

ART + SCIENCE AT HOME

Hara Woltz and Shelly Forster

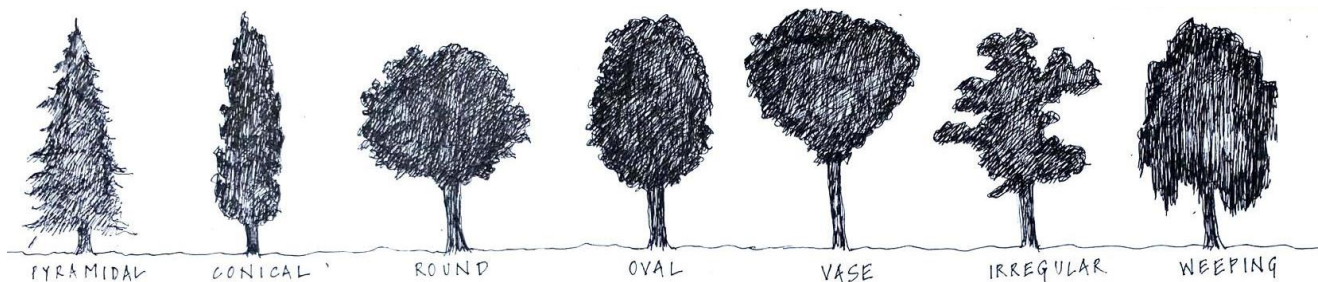
TREE INTERVIEWS

There are more than 60,000 different known tree species in the world. When you first go outside, you might see their forms as similar, and think that most trees are rounded, tall, and green. However, if we take some time to observe trees closely their variations quickly become apparent. Trees come in a variety of shapes, sizes, textures, and colors.

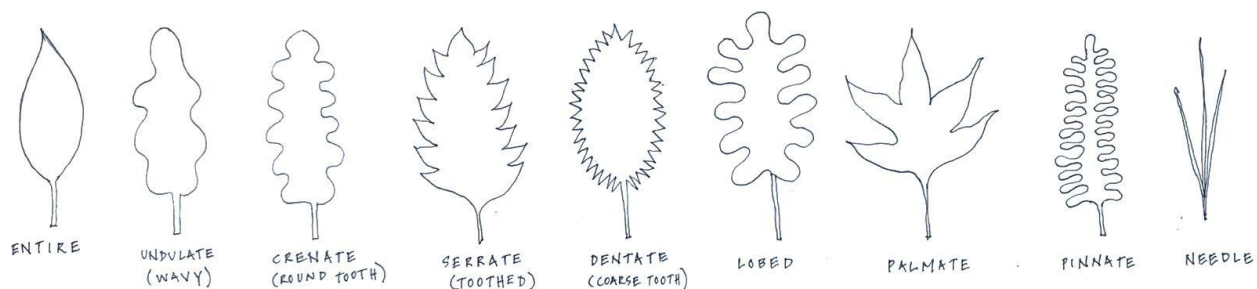
There are different ways of describing and grouping trees together. Trees are sometimes described in terms of the height layer that they occupy in a [forest](#). Some trees grow into canopy, or topmost layer of trees, and some remain as part of the understory, or lowest layer, their whole lives.

Scientists classify trees in taxonomic groups and give them a scientific name that includes their genus and species. The scientific name allows scientists to identify and group genetically similar trees together. For instance, all oaks are part of the genus *Quercus*. The White Oak is also called *Quercus alba*. If you'd like to know more about the scientific groupings and scientific names of trees, [here](#) is a source.

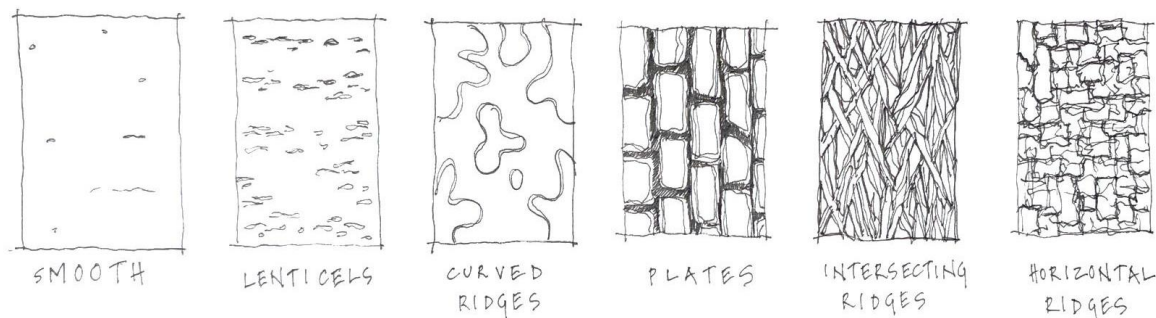
Trees may be described through their canopy shapes, such as round, weeping, oval, and irregular. This illustration shows some of the ways tree shapes are classified. Tree shapes can be distinctive to particular species, or can depend on environmental conditions. For instance, mature Red Maples usually have a round shape, but some varieties of Red Maple may be conical. Urban trees may also be pruned into shapes that are atypical for their species. You can find more [here](#) and [here](#).



Some trees are evergreen (they hold onto their leaves year-round) and some trees are deciduous (they drop their leaves in the winter). Leaves come in a wide variety of shapes and sizes. This illustration shows a few ways that leaves are classified. [This article](#) describes how to identify leaves by shape, edge, and vein pattern.



Trees also have a wide variety of bark types. The outer bark insulates the tree from temperature extremes and prevents the tree's nutrient transport network (xylem and phloem) from drying out. Below are a few drawings of different bark types. You can find more information and photographs of bark [here](#). If you want to learn to identify trees by their bark, we recommend the book [Bark: A Field Guide to Trees of the Northeast](#) by Michael Wojtech and Tom Wessels.



Now that we have some tools to help us investigate trees more deeply, let's head outside, interview some trees, and record our findings.

STEP ONE: Go Outside!

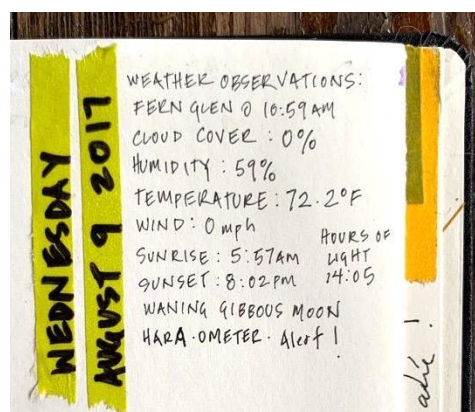
- Find a place with a few different looking trees that you can observe.
- Bring your fieldbook, a pencil or wax crayon, a pen and a few sheets of plain newsprint or thin paper.

STEP TWO: Observe the Weather.

Record some data about the day. Your location, the weather, the time of year, and the time of day can have a big impact on what you observe. Pick a corner of your journal page and make some notes that include:

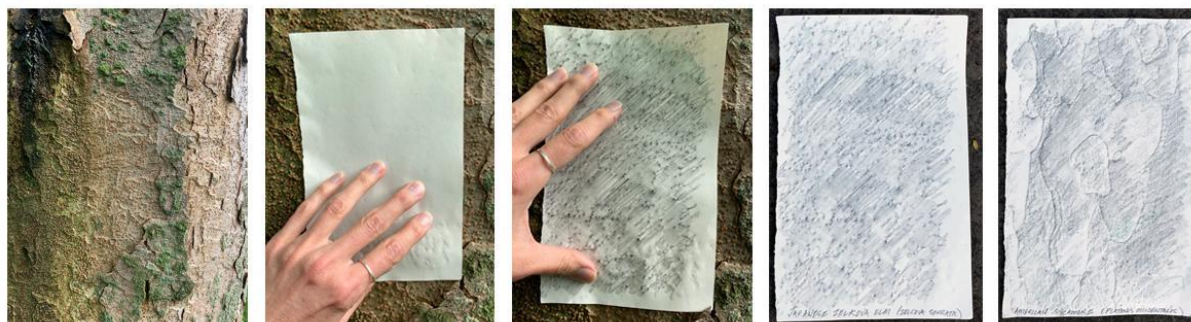
Location, Date, Time: Where and when are you making these observations?

Weather: Include general information about the temperature, the cloud situation, whether it is



STEP THREE: Make Bark Rubbings.

- When we work in our fieldbooks, we often focus on what we see, but you can use a combination of your senses to observe the world. Today we'll throw a spotlight on our sense of touch, and how to access that through specific drawing techniques.
- Walk around and look closely at the bark of a few trees. Pick two or three trees that interest you.
- Take a piece of newsprint or computer paper and lay it against the bark of the tree (This sort of paper works well for rubbings because it tends to be thinner than sketchbook paper and allows you to capture more detail).
- Hold your sheet of paper with one hand, and hold a crayon or pencil in your other hand.
- Begin rubbing your pencil or crayon at an angle across the paper. Try this on a few trees.



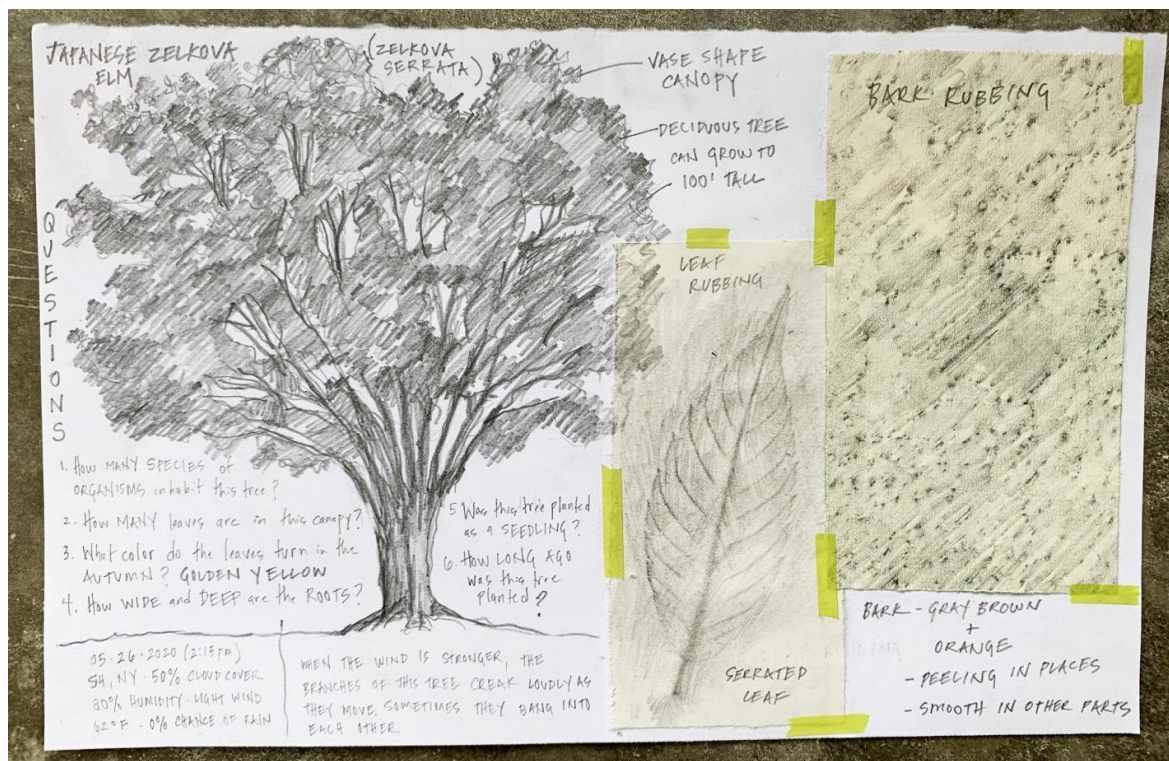
STEP FOUR: Make Leaf Rubbings.

- Look up at the canopies of several trees.
- Compare trees. How are the canopies different or similar?
- How are the leaves different or similar from one another?
- Find a leaf, place it on a firm surface (like the cover of your nature journal) and repeat the process that you used for the bark rubbing.



STEP FIVE: Pick a Focus Tree.

- Now that you've looked at the bark and leaves of several trees, pick one for a bit more focus.
- Begin to make drawn and written notes across two adjacent pages in your nature journal.
- Start by drawing the overall shape of your tree. As you draw, questions and observations will probably arise in your head. Use the canopy shape, leaf shape, and bark type guides to describe your tree.
- Write down ten questions about your tree.
- Write down any observations that you have while you are drawing.
- Tape your bark rubbing and leaf rubbing into your fieldbook as part of your observational record. When you get home, do some research and try to figure out what kind of tree was the subject of your focus.
- Here are some helpful digital sources for tree identification: [Inaturalist](#), [Arbor Day Foundation](#)
- If you'd like to make tree identification more of a habit, we recommend carrying around one of these field guides:
 - [Tree Finder: A Manual for the Identification of Trees by Their Leaves](#) by May Theilgaard Watts (Bonus feature: it's pocket sized!)
 - [National Audubon Societies Field Guide to Trees: Eastern Region](#) by Elbert L. Little
 - The incredible photo guides and folding charts from the [Northern Forest Atlas](#)
- I chose a Japanese Zelkova Elm for my focus tree. Here's the result of my interview!





This project is made possible with funds from the Decentralization Program, a regrant program of the New York State Council on the Arts with the support of Governor Andrew M. Cuomo and the New York State Legislature and administered by Arts Mid-Hudson.