Spring 2024

Herbalism As Community Care: Course Syllabus and Schedule

Kate Conway

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FAIR 297B **Herbalism as Community Care**: Syllabus and Schedule
CRN #23928, 3 credits, Spring Quarter 2024
Face-to-Face, class meets **M 10am–11:20am** and **W 10am–11:50am** in the **Outdoor Classroom**
Instructor: Kate Conway, katemconway3@gmail.com
<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Course Overview</th>
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<tbody>
<tr>
<td>➔ Building personal relationships with native and nonnative plants</td>
<td>This class will explore basic herbalism and its role in supporting communal well-being. You’ll have the chance to build relationships with individual plants and transform and combine them into plant medicine. In this peer-led learning group, we will begin by learning some botanical terms, herbalism vocabulary and theory, and plant identification. We will aim to use plants that are locally accessible, and you will learn simple ways of integrating plant medicine into your daily life. We will learn primarily from Indigenous herbalism, using <em>Held By the Land: A Guide to Indigenous Plants for Wellness</em> as our class text. We will also draw on scientific literature and the knowledge of local community herbalists. This course will combine discussion, research, and experiential learning to make herbal preparations such as teas, tinctures, and salves. Our class will be based in the Outback Outdoor Classroom and visit local walkable spots around campus and the community.</td>
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<tr>
<td>➔ Learning and practicing basic plant identification</td>
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<tr>
<td>➔ Understanding interrelationships within the natural world and our communities</td>
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<tr>
<td>➔ Exploring sustainable and respectful harvest of native plants</td>
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<tr>
<td>➔ Identifying key medicinal properties of a variety of native and nonnative plants</td>
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<tr>
<td>➔ Familiarizing ourselves with a few basic herbal preparations</td>
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<tr>
<td>➔ Learning how to utilize herbal preparations in a safe way</td>
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<tr>
<th>Learning Outcomes</th>
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<tr>
<td>Upon completion of this course, we will be able to:</td>
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<tr>
<td>➔ Identify, utilize, and</td>
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| Contact Hours | As this is a 3 credit course, students should expect to spend 9 hours a week on activities for this course: 3 hours a week in class (discussions, field trips, and labs) and 6 hours a week on course assignments including readings |

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<tr>
<th>Required Materials</th>
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| Other materials | Herbalism supplies, including weather-appropriate clothing, jars, scissors/knife, and cheesecloth. A full list will be posted to Canvas. |

| Recommended Text | *Plants of the Pacific Northwest Coast*, Pojar and MacKinnon (ISBN: 9781772130089) |

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<tr>
<th>Quarter-Long Assignments</th>
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<tr>
<td>Attendance</td>
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To make this class work, we have to show up, and we have to show up to each class ready to engage with each other and the material. The frequency with which you attend, as well as how you attend, matters. From Stan Tag, “To attend, in its roots, means to stretch toward”. Let us stretch towards each other and our plant relatives in an act of communal learning.

**Weekly Readings**
We will have assigned readings before most classes. Completing these readings is critical for your learning and our learning as a group as they will prepare you for activities, guest lectures, and discussion.

**Plant ID and Harvest Journal**
You will keep a plant ID and harvest journal throughout the quarter as a way of building relationships with different plants you encounter, practicing plant identification, and recording observations and discoveries that you will be able to refer back to. Your journal will include drawings, collages, plant pressings, field notes, and more. It will also serve as practice for your Plant Profile Presentation.

**One-Time Assignments**

*Botanical Vocabulary Share*
At the beginning of the quarter you will be asked to support our vocabulary acquisition by researching a few words that are new to you and sharing them with the class.

*Plant Profile Project and Presentation*
In the second half of the quarter, you will create your very own plant profile following the format found in *Held By The Land*. You will share your findings with the class.

*Class Herbal Remedy Share*
As your culminating project, you will be asked to contribute one found or created herbal recipe to a class book that will be made accessible online and one herbal preparation to share at our final class.
*This class contains information about plants that are used as remedies, foods and cosmetics. The information provided in this class and in the readings is for educational purposes only and is not medical/health advice, nor is it a substitute for the advice and care of a medical practitioner. Please do not attempt to self-diagnose or medicate. Before using any of the items we prepare in class, it is strongly recommended that you check that it is appropriate to do so by consulting a medical practitioner. This is particularly important if you are pregnant, breast-feeding, have an existing medical condition, and/or are taking prescription drugs.

Narrative Evaluations
This class uses S/NS (Satisfactory/Not Satisfactory) grading. Your narrative self-evaluations are due the Monday of Finals Week, as noted in the class schedule that follows. As part of your grade in this course, you will receive a narrative evaluation from me. I view the evaluation process as a way of reflecting on the quarter and what we learned and accomplished on a class and individual level. It is an opportunity to reflect on successes, shortcomings, strengths, and opportunities for improvement or further exploration. You will be evaluated based on the criteria found under “Assessment of Learning Outcomes” on the previous page.

Equal Access to Course Materials
I aim to make this course as accessible as possible, though there are parts of it that are inherently less accessible (plant identification walks, meetings in the Outdoor Classroom, etc). Despite this, I want to make this course work for you, so please reach out to me within the first week of the quarter with any non-official accessibility and accommodations questions or concerns you have.

“If, at any point in the quarter, you find yourself unable to fully access the space, content, and/or experience of this course, please contact the Disability Access Center (DAC) to discuss potential accommodations...disability can be acquired at any point and therefore accommodations can be granted and implemented at any point during a student’s academic career.

If you already have disability-related accommodations approved by the DAC, you must send your Faculty Notification Letter through the myDAC portal. Reach out to me or the DAC as appropriate to discuss implementation of approved accommodations...If you are unsure whether disability-related accommodations are appropriate for you, contact the DAC for more information, temporary assistance, or connections to other resources”

DAC Contact Information
https://disability.wwu.edu
360-650-3083
DRSFrontDesk@wwu.edu
Academic Honesty and Student Responsibilities
In this course, students are responsible for upholding all aspects of Western's Academic Honesty Policy and Procedure, and the Student Conduct Code.

Religious Accommodations
“Western provides reasonable accommodation for students to take holidays for reasons of faith or conscience or for organized activities conducted under the auspices of a religious denomination, church, or religious organization. Accommodation is available to students who expect to be absent or endure a significant hardship due to religious observance during certain days of the course of the program. An example of significant hardship would be challenges resulting from fasting for religious reasons.”

Student Services
As students, we have access to the assistance and support services offered by WWU, as well as resources offered by the city of Bellingham. If you find yourself experiencing illness, difficulty, or crisis, here is a non-exhaustive list of on-campus and off-campus resources. If you have additions for this list, please contact me and I will add them.

On-Campus Resources
- If you are experiencing an emergency or life-threatening situation, please call 911.
- In the case of a medical concern or question, please contact the Student Health Center at 360-650-3400.
- In the case of an emotional or psychological concern or questions, please call the Counseling and Wellness Center at 360-650-3164.
- In the case of a family or personal crisis or emergency, please contact the Office of Student Life at 360-650-3706.
- If you are experiencing food insecurity, there are 7 food pantries on campus. The closest to our class is the Fairhaven food pantry on the third floor. A complete list of on-campus food pantries can be found here: https://osl.wwu.edu/basic-needs.

Off-Campus Resources
- Suicide Prevention (24/7) Lifeline at 988 or 1 800-273-8255 for English, 1 888-628-9454 for Spanish, and 711 then 1-800-273-8255 for deaf/hard of hearing.
- If you are experiencing emotional and mental health challenges, the WA Warm Line is a help line offering peer support. All calls are confidential. 877-500-9276
- If you are experiencing food insecurity:
  - The Bellingham Food Bank is open on Mondays, Wednesday, and Fridays from 10am to 6pm and is located near campus at 1824 Ellis Street.
  - The Ferndale Food Bank is open Mondays, Wednesdays, and Saturdays from 9am to 11am at 1671 Main Street in Ferndale by the Ferndale Station Park and Ride.
  - The Birchwood Food Desert Fighters have Saturday Share Spots, time and place can vary based on the season, so check out their Facebook and/or Instagram.
- If you are experiencing houselessness, Northwest Youth Services serves people ages
13 – 24. They offer housing, street outreach, help finding a job or enrolling in school, connection to mental health services, support for LGBTQ youth, and restorative justice for juvenile offenders.

- If you need basic need services, the Opportunity Council serves houseless and low-income people through rental assistance, child care, energy assistance, job skills, preschool and head start, and more.

**Class Schedule**
*This class schedule and syllabus are subject to change. Changes, if any, will be announced in class or online. Students will be held responsible for all changes.*

**Week 1: Introduction (04/01–04/07)**

<table>
<thead>
<tr>
<th>Work Due Before Class (04/01)</th>
<th>In-class Agenda (4/01)</th>
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<tbody>
<tr>
<td><em>No class</em></td>
<td><em>No class</em></td>
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<thead>
<tr>
<th>Work Due Before Class (04/03)</th>
<th>In-class Agenda (04/03)</th>
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<tbody>
<tr>
<td>- Read Syllabus</td>
<td>- Introductions</td>
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<tr>
<td>- Take Syllabus Quiz in Canvas</td>
<td>- Review main projects from syllabus</td>
</tr>
<tr>
<td>- Acquire supplies from Course Supply List in Canvas</td>
<td>- Read the Introduction (p. 9–17) of Held By the Land</td>
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<tr>
<td>- Eat a lot of apples and bring your apple scraps!</td>
<td>- Apple Cider Vinegar Lab</td>
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**Week 2: Plant ID (04/08–04/14)**

<table>
<thead>
<tr>
<th>Work Due Before Class (04/08)</th>
<th>In-class Agenda (04/08)</th>
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<tbody>
<tr>
<td>- Read the Botanical Glossary (p. 173–176) from Held By the Land</td>
<td>- Introductions</td>
</tr>
<tr>
<td>- Read “Plant Identification Basics” from MSU</td>
<td>- Botanical Vocabulary Share</td>
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<tr>
<td>- Botanical Vocabulary Share</td>
<td>- Chapter 3 Reading Questions</td>
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<tr>
<td>- Read Chapter 3 (p. 41–49) of Held By the Land</td>
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<thead>
<tr>
<th>Work Due Before Class (04/10)</th>
<th>In-class Agenda (04/10)</th>
</tr>
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<tbody>
<tr>
<td>- Journal Entry 1: Plant ID</td>
<td>- Journal Share</td>
</tr>
<tr>
<td>- Plant ID Video (45 min, Botany in a Day)</td>
<td>- Plant ID walk, Outback Farm</td>
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### Week 3: Sustainable Harvest (04/15–04/21)

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<thead>
<tr>
<th>Work Due Before Class (04/15)</th>
<th>In-class Agenda (04/15)</th>
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</table>
| • Read Chapter 4 (p. 51–59) of *Held By the Land*  
• Read Chapter 5 (at least p. 64–69) of *Held By the Land*  
• Reading Questions | • Class discussion of reading: Asking for Permission and Sustainable Harvest |

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<thead>
<tr>
<th>Work Due Before Class (04/17)</th>
<th>In-class Agenda (04/17)</th>
</tr>
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</table>
| • **Journal Entry 2: Asking For Permission** | • Class discussion of reading: Asking for Permission and Sustainable Harvest cont. and Ch’átyaý (devil’s club)  
• Plant Walk, Arboretum with John Tuxill |

### Week 4: Plant Properties (04/22–04/28)

*Begin work on Plant Profile Project*

<table>
<thead>
<tr>
<th>Work Due Before Class (04/22)</th>
<th>In-class Agenda (04/22)</th>
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</table>
| • Choose plant for Plant Profile Project (one that is not in *Held By The Land*)  
• Read “Being in Relationship” (p. 72–73) of *Held By The Land*  
• Read 1 plant profile from “Trees” (p. 76–91)  
• Read 1 plant profile from “Shrubs” (p. 94–131)  
• Read 1 plant profile from “Flowering Herbs” (p. 134–159) | • Sign up for presentation dates  
• Class discussion of readings and Plant Profile Projects  
• Medicinal properties vocabulary |

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<thead>
<tr>
<th>Work Due Before Class (04/24)</th>
<th>In-class Agenda (04/24)</th>
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</table>
| • **Journal Entry 3: Plant ID**  
• Work on Plant Profile Project  
• Optional Reading: “Lemon Balm” from *Medicinal Herbs, A Beginner’s Guide* | • Definitions of Therapeutic Actions and Plant Constituents and Their Basic Functions from *The Herbal Apothecary*  
• Guest Lecturer: Anika Tilland Stafford; Infusion Lab |
### Week 5: Basic Herbal Preparations (04/29-05/05)

*Continue work on Plant Profile Projects*

<table>
<thead>
<tr>
<th>Work Due Before Class (04/29)</th>
<th>In-class Agenda (04/29)</th>
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</table>
| ● Read tincture recipe from *The Herbal Handbook for Home and Health*  
● Read select parts from “Antioxidant and genoprotective properties of extracts from edible flowers”  
● Continue working on Plant Profile Projects | ● Tincture Lab: Lavender and Rosemary |

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<thead>
<tr>
<th>Work Due Before Class (05/01)</th>
<th>In-class Agenda (05/01)</th>
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</table>
| ● Read p. 80–81 of *Held By the Land*  
● Read p. 179–180 of *Held By the Land*  
*No journal assignment this week, keep working on your Plant Profile Project!* | ● Salve Lab |

### Week 6 (05/06-05/12)

<table>
<thead>
<tr>
<th>Work Due Before Class (05/06)</th>
<th>In-class Agenda (05/06)</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Plant Profiles Due!</td>
<td>● Plant Profile Presentations</td>
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<thead>
<tr>
<th>Work Due Before Class (05/08)</th>
<th>In-class Agenda (05/08)</th>
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</thead>
<tbody>
<tr>
<td>● Journal Entry 4: Plant ID</td>
<td>● Plant Profile Presentations</td>
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### Week 7 (05/13-05/19)

*Start thinking about culminating project*

<table>
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<tr>
<th>Work Due Before Class (05/13)</th>
<th>In-class Agenda (05/13)</th>
</tr>
</thead>
</table>
| ● Read “Basic Human Anatomy: The Respiratory System” from *The Herbal Apothecary*  
● Read “Basic Human Anatomy: The Endocrine System” from *The Herbal Apothecary* | ● Class discussion of readings  
● Discussion of culminating project  
● First round: Recipe Contribution Sign-up |
- Reading Questions

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<tr>
<th>Work Due Before Class (05/15)</th>
<th>In-class Agenda (05/15)</th>
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<tbody>
<tr>
<td>Read p. 136-137 of <em>Held By The Land</em></td>
<td>Lab: Elderberry syrup</td>
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<tr>
<td>Journal Entry 5: Plant ID</td>
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**Week 8 (05/20–05/26)**

*Start working on culminating project*

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<thead>
<tr>
<th>Work Due Before Class (05/20)</th>
<th>In-class Agenda (05/20)</th>
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<tbody>
<tr>
<td>Read “Basic Human Anatomy: The Gastrointestinal System” from <em>The Herbal Apothecary</em></td>
<td>Class discussion of readings</td>
</tr>
<tr>
<td>Read “Basic Human Anatomy: The Cardiovascular System” from <em>The Herbal Apothecary</em></td>
<td>Second round: Recipe Contribution Sign-up</td>
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<tr>
<td>Reading Questions</td>
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<tr>
<th>Work Due Before Class (05/22)</th>
<th>In-class Agenda (05/22)</th>
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<tr>
<td>Journal Entry 6: Plant ID</td>
<td>Journal Share</td>
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**Week 9 (05/27–06/02)**

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<thead>
<tr>
<th>Work Due Before Class (05/27)</th>
<th>In-class Agenda (05/27)</th>
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<tr>
<td><em>no class</em></td>
<td><em>no class</em></td>
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<thead>
<tr>
<th>Work Due Before Class (05/29)</th>
<th>In-class Agenda (05/29)</th>
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<tbody>
<tr>
<td><strong>Culminating Project</strong>: Recipe contribution to Herbal Remedy Book</td>
<td>Share and discuss herbal recipes</td>
</tr>
<tr>
<td>Reading on Labeling and Storing Herbal Medicines</td>
<td>Discussion: Labeling and Storing Herbal Medicines</td>
</tr>
<tr>
<td>Journal Entry 7: Plant ID</td>
<td>Outback and Arboretum harvest walk</td>
</tr>
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**Week 10 (06/03–06/09)**
Work Due Before Class (06/03)  
- Review: Reading on Labeling and Storing Herbal Medicines  
- Review: “Basic Human Anatomy: The Gastrointestinal System” from The Herbal Apothecary  

In-class Agenda (06/03)  
- Herbal Vinegar Lab: Dandelion (gastrointestinal) with homemade ACV

Work Due Before Class (06/05)  
- Review: Reading on Labeling and Storing Herbal Medicines  
- Culminating Project: Herbal Preparation

In-class Agenda (06/05)  
- Class Evaluations  
- Bring herbal preparations to class  
- Class reflections and potluck

Week 11 (6/10–6/16) *No class*  
Narrative Self Evaluations due at or before 11:59 pm on Monday, 6/10

Additional Resources

Course Supply List  
*Herbalism As Community Care: Required Materials*  
- Shoes that will protect your feet from cold, rainy, muddy conditions *if necessary*  
- Raincoat and/or umbrella *if necessary*  
- Jars (various sizes for tea blends, tinctures, salves, etc) *Darker glass is preferred to protect from sunlight*  
- Scissors/knife/snips for outdoor harvesting  
- Cheesecloth and/or fine mesh strainer for straining herbal preparations  
- Metal or glass measuring cups (plastic can take on color or odor from certain plants)  
- Dedicated journal/notebook for your *Plant ID and Harvest Journal* (I recommend something small enough to carry with you on walks and hikes)  
- Basket/bucket for outdoor harvesting

*Recommended Materials*  
- Blender/coffee grinder/ pestle and mortar for grinding up plant material  
- *Plants of the Pacific Northwest Coast*, Pojar and MacKinnon

Week 2: MSU Plant Identification Basics  
[https://www.montana.edu/extension/invasiveplants/documents/publications/extension_publications/Plant%20identification%20basics.pdf](https://www.montana.edu/extension/invasiveplants/documents/publications/extension_publications/Plant%20identification%20basics.pdf)
Week 2: Reading Questions: *Held By The Land*, Chapter 3

- What is the advantage of knowing what kind of habitat a plant likes?
  - Pg 43 Ability to look for a plant rather than just identify it when you stumble across it, spread out harvest across multiple areas to not deplete the plant population in one area

- Did you get any ideas from this chapter on things you can do with your Plant ID and Harvest Journal?
  - Pg 43 Record dates and places you harvest so you can visit different places each season, add pressed flowers or leaves

- What are important flower characteristics for identification purposes?
  - Pg 43 color, shape (individual or clustered), size, number, type of petals (separate or fused), and scent

- What are important leaf characteristics for identification purposes?
  - Pg 44 leaf margin, leaf shape, patterns of leaf veins, thickness and texture, scent (in some cases)

- When does the seed develop on a plant?
  - Pg 44 after the flower is pollinated

- What can a seed’s form tell us?
  - Pg 44 Its dispersal strategy

- What are important bark characteristics for identification purposes?
  - Pg 44 color and texture of bark (smooth, rough, papery, resin blisters)

- What is the only time of year the inner bark of a plant can be accessed? Why?
  - Pg 44 when the sap is running in the springtime. At this time the plant sends stored energy and nutrients from its roots up to the aboveground parts of the plant to support new growth. Then the new inner-bark growth can be separated from the heartwood (“Heartwood is the central, supporting pillar of the tree. Although dead, it will not decay or lose strength while the outer layers are intact. A composite of hollow, needlelike cellulose fibers bound together by a chemical glue called lignin, it is in many ways as strong as steel.” US Forest Service)

- What is a good trick when harvesting the root of a plant?
  - Pg 44 Keep the aboveground plant parts attached so you can be certain you ID’ed correctly

  - From PennState Extension: “Essentially, bulbs are "storage tanks" that help plants survive dormant periods when it's too cold or too hot for them to flower. They also nourish the plant during the flowering and growing season. There are several major types of bulbs:
    - True bulbs (daffodils, tulips, hyacinths, etc.) are complete plants within a tiny package. They produce stems from the base of the
bulb and survive from year to year. As the plant grows, bulblets form at the base of the mother plant.

- Corms (crocus, freesia, and gladiolus) are usually short squat stems filled with food storage tissue. Some corms produce cormels which, like bulblets, are baby plants and can be separated from the parent to grow new plants.
- Tubers (dahlias and some begonias) are underground roots with fleshy, food-storing parts that resemble tubers.
- Rhizomes (iris) are bulb-like power packs that grow along the soil surface. Growth buds form on a rhizome for next year's leaves and flowers. The original rhizome will not reflower and in time will need to be dug out.

- What are the four different uses for plants the author mentioned? Can you think of any examples of plants that have at least one of these uses?
  - Pg 45 Beauty, nutrition (nettle, ), medicine, material (willow, nettle, marigold)

- What are the four drying techniques mentioned in the chapter?
  - Pg 46 Hanging to dry, sun drying, drying racks or baskets, dehydrator

- When is it convenient to hang to dry?
  - Pg 46 When the plant is leafy, has a stem and can be easily bundled together; when you don’t want the plant to lose potency; when you want to slowly dry the plant

- When is it appropriate to sun-dry plants?
  - Pg 47 when plants are thicker and hold moisture, especially when being used as food, for example: seaweeds and fruit leathers

- When is it convenient to use drying racks and baskets?
  - Pg 47 when drying petals and delicate flower heads that you want to maintain their color and fragrance

- When is it convenient to use a dehydrator or an oven?
  - Pg 47 when drying heavier materials like bark and fruit

- What is the rough ratio of dried plant to carrier oil needed when making an oil infusion?
  - Pg 48 1/2 cup to 1 cup (66–140 g) of dried plant to 1 liter of oil

**Week 2: Journal Entry 1**
Submit a high-quality photo or scan of your first journal entry here. For this entry, you will find and identify one (non-cultivated) plant. Your entry should include:
- Date
- Time
- Location (be as specific as you can; for example: south-facing forested slope in the Sehome Arboretum)
• Weather
• A sketch of the whole plant form/pressing of the whole plant form
• 2+ small sketches of plant parts (buds, flowers, seeds, bark, etc)/pressings of the plant parts
• Scientific and common name
• Field notes

**Week 3: Reading Questions: Held By The Land, Chapters 4 and 5**

**Chapter 4**
- Do you have experience harvesting plants? If so, do you have a pre-harvest practice of your own?
- Which, if any, of the questions on p.52 resonate with you? Are there any you would like to incorporate into a personal practice? Why or why not?
- Do you have any ideas about how to go beyond a land acknowledgement and take actions to support Indigenous communities in the area?
- What are ways that we can shift our mental framework around harvesting from one that prioritizes what we need and/or desire to one that prioritizes the needs of other human and non-human beings? Do you think a shift of this nature is important? Why or why not?
- What are keys to a sustainable harvest? What are ways of “giving back”?
- From the section “While I Harvest” on p. 57: Do you practice any of these steps when harvesting? Would you like to? Why or why not?
- How might we invite ceremony and ritual into building relationships with plants?
- Have you ever had an experience like the one Leigh Joseph describes on p. 59? If so, in what ways was your experience similar and different?

**Chapter 5**
- Do you have a mindfulness practice? Is it land-based? What is it like?
- How do rhythms and cycles of the natural world impact your life?
- What are ways that we can respect a plant during and after harvest?

**General**
- What are your big takeaways from these chapters? How familiar or unfamiliar were you with the information? Did you find the readings useful? Why or why not?
- Why is it worth our time to think about sustainable and mindful harvesting?
- Do you think that there is a depth and richness we tap into when we build respectful relationships with plants? Why or why not? If yes, what does this look or feel like?

**Week 3: Journal Entry 2**
For your second journal entry, you will be working on two pages. Please submit a scan of your entry to Canvas (you can scan them using the Notes app on iPhone or the Adobe Scan app). If you can't scan your entry, please take a high-res photo instead. Bring your journal entry to class so we can share them!
What to include:
1. Find and identify one (non-cultivated) plant. Your entry should include:
   ● Scientific and common name
   ● Date
   ● Time
   ● Location (be as specific as you can; for example: south-facing forested slope in the Sehome Arboretum)
   ● A sketch of the whole plant form and/or pressing of the whole plant form
   ● 2+ small sketches of plant parts (buds, flowers, seeds, bark, etc) and/or pressings of the plant part
   ● Field notes/any other info you want to include (maybe medicinal properties of plant or general ethnobotanical info?)

2. Write a poem or reflection or make a piece of art related to our discussion in class on Monday (for those of you not in class, refer to chapters 4 and 5 of Held By The Land)

Week 4: Journal Entry 3
Please submit a scan of your entry to Canvas (you can scan them using the Notes app on iPhone or the Adobe Scan app). If you can't scan your entry, please take a high-res photo instead. Bring your journal entry to class so we can share them!

What to include:
Start your Plant Profile Project research by making an plant ID-esque page for your chosen plant. Please include:
   ● Scientific and common name
   ● The family your plant belongs to
   ● Date, Time, and Location if you were able to find this plant in a non-cultivated setting
   ● A sketch of the whole plant form and/or pressing of the whole plant form. For sketches, please include color (could be watercolor, colored pencil, crayon, marker, etc)
   ● 2+ small sketches of plant parts (buds, flowers, seeds, bark, etc) and/or pressings of the plant part. For sketches, please include color (could be watercolor, colored pencil, crayon, marker, etc)
   ● Field notes/any other info you want to include (maybe medicinal properties of plant or general ethnobotanical info?)

Week 5: Tincture/Glycerite Workshop
Main Idea:
Tinctures allow us to distill a plant down to its most essential parts, its most beneficial elements. They are a way to preserve and continue to enjoy the medicine that plants give us for years and care for our community
What are tinctures?
Tinctures are made with plant material and a solvent. Usually alcohol is used as the solvent because of its ability to extract a wide range of plant properties and its long shelf-life (it stays good for a long time), but you can also use glycerin, honey, or vinegar.

They allow us to distill a plant down to its most essential parts without much work, and can be used for years to help support health and well-being, or treat different conditions.

Why tinctures?
There are a lot of other ways to receive the many gifts plants have to give us–you can eat them raw or cooked, drink them in an infusion or decoction (extracts of herbs in water; infusions: softer parts of herbs like the flowers, tops and leaves; decoctions: harder or woodier parts of herbs like bark, lichens, hard fruits, larger seeds, and roots), or dry them, crush them, and use them to season your meals.

So why make tinctures? For one, tinctures have a very long shelf-life. Generally speaking, they are good for at least 2 years, with many good for longer than that. Second, they are highly concentrated, so you only have to take a small amount to benefit from all the goodness the plant has to offer.

How to make a tincture (general)
From the Herbal Academy (https://theherbalacademy.com/how-to-make-a-tincture/) and The Herbal Handbook for Home and Health, Pip Waller:

1. Chop fresh herbs and grind dried herbs to increase the surface area. Place herbs into a clean, dry jar with a wide mouth.

3. Pour high proof alcohol (must be ethyl alcohol – from ethanol, like vodka or brandy if you want to take the tincture orally)/vegetable glycerin over the herbs until the alcohol/vegetable glycerin level is an inch above the top of the herbs. Dry herbs may absorb the liquid, so check and add alcohol/vegetable glycerin as needed.

*The higher the percentage alcohol, the quicker the properties will be extracted. Some plant properties require a certain percentage of alcohol. For example, to make a tincture of yarrow (Achillea millefolium) you need to use 60% alcohol, vodka is usually 40%. You can use vodka with most plants, you may just need to let it sit longer. If you’re using a very concentrated alcohol (more than 75%) you can dilute your alcohol with water or an infusion/decoction of the herb you’re working with to increase the strength of the tincture.

4. Cover tightly with a lid and place the jar in a dark cupboard and allow to soak or macerate for at least 3 weeks (but ideally 4–8).

5. During this time period, give the jar a shake every 1–2 days. Keep an eye on the alcohol/vegetable glycerin level to ensure all your herbs are still covered.
6. Once macerating is complete, layer cheesecloth a few times over top of a clean bowl and secure with rubber band if possible.

7. Strain the mixture through the cheesecloth and with clean hands, gather the cloth up and squeeze strongly so every bit of possible liquid is drained from the herbs.

8. Allow material to settle overnight and strain again, or decant, through a smaller filter such as filter paper or a thin wire screen.

9. Use a funnel to transfer into labeled, amber bottles and store out of the light.

10. Well-made tinctures keep for at least 2 years.

Demonstration
Today we will be working with rosemary and lavender.

Why?
They are easy to identify, grow abundantly in our garden, and have numerous health benefits.

Rosemary:
- Anti-microbial
- Anti-inflammatory
- Anti-oxidant (protects cells against free radicals, which may contribute to heart disease, cancer, and other diseases. Free radicals are produced when your body breaks down food or when you’re exposed to tobacco smoke or radiation)
- Antinociceptive (pain-relieving)
- Neuroprotective
- Important clinical effects on mood, learning, memory, pain, anxiety, and sleep

Lavender:
- Lavender tinctures proven to have strong antioxidant abilities (protect cells from free radicals)
- Lavender tinctures proven to protect the DNA of white blood cells (lymphocytes, the ones that help make antibodies and help kill tumor cells and help control immune responses)

Week 5: Salve Workshop
Why coconut oil?
It is solid at room temperature and it has a long shelf-life. Olive oil is also a popular choice for herbal oils.

Nettle-Infused Oil Recipe
- 6oz/168g dried nettle
- 30 fl oz/817.5 g coconut oil
1. Chop dried nettle into small pieces
2. Put the coconut oil in a double boiler and melt. Place the dried nettle in the double boiler with the coconut oil. Make sure all of the plant material is covered and add more oil if needed.
3. Gently heat the nettle over very low heat (100°F to 140°F) for 5 hours. The oil should take on the color and scent of the herb.
4. Turn off heat and allow to cool.
5. Once oil is cool, strain through cheesecloth.

*Ratio used: 1oz/28g dried nettle : 5 fl oz/136 g coconut oil - We ended up having to add a LOT more oil. We had 96g of dried, finely chopped nettle, and we probably ended up using about 50 fl oz of coconut oil

Nettle Salve Recipe
Makes 37.5 oz
- 7.5 oz beeswax
- 30 oz nettle infused oil
- Essential oil for smell if desired
1. Wrap beeswax block in a towel and use a hammer to break the block up into tiny chunks. Weigh as you go so the part of the block that we won’t use stays intact. We need 7.5 oz of beeswax.
2. Place beeswax in a double boiler and gently warm over low heat until melted.
3. Add nettle oil and stir over low heat until well-mixed.
4. Remove from heat and add essential oils if desired.
5. Quickly pour warm mixture into tin or jar and allow to cool completely
6. Store in a cool location

*Amount of beeswax can be adjusted to change the consistency of the salve. For a softer salve, use less, and for a firmer salve, use more.

Week 5: “Antioxidant and genoprotective properties of extracts from edible flowers”, 2019
https://wwwu.instructure.com/courses/1738269/files/119758377/download?download_frd=1

Week 5 and 6: Plant Profile Project
Requirements
Your project and presentation must include:
- Common name(s) – at least one
- Latin name
● Family plant belongs to AND defining characteristics of that family
  ○ Please also include if that family has any defining medicinal qualities
● Plant Description (What does this plant look like? What are its leaves like? Roots? Flowers? Seeds? How might we differentiate this plant from other similar plants? Does it have a distinct smell or texture?)
● Ecology (Where does this plant live? What is this plant’s range? What kind of an environment does it prefer (soil type, sun exposure, other plants it typically grows around, etc)? Where would you expect to find this plant in Bellingham and/or the surrounding area?)
● Therapeutic actions of plant
● Safety concerns (Does this plant have needles or thorns? Does it provoke a rash/allergic reaction of some kind? Does caution need to be taken when handling this plant? Are there any concerns about ingestion of this plant? At what level is this plant toxic? Are there any contraindications for preparations of this plant? etc)
● Pressing of the plant if at all possible (If you’re working with a larger plant like a tree, press the leaves and flowers. If you’re working with a smaller plant, try pressing the whole plant including the roots)
● Visual depiction of the plant, at least 1 hand-drawn element and 1 photo element, at least one of these elements must be in color

Other considerations
You are also highly encouraged to include:
● Why did you choose this plant? What is your connection to this plant? Where did you first meet this plant?
● Ethnobotanical uses and/or recipes
● Specific places in Bellingham you’ve seen this plant
● Creative element (poem, painting/watercolor, story, collage, cordage/rope, basket/cup, etc - the world is your oyster!)

Week 6: Plant Profile Presentation
Each person will give a 12 minute presentation about the plant they chose for their Plant Profile Project. It is really important that those of us not presenting are in class as a sign of respect to the time and effort everyone put into their project. I'm excited to hear from you all and learn about some cool plants! If you have any questions regarding the presentation or project, please reach out to me via email.

For your presentation:
● Physical copy of your project (if this is not possible, please let me know and we can arrange to be inside and use the projector)
● Things to share:
Week 6: Journal Entry 4
For this journal entry, we will be using the same format as Journal 2. You will be working on two pages again. Please submit a scan of your entry to Canvas (you can scan them using the Notes app on iPhone or the Adobe Scan app). If you can't scan your entry, please take a high-res photo instead. We won't be able to share these in class until Monday since we have our plant profile presentations.

What to include:
1. Find and identify one (non-cultivated) plant. Your entry should include:
   a. Scientific and common name
   b. Plant Family
   c. Date
   d. Time
   e. Location (be as specific as you can; for example: south-facing forested slope in the Sehome Arboretum)
   f. A sketch of the whole plant form and/or pressing of the whole plant form
   g. 2+ small sketches of plant parts (buds, flowers, seeds, bark, etc) and/or pressings of the plant part
   h. Field notes/any other info you want to include (maybe medicinal properties of plant or general ethnobotanical info?)
2. Write a poem or reflection or make a piece of art related to your relationship with this plant

Week 7: Reading Questions: The Herbal Apothecary, Respiratory and Endocrine
The Respiratory System, p. 31–33
- What’s the “first line of defense” in protecting the upper respiratory system from foreign particles? Why is this important? How might this inform the way we breathe?
- Which cells are responsible for mucus production in the nasal cavity? Why might someone experience chronic congestion and post-nasal drip?
• What do respiratory tonics do? What are examples of some respiratory tonics? How would you differentiate between the function of respiratory tonics (herbs) and allopathic (conventional/Western) approaches?
• What is the action of anticatarrhals?
• What can an inflammation response tell us?
• What is the action of mucolytics?
• What is the action of expectorants?
• Very generally, how do lymphatic herbs work to support the lymphatic system?
• What do demulcent herbs do? What is their energetic “temperature”?
• How do respiratory relaxants differ in action from demulcents?
• What is the action of bronchodilators?
• Very generally, how do antimicrobial herbs work?

The Endocrine System, p. 37–39
• Based on the reading, how would you define the endocrine system?
• What is the difference between sympathetic and parasympathetic states? Why do you think we might experience trouble finding balance between these states?
• What does the endocrine system include? What do these all do to some extent?
• What is the hypothalamus responsible for?
• What is the pituitary gland responsible for?
• What is the thyroid gland responsible for?
• What might be a cause of thyroid dysfunction?
• What are the parathyroid glands responsible for?
• What are the adrenal glands responsible for?
• What might a decrease in the function of the thyroid and/or reproductive glands indicate?
• What is the pineal gland responsible for?
• What is included in the term “reproductive glands”?
• What is the pancreas responsible for?
• Which gland secretes and balances cortisol?
• In regards to cortisol release, what can happen when one is experiencing chronic stress?
• What are adaptogen herbs?
• What do bitter herbs do?
• What do alterative herbs do?
• What do nervine herbs do?
• How does herbalism offer a unique way of approaching endocrine imbalance?
Week 7: Journal Entry 5
*For this entry, you will be working with a plant that supports respiratory and/or endocrine functions. Refer to the reading for ideas or do some light research of your own. Please submit a scan of your entry to Canvas (you can scan them using the Notes app on iPhone or the Adobe Scan app). If you can't scan your entry, please take a high-res photo instead.

What to include:
1. Find and identify one plant that supports respiratory and/or endocrine functions. Your entry should include:
   - Scientific and common name
   - Plant Family
   - Date
   - Time
   - Location (be as specific as you can; for example: south-facing forested slope in the Sehome Arboretum)
   - Therapeutic Actions of the plant
   - Possible herbal preparations that could be made with the plant
   - A sketch of the whole plant form and/or pressing of the whole plant form
   - 2+ small sketches of plant parts (buds, flowers, seeds, bark, etc) and/or pressings of the plant part

Week 7: Syrup Workshop
Recipe
This recipe uses a ratio 1 part decoction: 1 part honey

4 cups dried elderberries (Sambucus nigra)
4-6 tsp dried ginger root (Zingiber officinale)
2 ceylon/sweet cinnamon sticks (Cinnamomum verum)
8 cups cold water (preferably filtered/distilled)
4 cups of honey (preferably local and organic)

Measuring cups
Pot
Heat source (stove, hot plate, etc)
Funnel
Cheesecloth
Sterilized glass storage container

Decoction – an herbal preparation that involved placing your plant material (typically hard roots, dried berries, barks, and seeds) in cold water, bringing to a boil, and then simmering. The result is stronger in flavor than an herbal infusion and more concentrated.
Directions
1. Combine berries and herbs with cold water in a pot and bring it to a boil.
2. Reduce heat and simmer for 30-40 minutes or until the liquid is reduced by half.
3. Remove decoction from the heat and let it steep for 1 hour.
4. Strain the berries and herbs from the liquid using a funnel overlaid with cheesecloth.
5. Once the decoction has cooled to slightly above room temperature, add equal parts honey (should be about 3-4 cups) and stir to incorporate.
6. Bottle the syrup in sterilized glass and store in the refrigerator for up to 3 months.
7. Label your container with an ingredient list (including the common and Latin names of the plants), date prepared, storage instructions and shelf life, contraindications, and dosage instructions.

Additional Information
¹You can also use a ratio of 2 parts decoction: 1 part honey for a less sweet syrup, but do note that using less honey/sugar will result in a less shelf-stable syrup

²You can substitute sugar for honey

You can add alcohol (common choices are brandy, vodka, or a tincture) to your syrup to prolong its shelf life.

General dosage is ½-1 tsp taken 1-3x per day

Black elderberry, Sambucus nigra
Family: Adoxaceae
Therapeutic actions
Berries are diaphoretic, diuretic, antiviral, and laxative
Medicinal Properties
“The berries work to remove viruses from the body and remove deep congestion, whether it be in the lungs, kidneys, or joints.” The Herbal Apothecary
“Recent research focusing on elder indicates that it has antiviral effects and can help knock out such viruses as H1N1.” The Herbal Apothecary
“Berries are packed with vitamin C and flavonoids, which support day-to-day cellular health and immune function.” The Herbal Apothecary
Ethnobotanical Uses
Red elderberries were/are a very important food for the peoples living on the central and northern coast. They were always cooked since the raw berries can cause nausea. They have been used to make jellies and wines.
**Safety**
Do not consume elderberry leaves, elderberry stems, or raw or unripe elderberries. They contain harmful chemicals (cyanogenic glycosides).
If you are taking laxatives, exercise caution because elderberry can increase their effect.
Avoid use during pregnancy or if lactating due to risk of toxicity and potential GI distress.

**Ginger root, Zingiber officinale**
Family: Zingiberaceae

*Therapeutic actions*
Anti-inflammatory (more research needed), antirheumatic (more research needed), carminative (soothes digestion and helps to expel gas and relieve bloating)

*Medicinal properties*
“Gingerol, a natural component of ginger root, benefits gastrointestinal motility — the rate at which food exits the stomach and continues along the digestive process.”

hopkinsmedicine.org

Nausea relief
Bloating and gas relief
Antioxidants in ginger help manage free radicals

*Ethnobotanical uses*
Ginger has been used as a spice since before recorded history and has been used to treat various ailments for thousands of years. It was a very important commodity in trade.

*Safety*
Ginger is generally regarded to be safe, but it may interact with prescription drugs when taken regularly/in larger quantities.

**Ceylon cinnamon, Cinnamomum verum** (previously called Cinnamomum zeylanicum)
Family: Lauraceae

*Therapeutic actions*
Antimicrobial, antiparasitic, anti-inflammatory, antifungal

*Medicinal properties*
Ceylon cinnamon has been shown to reduce cardiovascular disease, boost cognitive function, and reduce the risk of colonic cancer.

In-vitro studies have also shown many beneficial effects on diabetes. “Cinnamtannin B1 was identified as the potential active compound responsible for these effects.”

“Medicinal properties of 'true' cinnamon (Cinnamomum zeylanicum): a systematic review.”

In-vivo studies have shown cinnamon’s beneficial effects on diabetes as well.
“An aqueous extract of [Cinnamomum zeylanicum] is known to inhibit tau aggregation and filament formation, which are hallmarks of Alzheimer's disease.” “Medicinal properties of 'true' cinnamon (Cinnamomum zeylanicum): a systematic review.”

Ceylon cinnamon has various other medicinal uses that have been widely studied.

**Ethnobotanical uses**

Cinnamon is used as a spice and fragrance. It has been used in cuisine and medicinal preparations around the world.

**Safety**

Courmarin, a component of cinnamon (found in low levels in Cinnamomum verum and in higher levels in Cinnamomum cassia) may have hepatotoxic and carcinogenic effects. For this reason, caution should be exercised when incorporating cinnamon into one’s diet so as not to exceed the safe daily amount. Because of its various medicinal effects, cinnamon may also increase the action of certain drugs.

**Sources**

Memorial Sloan Kettering Cancer Center, [https://www.mskcc.org/cancer-care/integrative-medicine/herbs/elderberry-01](https://www.mskcc.org/cancer-care/integrative-medicine/herbs/elderberry-01)

Mountain Rose Herbs, [https://blog.mountainroseherbs.com/elderberry-syrup-recipe](https://blog.mountainroseherbs.com/elderberry-syrup-recipe)

*The Herbal Apothecary, JJ Pursell*

*Plants of the Pacific Northwest Coast*, Pojar and MacKinnon


Johns Hopkins Medicine, hopkinsmedicine.org


Week 8: Reading Questions: *The Herbal Apothecary, Cardiovascular and Gastrointestinal*

**The Cardiovascular System, p. 28–30**

- What can herbs be helpful for in regards to the cardiovascular system?
- What do arteries do? What do veins do?
- What are some possible actions herbs can have on the cardiovascular system?
- What do cardiotonic herbs do?
- What do cardioactive herbs do? Why must these herbs often be treated with caution?
- What is the function of cardiovascular stimulants? What is often the energetic “temperature” of herbs that have this action?
- What is the function of vasodilators?
- What is the function of hypertensives?
- What is the function of diuretics in supporting cardiovascular health?
- What is the function of vascular tonics?
- What is the function of nervines in supporting cardiovascular health?

**The Gastrointestinal System, p. 34–36**

- What are apertifs and digestifs? How do they differ and how does each support digestive functions?
- What is salivation a sign of?
- How can the preparation of food play a role in proper digestion?
- How might stress affect digestion?
- What are the downsides of “improper” digestion?
- What do bitter herbs do to support digestion?
- What is the function of carminatives? How do they combat gas?
- How do digestive demulcients differ from respiratory demulcients (think back to last week’s reading)?
- What are the similarities and differences in the functions of purgatives and laxatives?
- What is the function of astringent herbs in the context of the gastrointestinal system?
- What is the function of antispasmodics?

**Week 8: Journal Entry 6**

*For this entry, you will be working with a plant that supports cardiovascular and/or gastrointestinal functions. Refer to the reading for ideas or do some light research of your own. Please submit a scan of your entry to Canvas (you can scan them using the Notes app on iPhone or the Adobe Scan app). If you can’t scan your entry, please take a high-res photo instead.*

**What to include:**

1. Find and identify one plant that supports respiratory and/or endocrine functions. Your entry should include:
• Scientific and common name
• Plant Family
• Date
• Time
• Location (be as specific as you can; for example: south-facing forested slope in the Sehome Arboretum)
• Therapeutic Actions of the plant
• Possible herbal preparations that could be made with the plant
• A sketch of the whole plant form and/or pressing of the whole plant form
• 2+ small sketches of plant parts (buds, flowers, seeds, bark, etc) and/or pressings of the plant part

Week 9: Herbal Recipe
Your recipe can be one you’ve found (in a book, from a blog, a family recipe, etc), or one entirely of your own making. The recipe must utilize herbs with known medicinal qualities, and these herbs should be the primary ingredients of the recipe. Even if making your own recipe, I recommend using one or more existing recipes for guidance.

What I’m looking for:
1. A name for your recipe
2. A description of the recipe and its intended use
3. Dosage for adults and children
4. Any safety concerns/contraindications
5. A short write-up on the main ingredient(s) including their:
   1. Common name
   2. Latin name
   3. Therapeutic actions
   4. Medicinal properties
   5. One or more ethnobotanical uses
   6. Contraindications (can copy and paste from safety concern/contraindication section above)
6. A list of supplies needed to make the recipe (e.g. digital scale, double boiler, glass jar, food processor)
7. An ingredient list with quantities (quantities can be by weight or volume, but they must be consistent throughout the recipe)
8. Detailed directions for making the herbal preparation
9. Directions on labeling and storing the preparation
10. Bibliography section with sources used for therapeutic action, medicinal property, ethnobotanical use, and contraindication information, as well as the sources you consulted for the recipe itself

Week 9: Journal Entry 7
In preparation for your culminating project, your last entry will focus on an important plant in your recipe for the Herbal Remedy Book. Please submit a scan of your entry to
Canvas (you can scan them using the Notes app on iPhone or the Adobe Scan app). If you can't scan your entry, please take a high-res photo instead.

What to include your last entry:
- Scientific and common name
- Plant Family
- Date (if applicable)
- Time (if applicable)
- Location (if applicable; be as specific as you can; for example: south-facing forested slope in the Sehome Arboretum)
- Therapeutic Actions of the plant
- Why you chose a recipe using this plant
- A sketch of the whole plant form and/or pressing of the whole plant form
- 2+ small sketches of plant parts (buds, flowers, seeds, bark, etc) and/or pressings of the plant part