



Visual Mapping

- Create visual maps in your nature journal while walking the land.
- Practice observing the natural world and discussing the dominant features.
- What is the general shape of the site being observed? Where is it flat or elevated? Where does it dip? Are there low/wet areas, or bluffs of trees?
- At intervals, spend some solo time to stop and record observations.



Your home or neighbourhood as a stewardship site: mapping where you live is a way of learning more about it and inviting questions about what you might do to contribute as a steward of that place.



Map Tour

- Bring some of the data maps from the **Map Layers** activity out to the stewardship site and make connections between the information on the map and the actual space.
- Can you find a wetland or bluff of trees? Can you see evidence of the prevailing wind? Do you recognize landmarks described in oral histories about the site?
- Spend time adding these details to your visual maps.



Getting to Know A Place



There is something about drawing or painting a landscape or map of a space that helps you to notice details you might otherwise miss. I often find myself wondering why landforms have a particular shape, what has caused one area to be greener than another, or why trees are gathered in one spot versus another. These kinds of questions can lead to investigation that help me to feel more intimately connected to the space I am working in.



Overview: Before beginning a project, it is important to get to know the natural space you will be working with. Sometimes, we can come to land care projects with assumptions and preconceived ideas about what is best for the land. Spending time noticing, wondering, and connecting with a place over a period of time (the longer the better!) can help you to understand the unique character of that location through different temperatures, weather, growing periods, and other natural cycles.

Your Goal: Think about land as an active partner in the restoration project relationship - get to know the beautiful and surprising things about the place, as you would a new friend or partner. Use your nature journal to explore what you notice, wonder and connect with using words, pictures, and numbers.

Nature Journaling Strategy: Visual Mapping, The Big Picture

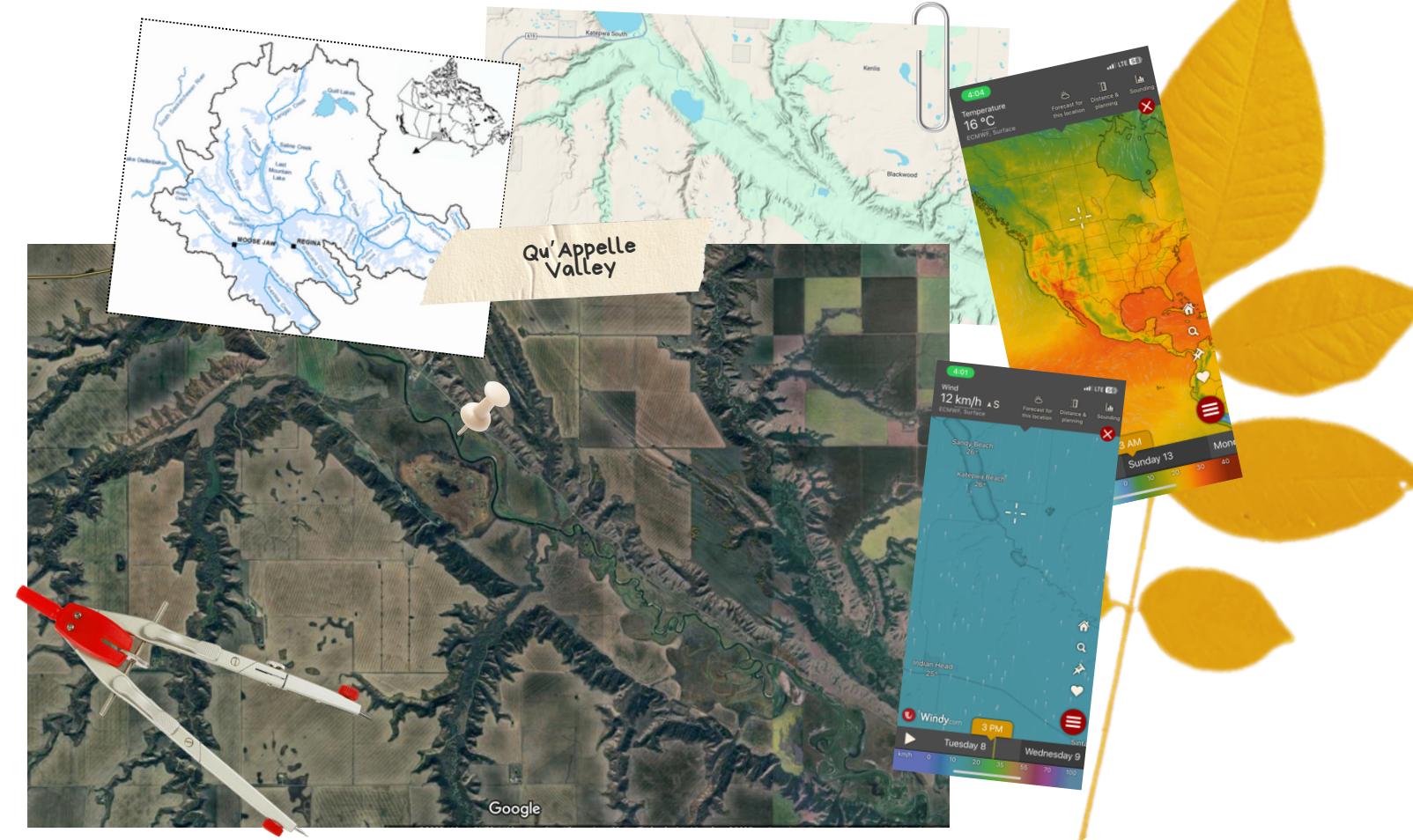
Visual mapping is a fun way to collect a variety of qualitative and quantitative observations about a place. Begin by considering the general shape of the space you are getting to know and lightly map out major landmarks or features (water, hills, rocks, paths, roads, buildings, trees, etc.) in their relative locations across your page. The goal of this mapping technique is not geographical accuracy. Exact distances between things don't have to be accurately represented- you could bring along an actual topographical/satellite map to provide that data. Instead, use descriptive notes and visuals to help you get the lay of the land and generate questions about how different elements might be interrelated (for example, water collecting in low spots and the type of species that seem to grow there). Consider adding to this map over time as conditions change throughout the seasons - where does water run in spring? Or create new maps of the same space in different seasons.



Using your nature journal in parks or historical sites is a fun way to create your own field guide and record your memories.

Mentor Maps

- Look at the examples of illustrated nature maps (or look online for other samples).
- What do you notice, wonder, or connect with when looking carefully at the details included in the map?
- Make a list and discuss the value of features (labels, arrows, diagrams, titles/subtitles, etc) you notice about the map.



Consider the wealth of information you can collect about a place using all of the digital map data available online. Make connections between species, adaptations, landforms, water flow, and seasonal changes. How may these different layers interact with one another at the land partner site?

Map Layers

- Explore sources of data you could use to learn about the land partner site, even if you can't get there on a regular basis.
- Topographical maps, satellite imagery, weather radar, wind reports, watersheds, historical aerial photographs, and oral histories are all layers of important detail in getting to know a place.
- Remember to keep the bigger picture in mind as well- how does this site fit into the larger landscape- what is upstream/downstream, north/south/east/west of the location?





Digital Data Collection

- Drawing/writing from first hand observation is ideal, but not always possible. You can also 'gather' digitally for future reference or indoor nature journaling activities.
- Printed photos, recorded sounds, and video clips/trail cam footage gathered from the site can provide opportunities to 'visit' your site even if you can't get there, or if removing materials is not ideal.
- Try a photo walk, or use an app like Merlin to record bird song, or iNaturalist to document species you encounter.



Natural Materials Preservation

- If you do gather, arrange collected material so that it will last as long as possible and such that it invites study, using glass jars, vases, trays, or frames.
- Pressed plants, photocopied leaves, rooted cuttings, or dried seed heads can be observed all winter long if properly preserved.
- Revisit the collected materials over time indoors to observe and record any changes. For example, cuttings placed in water may develop roots, cones may open, grasses and flowers may undergo colour changes or drop seeds! Write about why and how these changes take place indoors.



Gathering & Collecting



Overview: Autumn is a great time to visit a site to observe and record the exciting changes that happen during shoulder seasons, but it is also an opportunity to collect a wide range of natural elements for more detailed study. The coming winter months are an opportunity for practicing nature journal skills through focused study with individual natural materials. Note: In the lesson "Introduced Species," you will study a plant that is not native to your area, but present nevertheless, so consider gathering specimens for that study now.

Your Goal: Become familiar with best practices in terms of gathering natural materials from your particular land partner site. In some cases, harvesting any plants, plant parts, or other natural elements may require protocol, permissions - or be discouraged entirely. Reaching out for guidance can further your connection to and respect for the land you are caring for.

You can also gather primary data from this site using audio/visual recordings, or alternative locations (ex. gardens). Your goal is to begin practicing close looking, comparing, and recording.



Nature Journaling Strategy: Looking Closer

This practice brings your attention close to the individual species that make up your land partner site. Begin by observing a single leaf, branch, or seed head. Consider the main shape of the individual and work from the large shapes to the smaller ones. Notice differences in details and colours. Notice textures and see if you can draw or describe how they feel, smell, sound, or look close up. Use magnifying tools to see how closely you can observe. Magnify your drawings on the page as well- remember, you can describe in words/numbers when it's tricky to represent in drawing.



You can use a microscope, hand lens, or other magnifying tools to look closer. Here, a single cattail seed is under observation.



Ethical Gathering Inquiry

- There are many approaches to gathering natural materials responsibly. Connect with a knowledge keeper, or consider reading the "The Honorable Harvest" from *Braiding Sweetgrass* by Robin Wall Kimmerer as a starting point. (See Resources)
- Discuss what and how to gather, and what will be done with collected material following its use during indoor study. Will it be discarded, planted, composted, or returned to the site?
- Add notes/diagrams on best practice to your nature journal for field reference.



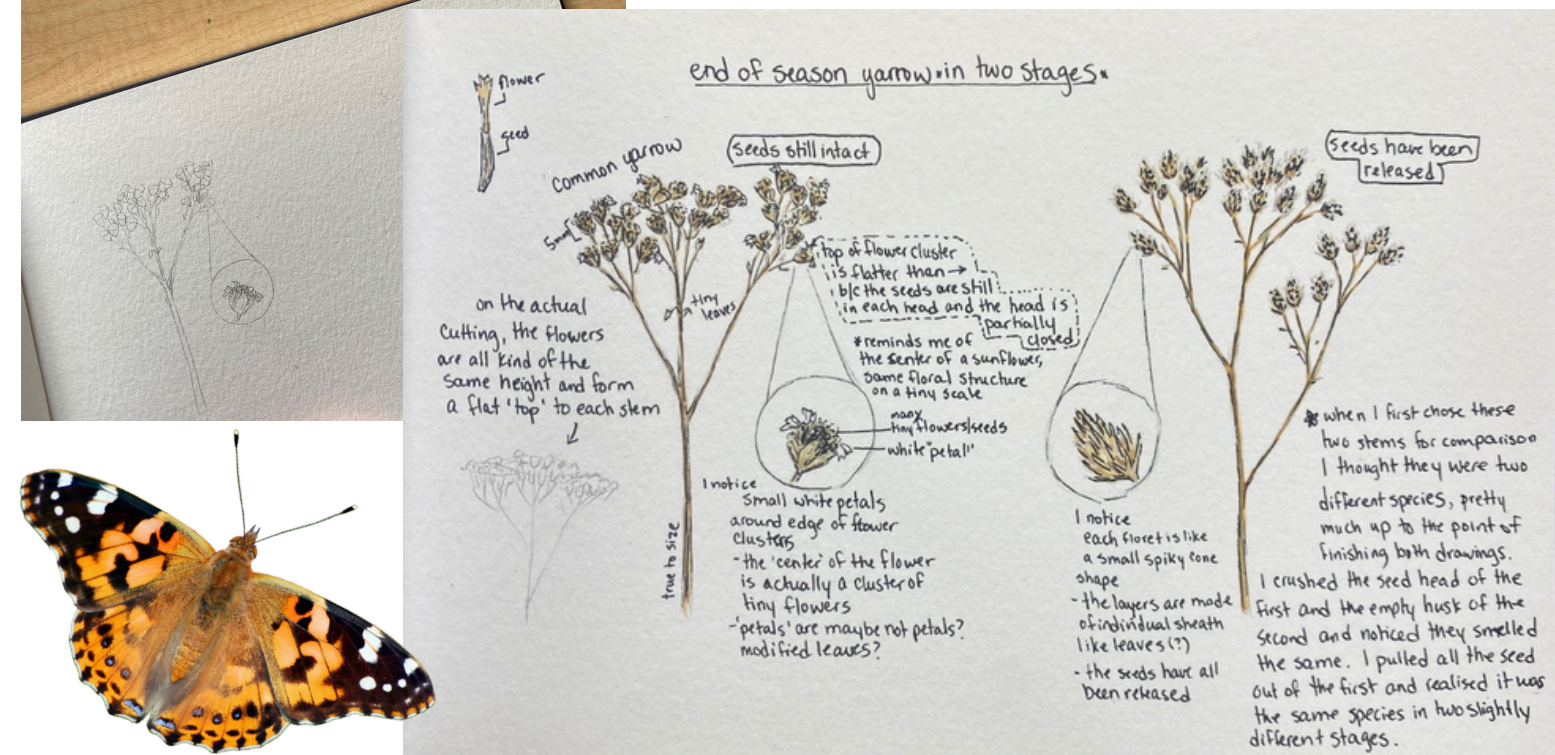
Seeing Similarity

- Collect and look closely at two similar things.
- Make connections between observed details (ex. cones from different conifer species; flowers with similar growth habits) and the context of the site.
- Write about why these differences and similarities exist- what function might they have, or what might they be telling you about the character of this site? For example, you might notice some species have thick, succulent leaves in dry, harsh conditions, while others in the same site have a layer of fuzz. Why?



Common Yarrow in flower

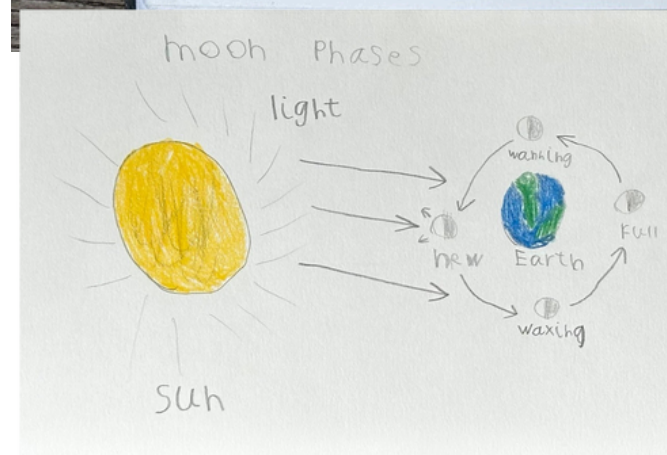
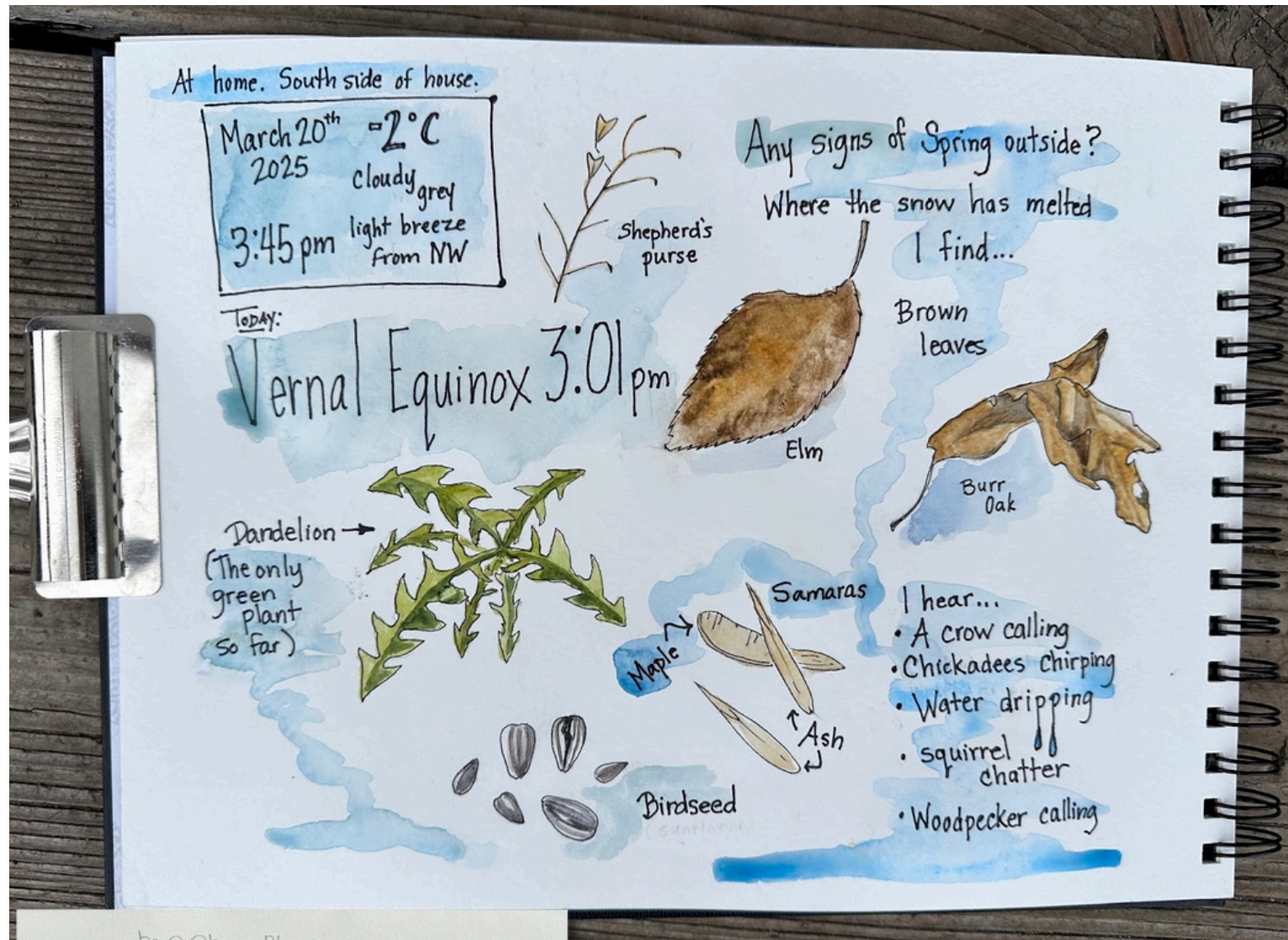
At first, it seemed that these two dried stems were different species. It was only after carefully observing them during the drawing process that I realized they were both common yarrow, just in two different stages of seed dispersal.



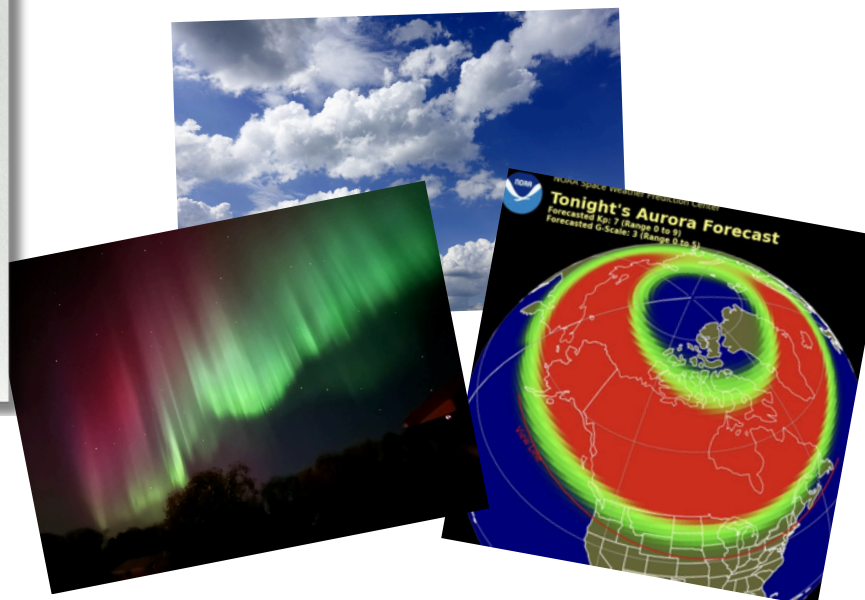


Time and Trends

- Looking back on journal pages from the same date and location can be used to compare trends and changes from year to year.
- Choose to use regular processional events like the seasons, solstices, equinoxes, and moon phases, or more personal ones like birthdays or holidays for routine documentation.



Using your journal to learn about natural cycles and processes, on any scale, contributes to your understanding of the relationships between things.

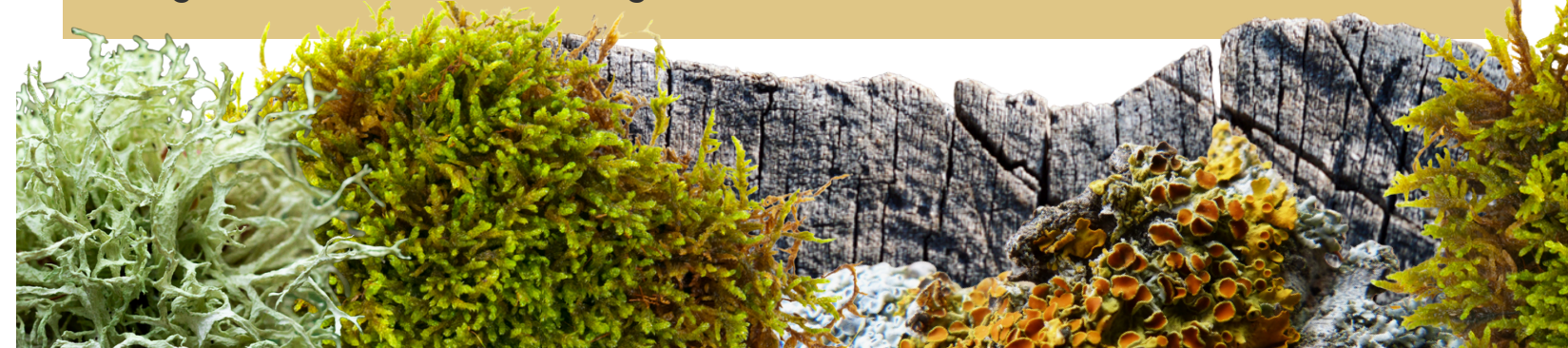


Phenological Awareness



Overview: A phenological approach to design encourages us to consider a restoration site as active and ongoing through all the seasons. As the temperature drops and days grow shorter in cold climates, it's a great time to notice what other seasonal changes are taking place. Information gathered at different times of the year is useful in developing familiarity with the landscape during the planning stages of ecological design or other planting projects.

Your Goal: Develop a deepening understanding of a place by observing it in all seasons. Notice what changes are observed in specific plant and animal species, and if any of these seem connected. Explore what happens to plants and animals in the cold, and how wind, temperature and snow cover can affect them. Create a nature journal page focused on a specific subject to help build recognition of it in different stages and seasons.



Nature Journaling Strategy: Diagrams, Graphs & Quantitative Data

Using diagrams, graphs, and quantitative data can be a helpful tool on any journal page, and a more accessible approach if the task of sketching seems daunting or if you are short on time. Diagrams often use labels and simplified line drawings, in the place of detailed realistic illustrations, to capture observations. Start by focusing on the main shape(s) of your subject, which can be done loosely in pencil at first. Then, gradually add details, labels and descriptions. If there are too many details to draw, such as many tiny flowers or leaves, focus on cluster shapes and insert smaller diagrams on the page to show a single flower or leaf in detail. Use boxes, frames, arrows and notes to make connections.

Graphs and charts can be used in recording quantitative data such as time, date, and weather conditions. Try a combinations of shapes, pictograms, words and numbers. Including this information on the journal page creates a document of useful data for the future.

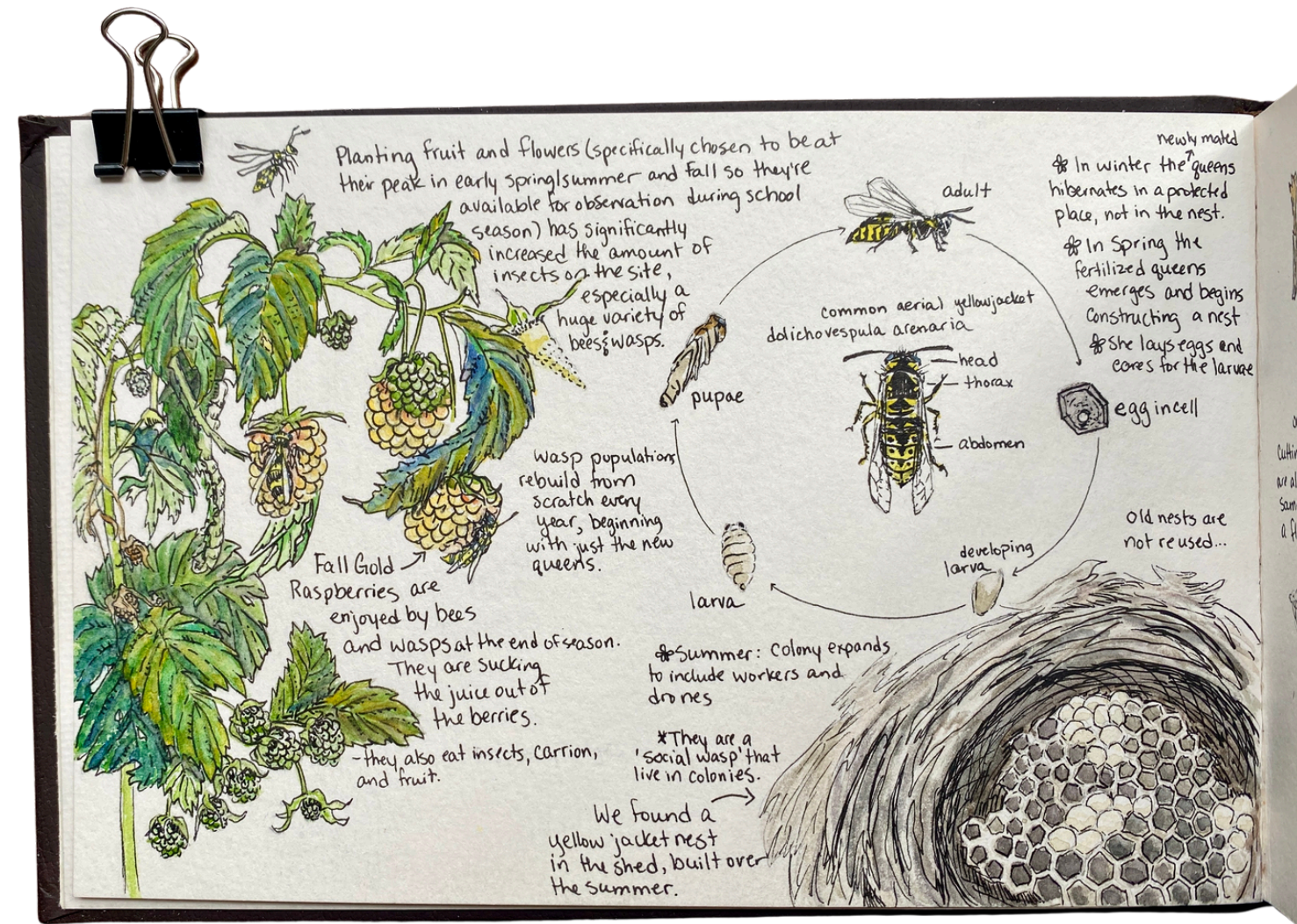
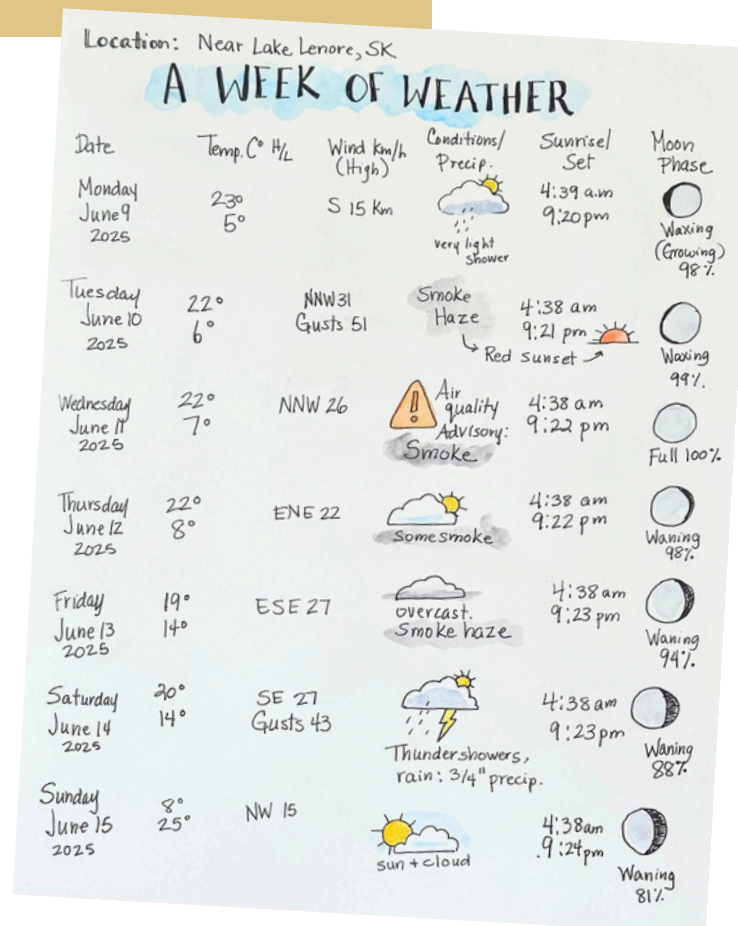


Simple pictograms can be the feature in pages of quantitative data, like the weather chart (below)



Weather Watch

- Gather and record data about weather, precipitation, snow depth, etc., using tools like rain gauges, thermometers, measuring sticks, or weather apps. Observations can be made on site, from a window, or virtually.
- Note the sun or cloud cover and what types of clouds are forming.
- It can be fun to try using the Beaufort scale or assessing wind direction and intensity by observing leaves, grass, flag/weathervane movement, or tree growth habits.
- Try using descriptive words and phrases to convey conditions, for example, *biting wind*, *slippery sidewalks*, *dripping icicles*, and making connections between **quantitative data** and the **qualitative** experience of an event.



Sometimes we fear or dislike species we don't really know much about. An in depth study on the life cycle, habits, and unique characteristics of such a species can often lead to a deeper appreciation and respect for the unique role it plays in a habitat.



Species Through the Seasons

- Choose a specific species connected to your stewardship site to study.
- Draw its structure & habitat, and list other species that share its space.
- Diagram the subject in various stages of growth and development, using labels and arrows to note adaptations and/or seasonal responses.
- How is the species affected by shifts in daylight hours, temperature, and precipitation?
- If the species is an animal, what changes are noticeable as the seasons change?



Caught on Camera

- Observe the species at the site, or using live cams, time lapse video, gathered material, or alternative sources.
- Try to make connections to the quantitative data you collect about time/date/weather during observation.
- If you're observing your subject in real time as the seasons change, bookmark your page so you remember to return to it periodically!

