



EVERHART MUSEUM
NATURAL HISTORY. SCIENCE. ART.
est 1908

VIRTUAL CLASSROOM SERIES



Carum Carvi, Umbelliferae
Alfred Twining, June 1901
South Abington

PA STANDARDS

Arts & Humanities

9.1.5.E - Know and demonstrate how arts can communicate experiences, stories or emotions through the production of works in the arts.

Ecology

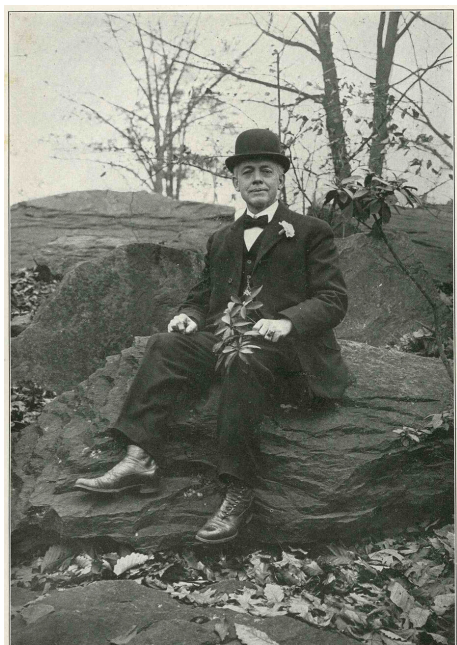
4.1.4.E - Explain that ecosystems change over time due to natural and/ or human influences.

OVERVIEW

In this lesson, you will learn about the Everhart's Herbarium.

We will cover:

- Twining's herbarium
- How to forage ramps & make basil pesto
- How to make a nature journal



ALFRED TWINING
IN NAY AUG PARK, SCRANTON PA., OCTOBER, 1915

TWINING'S HERBARIUM

An important early contribution to the Museum's collection was made by Alfred Twining (1856-1922), editor of the Scranton Times and friend of Dr. Everhart. Twining was passionately interested in local flora and, around 1900, began to collect plant specimens.

Twining's intention was to compile a regional herbarium, a collection of preserved plant specimens and associated data used for scientific study. In roughly a decade, Twining collected 1,500 examples of plant life. His complete herbarium was presented to the Museum in 1913 and a catalog of its contents was published four years later. The contents of the Twining Herbarium offer a snapshot of the vegetation of the region at the time it was gathered.

A survey of plant life compiled today would turn up very different results. For instance, Twining's notes on the American chestnut tree lists them as being common. In the century or so since Twining did his work, these trees have been mostly wiped out by disease. Conversely, the honey locust was found by Twining in only one place, along South Washington Street in Scranton. Today, the honey locust is a commonly used landscape tree that is found in far more abundant numbers.

Pressed and preserved plant specimens provide scientists and botanists with important information about plant diversity and distribution. If these specimens are properly preserved and maintained, they can last for well over 200 years. In a time where we are experiencing rapid habitat loss, herbariums provide important repositories for these sorts of data, and ensure their availability for future research. Plant collections are made by botanists, scientists of other disciplines, and citizen scientists in order to document their research and interest.

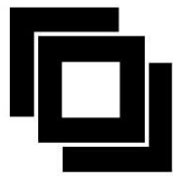
OBJECTIVES

- You will:
 - Understand what an herbarium is.
 - Understand why scientists save plant specimens.
 - Learn that plant specimens are sensitive and need special care in a museum.



TRY THIS!

Which plants in your backyard or neighborhood can you press and save? Use the following worksheet to draw your plant you discovered and write a short sentence describing it.



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Handwriting practice lines consisting of solid top and bottom lines with a dashed middle line. There are four sets of these lines.



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COOKING DEMO: BASIL PESTO WITH CHEF JAMES



WHAT ARE RAMPS?

Ramps are wild spring onions native to Northeastern US. Ramps typically sprout in early March or April and continue to grow until around June, when the temperature rises and the leaves die back.



HOW TO SPOT THEM!

Look in a wooded area with an array hardwood trees. Look for their broad, light green leaves and deep purple stems poking out from the forest floor. Check to make sure you have the right plant by tearing off a leaf and sniffing for the onion scent and check for their onion bulb.

WHAT IS PESTO?

It's a bright green sauce, olive oil based, that originated in Genoa, Italy. The word "pesto" come from the past tense of the Italian verb "pestare," which means "to smash/crush."

OBJECTIVES

- You will:
 - Know how to forage ramps (wild spring onions).
 - Learn how to prepare a basil pesto.

INGREDIENTS

- 1 basil plant
- 3 cloves garlic
- ½ cup toasted walnuts
- ½ cup olive oil
- ¼ cup grated parmesan cheese
- 1 teaspoon salt
- 1/8 teaspoon black pepper



Please note: this is recipe contains nuts.



PREP



- Soak walnuts for a couple hours.
- Drain the walnuts.
- After draining, roast the walnuts. By doing so, you break down the outer holes of the walnut to get the full nutrition.
- Grate Parmesan cheese



DIRECTIONS

- Combine the basil, cooled nuts, Parmesan cheese, garlic, salt and pepper in a food processor or blender.
- Drizzle in the olive oil.
- Continue processing until the mixture is well blended but still has some texture, pausing to scrape down the sides as necessary.
- Taste, and adjust if necessary.
- Add more Parmesan if you'd like a creamier/cheesier pesto.



TRY THIS!

Put your Pesto sauce on pasta, vegetables or roasted vegetables!





ART MAKING: NATURE JOURNAL WITH LINDSAY



Malus Malus, Rosaceae
Alfred Twining, June 1910
Chinchilla Reservoir

STEP BY STEP

1. Decide how you're going to document, or journal, in your notebook – scientific observation or when inspiration strikes? There is no wrong way to do this – just your way!
2. Gather materials – your 'Kit': (see materials list)
3. Draw as much as you write down, or document. Drawing helps you notice more details.
4. When you get home, look up info/answers on the specimens you collected. This is the research part of the project – the more you know, the more you'll see! BIG FUN!
5. When you reach the last page of your journal, you'll have an amazing first person record of not just what you've witnessed, but also what you learned along the way.

OBJECTIVES

- You will:
 - Be able to identify native plants & flowers.
 - Leaf collecting and nature journaling:
 - Focus your attention
 - Engage your senses
 - Encourage curiosity

MATERIALS

- Notebook, journal, or a 3-ring binder with (if you have) sheet protectors
- Pen or pencil for note taking, sketching, filling out i.d. labels
- Drawing Supplies (pencils, colored pencils, crayons)
- Tweezers for those teeny weeny little leaves
- Flashlight – always a good idea
- Gloves
- Magnifying Glass – this is a great tool to have in your 'kit'
- Tape, glue, glue stick
- Bags/containers – see-through food storage bags to collect or carry specimens
- A big or heavy book – for pressing leaves, flowers
- Printer Paper – for making labels, sketching, rubbings
- Construction Paper or heavy paper – for mounting specimens in a binder
- Tracing Paper – cut into squares to make rubbings of tree bark, rocks
- Camera – to photograph plants, trees, flowers, animals & mount in journal
- Labels – for documenting leaves & flowers
- Ruler
- Scissors
- Backpack, or bag, for all your journaling 'stuff'





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Scientific Name _____
Common Name _____
Location of Collection _____
(Town & State)
Habitat Description _____
Collectors Name _____
Collection Date _____

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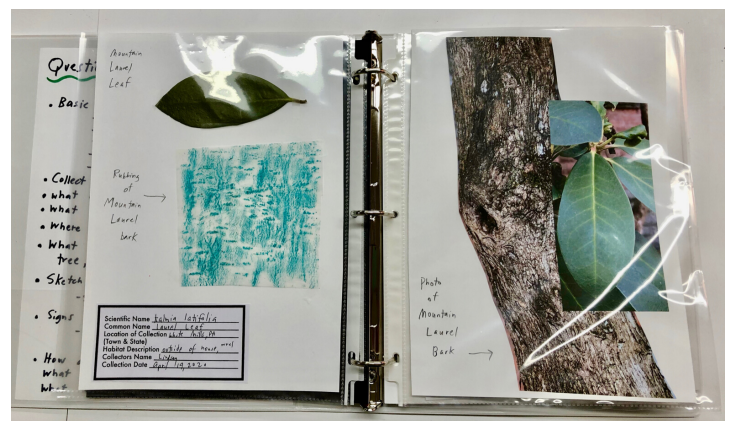
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THE PROCESS

Combine Twinings Herbarium practices with recording your observations, drawings, photographs, rubbings and/or writings in a journal, notebook or binder.

- Collect leaves, flowers, anything fairly flat that can be glued down
- Identify leaves, flowers, things you've collected on the identifying label
- Press leaves, flowers in large book, or in a 'leaf press'
- Glue or tape the pressed leaves/flowers into your journal,
- or onto construction paper and insert into binder
- Make 'rubbings' of tree bark, leaves, rocks - and insert in journal
- Draw the things you see around you, and insert in journal—
- you'll see more details when you draw - I promise!
- Record and tape into journal
 - Document basic observations about location, date, time, habitat description, weather
 - Collect & document plants, leaves, flowers what type of animals do I see here?
 - What do these animals eat?
 - Where do they nest, burrow, live or rest?
 - What is the dominant type of vegetation?(as you sketch a leaf or flower) – notice the size, color, stage of life
 - Signs of other species – droppings, tracks, flattened grass, holes, remains of a meal
 - How do I feel about where I am and what am I seeing? hearing? smelling?





TRY THIS!

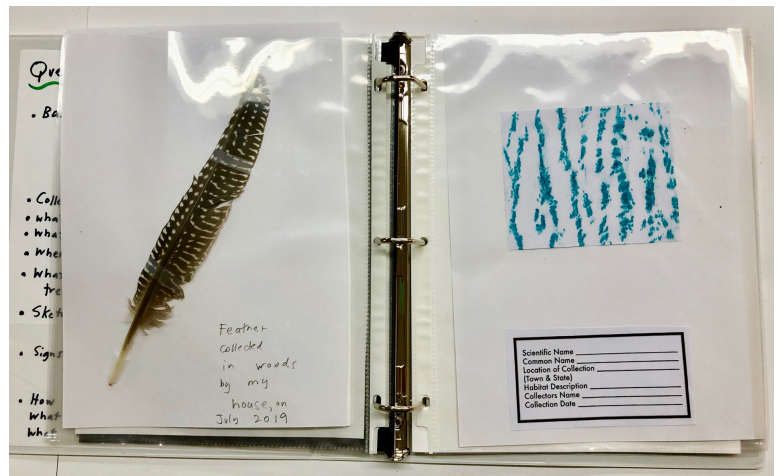
Pick a tree that grows near where you live.
Identify the tree.
Look at its leaves – its bark.
Make rubbings of the bark.
Draw the tree. Spend time with it – no kidding.
Feel the bark – is it smooth? Rough?
What animal, or animals, live in that tree?
If the tree bears nuts or fruit, who eats these?
What critters eat the leaves of the tree.
What critters rest in the tree? or play in and around the tree?



Know all you can about the tree.
Tape or glue all your collected info into your journal, or a notebook.
So now, when you pass the tree, you'll know what it is, who's hanging
out in the tree, who might be inside the tree, who's eating the leaves and getting
nourishment from the tree.
Knowing a tree, having drawn that tree, having touched that tree –

Protect it.
Care for it.
Love it.

It's your tree.





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AND YEAH! YOU'RE DONE!

**SEND US A PHOTO OF YOUR CREATION(S), AS WELL AS
LETTING US KNOW WHAT YOU PUT INSIDE YOUR
NATURE JOURNAL, AND WHY**

WE'D LOVE TO SEE YOUR ART!

EMAIL US AT

ASSISTANT.PROGRAMS@EVERHART-MUSEUM.ORG

SHOW & TELL WILL BE ON MAY 22 AT 12:30PM

HOPE TO SEE YOU THERE!

