A., & Davis, C. (2017, February 28). The secrets of bioplastic. Retrieved November 09, 2020, from https://issuu.com/nat_arc/docs/the_secrets_of_bioplastic_

Assessing Lab Space



Most of what I need to cook the recipes are available within the home kitchen: stove top for heat, pans, spoons, plastic cutting boards, glass surfaces, and aluminum.

What is needed is a digital scale. This is available as a food or diet scale at the local pharmacy. There are also web apps which use older iPhone models' 3D Touch capability. I was not able to find one using the new Haptic Touch.



Jie, W. (2020, May 18). Wernjie/digital-scale-plus. Retrieved November 09, 2020, from https://github.com/wernjie/digital-scale-plus

Example Recipe:
Red Oak Acorn Bioplastic

Roatch, T. (2019, February 27). How to Make Acorn Flour. Retrieved November 09, 2020, from https:// www.askaprepper.com/make-acorn- flour/

01. Dry cracked and shelled red oak acorns by either using a dehydrator, leaving them out in the sun on screens, or using the oven at a low temperature.
02. Separate the meat of the acorn from the shells and skins by rub pieces with hands. Smash with a potato masher.
03. Cold-leaching the smashed acorn pieces will make the inedible parts edible by removing the tannins. Place the parts in a cheese cloth bag. Then, submerge the pack into a five gallon bucket of cold water. Squeeze the bag to ensure that the pieces are saturated. Leave the bag to soak for 30 minutes. 04. Drain the bucket. Then repeat the cycle until the water is clear.
05. Dry the acorn pieces by spreading them out on a cookie sheet and place them in the oven at 200F/94C for a few hours or until dry.
06. Mash the dried acorn pieces with the potato masher until they make a fine powder.
07. Sift the flour with a mesh colander to make sure no large or hard pieces remain.
08. Mix 48g of acorn flour with 240ml of cold water in a pan without any heat.
09. The mixture should turn into a granular paste.
10. Start heating the mixture while stirring slowly to make sure that tere are no lumps.
11. Stir until the mixture is liquid and homogenous. Then, add the glycerol.
Continue mixing and heating until there is a deposit on the surface. This can be removed to make a transparent material.
12. Pour the mixture into a mold or a prepared surface.
13. Let dry 2-3 days at least, preferably a week, before removing.