



GARDEN

Indigenous at KPVC



Indigenous Garden

The Indigenous Garden at KettlePond Visitor's Center (KPVC) will help visitor's explore indigenous plants, edibles, medicinals, and animal resources and habitats. In this curriculum we explore Native American uses of some of the plants in this garden. There are also resources in the adjoining forest that have usage for Indigenous Peoples from history through today. The first peoples of Rhode Island are the Narragansett, Niantic, Wampanoag and Nipmuk. The Narragansett are the only federally recognized tribal nation in Rhode Island today.

Our hope is to help families, educators and nature enthusiasts to explore the traditional uses of these resources once wild now adapted to our gardens. Please consult an expert before use of medicinal and unique foods. Enjoy!
For more information on Indigenous culture scan the QR code below.



Contents

Plants:

❖ Wild Yellow Indigo.....	3
❖ Wreath Goldenrod.....	7
❖ Milkweed.....	9

Cactus:

❖ Eastern Prickly Pear.....	12
-----------------------------	----

Shrubs:

❖ Arrowwood.....	14
❖ Wintergreen.....	17

Vines:

❖ Groundnut.....	20
❖ Grapes.....	23
❖ Virginia Creeper.....	26

Grass:

❖ Switchgrass.....	29
--------------------	----

Ferns:

❖ Hayscented.....	30
-------------------	----





PLANTS

Wild Yellow Indigo



Wild Yellow Indigo (Chachepissu Wesaúí Pesháuí)

Wild Yellow Indigo is traditionally used as a blue dye. It can be used in weaving, painting and stamping. The flowers also can be used for a light yellow dye.

The plant was also used as a poultice to fight infection, to reduce inflammation and as a cleanser for cuts and ulcers. The roots were used for intestinal issues by Indigenous people.

Do not try medicinal remedies without an expert.

Activities:

1. Sketch parts of the plant & label.
2. Measure height with centimeter rulers.
3. Make dye using leaves. Steep like a tea and test the depth of color. Have fun trying.
4. Use flower to create design or background wash with the dye on paper. Once dry, draw or paint a picture over the background of blue Indigo.

Wild Yellow Indigo

Activities Continued:

5. Color & label Indigo Plant.



Wild Indigo (*Baptisia tinctoria*) Branch Showing Flowers and Seed Pods.



6. Wild Yellow Indigo Word Search Puzzle:

Wild Yellow Indigo

D L I W B I Z B H E U Q S M O
C V H T X G P S L L E L E J S
K J I N D I G O R Y R D K W N
L U F I T U A E B E I Q O N E
F S D Y Q D A M E C W L V Z D
S E S D Q H M I I P L O K Z R
X E E J D I E N U E Y Y L H A
O D M B C B A D Y E J K P F G
P S I K X L F I G U V T V R D
F L M F T J I G S L C W O G B
S B A D M Q R E Q B D O Q F N
G E A N B I W N C F T A T W S
S E Y R T K P O N S W I W D W
P W W D X S L U G R O W O Z Z
N C R E K D Q S J U M P G O J

BEAUTIFUL
BLUE
DYES
FLOWERS
GARDENS
GROW
INDIGENOUS
INDIGO
MEDICINAL
PLANTS
PODS
ROOTS
SEEDS
WILD
YELLOW

15 of 15 words were placed into the puzzle.



Solution

(Over, Down, Direction)

D L I W + + + + + + + + M +	BEAUTIFUL(9,4,W)
+ + + + + + + S + + + + E + S	BLUE(10,11,N)
+ + I N D I G O R + + D + W N	DYES(4,14,NW)
L U F I T U A E B E I + O + E	FLOWERS(14,8,NW)
+ S + + + + + + C W L + + D	GARDENS(15,8,N)
+ E + + + + + I I + L O + + R	GROW(9,14,E)
+ E + + + + + N + E + + L + A	INDIGENOUS(8,6,S)
+ D + + + + A D Y E + + + F G	INDIGO(3,3,E)
P S + + + L + I + U + + + R +	MEDICINAL(14,1,SW)
+ L + + + + + G + L + + O + +	PLANTS(1,9,SE)
S + A + + + + E + B + O + + +	PODS(12,15,NE)
+ E + N + + + N + + T + + + S	ROOTS(14,9,SW)
+ + Y + T + + O + S + + + D +	SEEDS(2,5,S)
+ + + D + S + U G R O W O + +	WILD(4,1,W)
+ + + + + + + S + + + P + + +	YELLOW(9,8,NE)

Created by Puzzlemaker at DiscoveryEducation.com





PLANTS

Wreath Goldenrod



© Tomaquag

Wreath Goldenrod

Wreath Goldenrod was used by many tribes as a medicinal for fevers, ulcers, and boils. Roots infusions were used for colds & fevers and plant infusions were used for nasal congestion, and by some for heart disease. Roots were made into a poultice for external skin injury.

Goldenrod is a pollinator for bees, butterflies and birds.

Do not apply medical remedies without expert.

Activities:

1. Sketch parts of the plant & label.
2. Measure height of plant with centimeter rulers. Measure length & width of leaf.
3. Photograph flowers, print and frame for digital art.
4. Grow Goldenrod in your yard for a beautiful Autumn spread. Harvest the flowers in the early fall.

Wreath Goldenrod

Activities Continued

5. Make your own Goldenrod paper flowers. Here's a tutorial on YouTube. **Scan this QR code to access the video.**



6. Press Goldenrod. Easy method put goldenrod flowers between two pieces of paper or wax paper and press between two books (or more). Another easy technique is to iron once between paper or fabric, use adult supervisor. For more elaborate instructions and to retain vibrancy of color **check out the QR code below** when done mat and frame for a beautiful picture.





PLANTS

Milkweed



Milkweed (Soqkodontunk)

Milkweed, also called wild cotton has many traditional uses. The young shoots, flowers and pods are edible but only if boiled in three or four different batches of water to remove toxins. SO BE CAREFUL! Milkweed roots also could be used medicinally for intestinal issues. The sap can be applied to remove warts and to relieve poison ivy. Cordage, string or rope can be made from the inner bark of milkweed to make nets, and fishing line. Traditional finger-weaving uses the dyed cordage for sashes, belts, headbands, leg garters, and using a twining technique bags and pouches. The fluff works extremely well as a fire starter using a bow drill.

Activities:

1. Sketch parts of the plant & label.
2. Measure height with centimeter rulers.
3. Estimate seeds in seed pod. Count.
4. Use pod as a stamp with ink/paint.
5. Put seeds & fluff inside a clear glass/plastic ornament for a wonderful natural ornament for your window, holiday tree or put many on twinkle lights as a beautiful nature border.

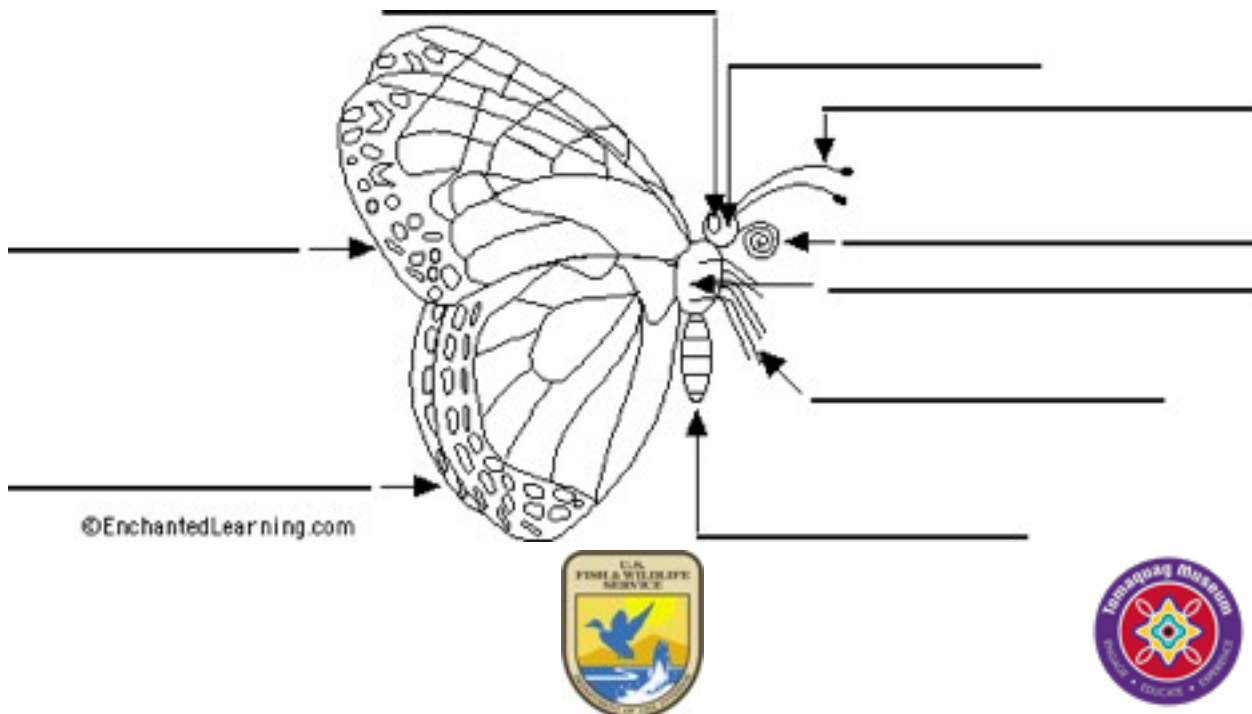
Milkweed

Activities Continued:

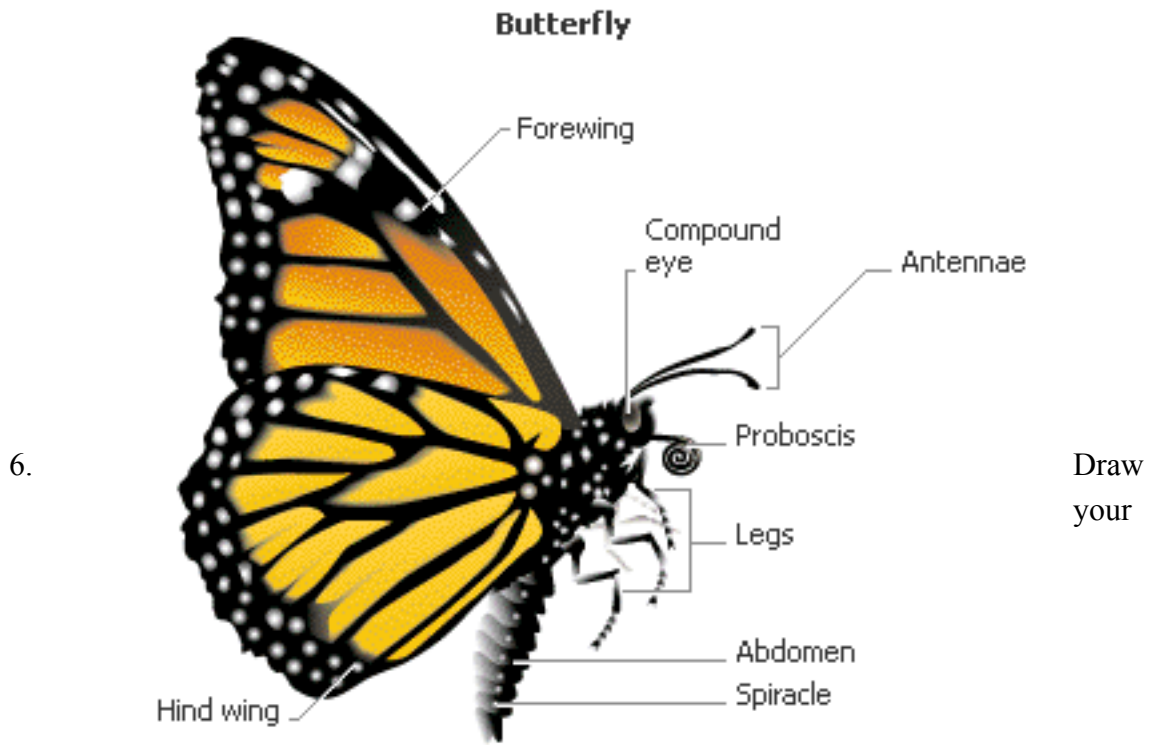
6. Milkweed is edible. Eat young stalks thoroughly cooked, 20 minutes or more. Some boil in repeated batches for older shoots and pods. The silk is also edible, some think it tastes and feels like cheese. The flower buds are edible and can be added to stir-fry, soups, stews and casseroles. With an adult try adding some milkweed to your diet.

7. Milkweed are great pollinators and attract butterflies. Go observe the milkweed plants. Record and/or draw all the types of butterflies you see.

8. Label parts of the butterfly below.



Answer Key.





CACTUS

Eastern Prickly Pear



Eastern Prickly Pear Cactus at Kettle Pond Visitor's Center

Eastern Prickly Pear Cactus

The Prickly Pear, also known as "Indian Fig" has edible fruit that is red when ripe. The pad or nopal of the cactus is also edible but take care in removing the spines, especially the fine, hairlike spines. It is a cactus.

Prickly Pear can be made into sauce, juice, jelly, candy and eaten like other fruit. It may have medicinal properties that support balanced blood sugar. The leaf pads used to treat wounds as a poultice. The juice was used for warts and the tea for lung or respiratory ailments.

Do not apply medical remedies without expert.

Activities:

1. Sketch parts of the plant & label.
2. Measure height and width with centimeter rulers. Be careful of spines!
3. Photograph flowers, print and frame for digital art.
4. Grow Prickly Pear in your garden. Harvest the fruit in the early fall.

Prickly Pear Cactus

Activities Continued:

5. Prickly Pear is edible. Try the fruit in the fall. It is ripe when flesh is red. Tastes similar to watermelon with a delicate sweet taste. **Check out this QR code for a jelly recipe that looks good!**



6. Young green nopales or pads of the cactus can be sliced into strips and boiled and eaten as a vegetable. If you have prickly pear in your garden or are able to find it in the wild, you can try this with your dinner.

7. The deep reds and purples of the fruit can be made into dyes for fabric or textiles. A project you can do is to take cotton or linen cordage (string) and dye using the cactus fruit, boil in water that covers fruit until liquid is a deep red or purple. Soak the yarn/string/strips of cloth until dyed the color you want. Dry. Then wash(alone). Dry again. If needed do dyeing process again to get depth of color. Then using a loom or weaving board to make a placemat or piece of art. **(Scan this QR code for a loom example)**



8. Dry the seeds to grow your own prickly pear cactus in your yard or use dried seeds, along with dried flowers to make a collage or mosaic.



SHRUBS

Arrowwood



© Tomaquag Museum

Arrowwood (Caúquadteewuttuhqunash)

Arrowwood was used to make arrows as the wood is strong, straight and firm. The wood was harvested and seasoned over a fire to create a straight and strong arrow. The fruit is also edible, but has a large seed with little fruit. It has a gentle sweet taste. The leaves also were used as a external poultice to reduce swelling in the legs for women.

Activities:

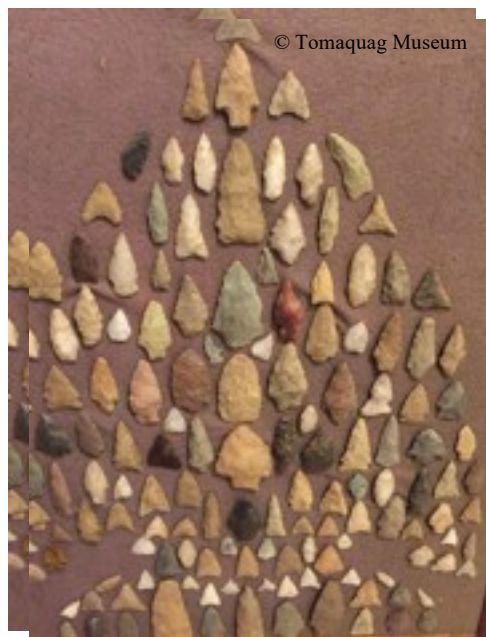
1. Sketch parts of the plant & label.
2. Measure height with centimeter rulers. Measure circumference of berries. What is diameter? Radius?
3. Pick flowers for a bouquet.
4. Use leaf as a stamp with ink/paint.
5. Harvest berries with an adult.

Arrowwood

Activities Continued:

6. Harvest arrowwood shoot and try your hand at making an arrow. Use string or sinew for the bow string. Try your hand at flint-knapping and make your own arrowhead using quartz or flint stones. Use another stone, antler or hammer as a tool. WEAR eye protecting glasses! It is a hard process. There are few master flint-knappers today. They are considered traditional artists. Look at flint-knapping videos online to learn more. (You can purchase inexpensive arrowheads at Tomaquag Museum gift shop).

Here are some stone points from Tomaquag Museum collection for inspiration.



7. Draw your arrowhead(s) here:



8. Start a rock collection. Identify types of stones. Store in egg carton & label each or get a curio box for your collection.

9. Make a quiver (macheepog) for your arrows. Use fabric, leather, felt, or other material. The width of quiver 4 inches(need material 8 1/2 inches wide, height 16 inches or a three inches shorter than your arrows. Fold material in half. Sew up the seam. I like to sew with a criss cross stitch, so it looks appealing. Optional using acrylics or fabric markers draw basket designs, plants or animal images. Braid some leather, rawhide or other cordage for a handle.

Here's an image for inspiration.





SHRUBS

Wintergreen



© Tomaquag Museum



© Tomaquag Museum

Wintergreen (Paponée Ashkaskee)

Wintergreen leaves are used traditionally for medicinal purposes as an anti-inflammatory and a pain killer like aspirin. It is one of the last berries leading into the winter (paponé) season. The Narragansett still use the wintergreen medicinally and as an edible. Berries are delicious to eat straight off the plant or used to make a Wintergreen jelly. The oils and leaves can be used as an astringent, diuretic, or tonic healing a variety of ailments. Do not use as a medicinal without supervision.

Activities:

1. Sketch parts of the plant & label.
2. Measure height with centimeter rulers. Measure circumference of berries. What is diameter? Radius?
3. After collecting, estimate how many you have. Count to verify.
4. Use leaf as a stamp with ink/paint.
5. Harvest berries with an adult.

Wintergreen

Activities Continued:

6. Harvest wintergreen berries. A bit of a long task as the berries grow on low plants and often have only a couple berries per plant. Gently rinse and remove debris.

Here is a favorite recipe:

Wintergreen Jelly Recipe

By Silvermoon La Rose her mom's recipe

Ingredients:

8-10 cups Wintergreen Berries

2 cups water

1 cup sugar

Mix berries and 2 cups water. Cook for 5-10 minutes, they absorb juice. Pour into strainer (very fine) over pan to capture juice. Mash berries down save juice & add to other juice. If not enough juice to be 4 cups, add more boiling water over the mashed berries and strain to equal 4 cups of juice. Then put 4 cups of juice put on stove, add 7 cups of sugar, cook to a boil while stirring, add a packet of pectin stir to boiling for 1 minute. Skim off white foam. Pour in to jelly jars (sterilized) to equal about 6-8 cups of jelly. Then put in bath of hot water for 5 minutes to seal tops.

Makes approximately 6-8 cups of jelly. Enjoy!

So delicious! Variations:

- Put on toast, cornbread, or muffins.
- Use your favorite cookie recipe & add jelly drops in the center.
- Glaze a roast with the jelly, so delicious!
- Numeechunag! Let's Eat!



7. Make Wintergreen tea by steeping leaves in water (use a tea ball with dried leaves) to make a cup or a pot. Enjoy with a snack from above. The tea also helps when you have a cold or allergies. Tastes delicious as is or add a dollop of honey or maple sugar-Yum!

8. Try this cryptogram. Match letters to numbers and figure out some of the benefits of wintergreen.

Wintergreen

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
				2		23																				

E				G				E E				E														
21	25	3	19	2	13	23	19	2	2	3	1	2	4	18	11	21	25	19	1	7	15	4	8	11		
E				G				E				E														
14	4	4	2	13	23	25	2	11	14	7	1	2	11	14	3	8	18	14	25	3	11					

Created by [Puzzlemaker](#) at [DiscoveryEducation.com](#)

Answer below (Backwards)

Wintergreen helps with colds, allergies, aches and pains!





VINES

Groundnut



Groundnut (Ahkeemun)

Often known as the "Indian Potato". The tuber, roots, seeds, pods and flowers are edible. The tubers are best boiled like a potato and can be ground into a flour. They can be used for external sores, boils, and cancers as poultice. The plant puts nitrogen back in the soil. They self-pollenate and self-fertilize. They smell like violets or lilacs, provide pollen for bees and a home for butterfly larvae. They are part of the legume family. They like partial sun, grow near elderberries & poison ivy-beware!

Activities:

1. Sketch parts of the plant & label.
2. Measure seeds and seed pods with centimeter rulers. Do conversion to inches.
3. Compare groundnut with other legumes like peanuts. Draw parts of the plant.
4. Which of the Three Sister's puts nitrogen back in the soil? How is that plant similar to groundnut?

Groundnut

Activities Continued:

5. Harvest groundnut and create an “Indian Potato” dish. Boil first and then prepare like any other potato dish, fry, bake, or mash. Yum! A favorite Native dish is to add tubers to your soups, stews or chowders. Here is a recipe:

Narragansett Venison Stew Recipe

By Lorén Spears

Ingredients:

2-3 ears of corn

1-2 wild onions

4-8 Groundnuts

(aka “Indian potato”)

1-1/2lbs venison (diced)

4 cups spring water

Optional Cattail Shoots

Steam 2-3 ears of corn in the husks on stones next to open fire. Let cool. In a cooking pot over the fire, add diced onions with venison & fat. Add corn (kernels and pulp) that has been scrapped off cob using a knife or scrapper, it will thicken stew. Add diced groundnuts &/or cattail shoots. Add water and simmer over open fire until flavors well blended. Enjoy.

Four-Six Servings

Variations:

- Add diced winter squash
- Substitute wild rice for potato
- Change the meat to raccoon, bear, beaver, or other meat such as beef, buffalo, or Ostrich.

Numeechunag! Let’s Eat!



Groundnut Q & A

Find answers in the text.

What is the Groundnuts nickname?

Where does it like to grow?

What parts are edible?

Describe how it looks, feels, smells, tastes?

How can the plant help?

Teacher Answer Key

What is the Groundnuts nickname? Indian Potato

Where does it like to grow? part sun, near elderberry and/or poison ivy

What parts are edible? flower, seed, pod, root, tuber.

Describe how it looks, feels, smells, tastes? Answers vary

How can the plant help? poultice for boils, cancers and other external sores.

Plant fertilizes soil, provides pollen for bees and home for butterfly larvae.





VINES

Grapes



© Tomaquag Museum

Grapes (Wenominneash)

Summer Grapes include edible fruit (fresh & dried) leaves & seeds that provide antioxidants. An important food source for bears preparing for hibernation, many species of birds and humans. The grape is a cleansing fruit and aids digestion. The leaves brewed as a tea may heal diarrhea, thrush, & stomachaches. The leaves also are used as an external poultice for sore chest, headaches, rheumatism & fevers. The vine contain potable water and are used for basketmaking.

Activities:

1. Sketch parts of the plant & label.
2. Measure leaf with centimeter rulers. Measure circumference of grape. What is diameter? Radius?
3. Dissect a grape, draw and label.
4. Weave a bird nest and add a handle for a basket.
5. Harvest grapes to eat and cook.

Summer Grapes

6. Go grape picking with your family. Wash grapes. Make grape jam or jelly. I prefer jam. Try this recipe or research your own.

Ingredients:

5-6 cups grapes
1 cup sugar/honey/maple sugar
1/2 cup water
Tsp lemon juice/ vinegar

Put washed grapes in small pot/sauce pan with water and add lid. cook for 5 minutes to until berries are soft, mash with potato masher. Cook to rolling boil, about 1 minute. Turn off heat. Once cool enough to handle, pass through a sieve to remove seeds and skins. Put back in clean sauce pan and add sugar bring back to a boil for about 10 minutes, until it has a creamy texture. Pour into sterile jar. Cool. Then refrigerate.



7. Make a basket-Gather grape vine and create a grape vine basket. Visit our podcast episode on how to make a basket, same basic technique using ash splints verses grapevine www.tomaquagmuseum.org/podcasts.

Directions: Collect 2 large vines 3 feet long (diameter of a marker/1/4 inch); it will become your handle, spine and rim of the basket. You will need 6-15 inch long vines (1/4 inch diameter to be your frame or warp. Your weft or weavers will be smaller (1/8 inch/more flexible vines). Remove any shoots to create a smoother vine.

To create stability, weave the handle/spine to the rim. It looks like a God's Eye. Wrap around handle, wrap around rim, wrap around spine and return to handle. Repeat eight times. Then continue to weave in an over, under pattern to form the basket continuing from the side until you reach the other side. Then finalize with the end weave and tuck end to complete.

Use your creativity or look online for videos of weaving a basket to help you along.

8. Create a dye using the grapes. You can use the whole grape



or just the deep purple skins. Boil skins in water until liquid is deep purple. Once cooled use cut outs or store-bought stamps to create stamp patterns on paper bags, large sheets of paper, or white gift bags to create your own wrapping and or gift paper. You can also use images to make the tags. To make your own stamps use erasers or modeling clay. Sketch design such as a geometric shape, flower, acorn, berries, and/or shells (wampum). Scrap away from shape to cause a relief which becomes your stamp.

9. To learn more about stamping for baskets **scan this QR code to see our website to download Painted & Stamp Basket Design Book** or learn about a baskets journey to Tomaquag Museum in A Baskets Own Story.



10. Visit Tomaquag Museum and see the exhibit on baskets including the Grape Vine basket, ash splint baskets, Stamped baskets and others with porcupine quills, sweetgrass and pine needles.

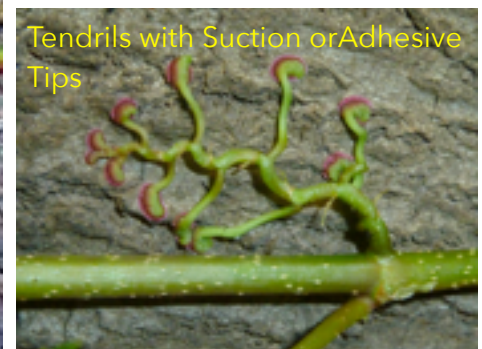
11. Book you family and/or group for a basketmaking workshop at Tomaquag Museum.





VINES

Virginia Creeper



Virginia Creeper

The Virginia Creeper bark and young shoots were used as a tonic for coughs and colds. A hot poultice was used to reduce swelling. A tea from the leaves was used as a diuretic or externally as an astringent or to relieve poison ivy. A tea from the plant was known to treat jaundice. A tea from the roots was used to correct intestinal issues. Stalks & roots are edible but should be peeled and boiled.

Always use expert for medicinals & food uses.

Activities:

1. Sketch parts of the plant & label.
2. Measure berries with centimeter rulers. What is diameter? Circumference? **Do Not Eat Berries-Toxic.**
3. Compare Virginia Creeper with Grape vine, how are they the same or different?
4. Press flower and create an art piece by matting and framing.

Virginia Creeper

Activity 3 Continued:

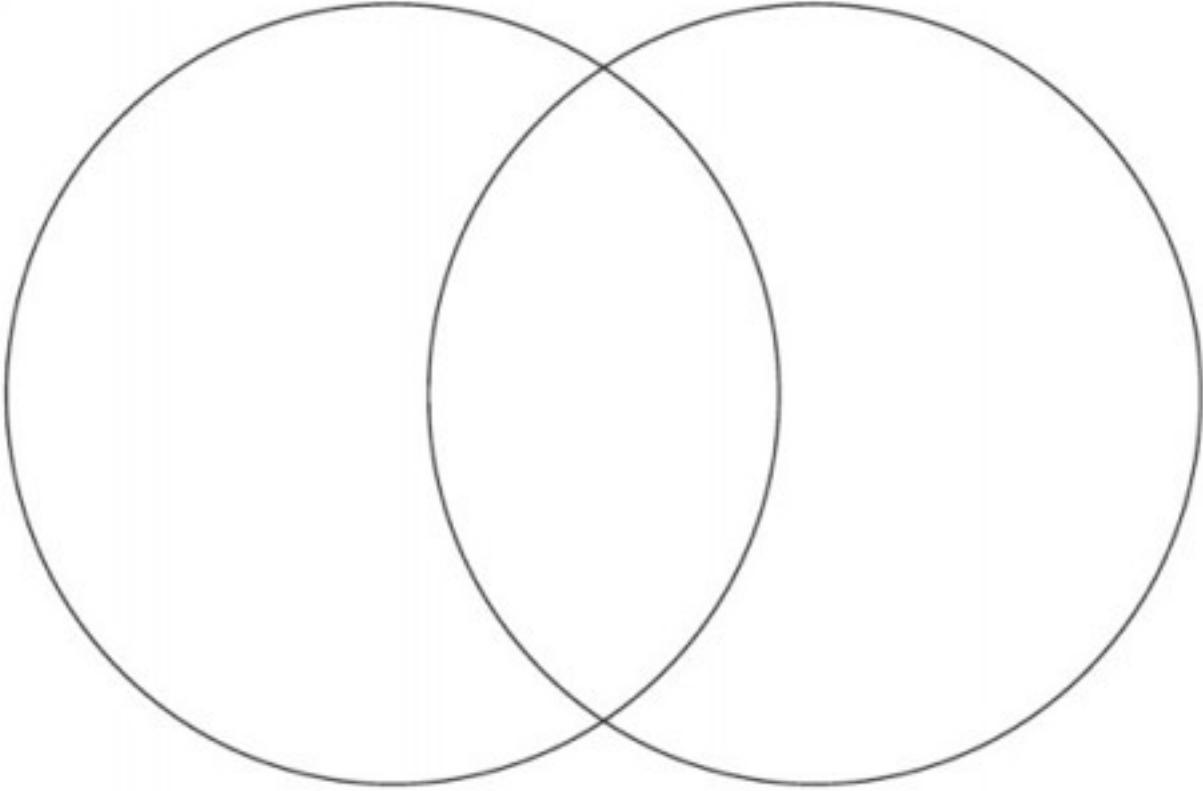
3. Compare Virginia Creeper with Grape Vine. Put items that are the same in the center & items that are different under each plant name. Make your own Venn Diagram and compare Groundnuts with Grapes or Virginia Creeper.

Compare other similar plants Such as Switchgrass and Goldenrod or Wild Indigo. Make a three-way Venn diagram.

Name: _____ Date: _____ Class Period: _____

Virginia Creeper

Grape Vine



5. Make pink dye with the Virginia Creeper. **Scan this QR code to learn about some history around making dye.**



Experiment with berries (wear gloves as some folks skin is sensitive to juices) and with the vibrant fall leaves and stems.

Here is a picture for inspiration from same website:



Scan this QR code for another website with dyeing techniques and directions:



6. Try printing on paper as an easier alternative. **Scan this QR code to view a website to help:**





GRASS

Switchgrass



Switchgrass

Switchgrass was important to Indigenous peoples. It was used as a flour made out of its ground seeds. It was used as a shampoo to wash hair using a mixture of soapweed and the switchgrass roots. Leaves were steeped to reduce fevers. The grass was used as padding for moccasins.

Today it is used as a plant for landscaping, for livestock and as a biofuel. For more information on it biofuel scan this QR Code:



Do not try medicinals without an expert.

Activities:

1. Sketch parts of the plant & label.
2. Measure height of plant with inch/ centimeter rulers.
3. Photograph plant, print and frame for digital art. Try a close up of tassels.
4. Grow Switchgrass in your yard for a beautiful enhancement to your garden.
5. Press tassels into a piece of art.



FERNS

Hayscented



Ferns

The Hayscented fern is one of many edible ferns known as fiddleheads due to their coiled shape. Fiddlehead ferns are collected in early spring before they unfurl. They are found in woodland environments, near streams, wetlands and other moist areas. Ferns make a wonderful ground cover and often spread pervasively. To the Narragansett & other Indigenous people they are a sure sign of Spring (Sequan)

Activities:

1. Sketch parts of the plant & label.
2. Measure height with centimeter rulers. Measure circumference of top before unfurls. What is diameter? Radius?
3. Use fiddlehead as a stamp with ink/paint.
4. Use unfurled fern to stamp on paper.
5. Harvest ferns with an adult.

Fern

Activities Continued:

6. Harvest ferns early in spring before unfurling. Gently rinse and remove brown papery chaff by rubbing gently. You can cook fiddleheads a variety of ways including steamed, boiled, sautéed, stewed, stir-fried, baked or fried. Be sure to cook them through, as they are not good raw.

Here is a favorite simple recipe:

Narragansett Fiddlehead Recipe

By Lorén Spears

Ingredients:

12-15 fiddleheads

1 wild onion

sliced mushrooms

(wild, if you are experienced collecting)

A dash of olive oil/butter

Two-Four Servings

Variations:

- Add diced Spaghetti squash or pasta or rice noodles
- Add cubed squash, sliced carrots or other veggies you like to create a stir-fry
- Substitute chicken, turkey, venison for mushrooms or add both! Be sure to sauté meats first to ensure cooked fully as fiddleheads do not take long.
- Add fiddleheads to soups or stews.
- Numeechunag! Let's Eat!



Appendix

Links from Curriculum

Tomaquag Museum:

www.tomaquagmuseum.org

Paper Flowers Video:

<https://www.youtube.com/watch?v=hoyKU7rHMeg>

Pressed Flowers:

<https://www.proflowers.com/blog/how-to-press-flowers>

Prickly Pear Cactus Jelly:

<https://www.allrecipes.com/recipe/254409/prickly-pear-jelly/>

Weaving Loom:

<https://www.dickblick.com/products/kb-all-n-one-loom/>

Tomaquag Podcasts:

www.tomaquagmuseum.org/podcasts.

Tomaquag Books:

www.tomaquagmuseum/books

Dying Techniques:

<https://davesgarden.com/guides/articles/view/1033>

Virginia Creeper Printing:

<https://naturaldyept.wordpress.com/tag/printing-with-virginia-creeper/>

Biofuel:

<http://extension.missouri.edu/sare/documents/SwitchgrassBioenergCrop20>

