

Inspired by Wrath

Method

After trying to manually control an invasive species, you and your students will either be consumed with wrath or filled with satisfaction. In a more creative mood, what could you do with a pile of garlic mustard plants, buckthorn leaves, or purple loosestrife flowers? Could you dye or decorate T-shirts? Are any of our invasives edible? This activity will recommend a few creative possibilities and give you the encouragement to pull weeds for supply – not spite!

Introducing the Activity

It should come as no surprise that many of the plants we are fighting to get rid of were purposely brought to this country for beneficial reasons. Early settlers brought with them the plants that had provided their families with food, medicine, and art for generations. Try some of these projects and maybe invasive species will become the weeds you love to hate.

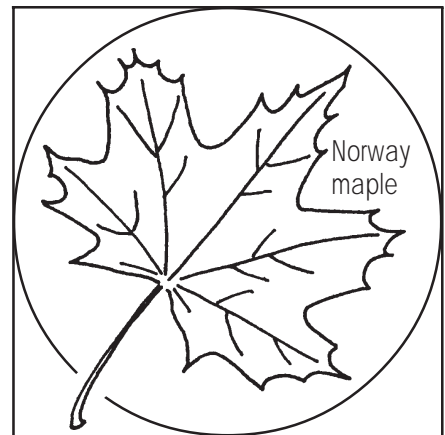
Doing the Activity

See individual project sheets for materials and directions.

This activity is from “Inspired by Wrath.” **Non-Native Invasive Species Learning Kit – Do Something.** United States Forest Service. 2005.

Remember:

- Always know exactly what species you are using for crafts or cooking!
- Be aware of poisonous plants and the potential hypersensitivity of participants.
- Always ask permission before harvesting any plant material from public or private land. You must get this permission even if the plants are invasive!
- Never plant an invasive plant so that you can use it for art or cooking. Even if you are careful, it might escape cultivation and invade a natural area.
- Never use invasives for art or eating if they have been treated with a chemical.
- Be careful that your artwork does not spread the invasive!
- Have fun!



Objectives

- Create art or food from invasive species.
- Understand the usefulness of plants to people of all times and cultures.

Grades

Varies with project

Group Size

Depends on the tools and equipment available

Activity Time

Varies with project

Setting

Outdoors

Materials

Varies with project

Scout Connections

- Webelos Scouts: Artist
- Brownie Girl Scouts: Plants
- Junior Girl Scouts: Outdoor Creativity
- Cadette and Senior Girl Scouts: Artistic Crafts, Eco-Action, Textile Arts

When cooking with invasives:

- Limit participants to adults or family groups. Be sure parents know that they are responsible for monitoring their own children's eating.
- Be sure participants know they are tasting at their own risk.
- Offer very small portions.
- Caution participants that different people can have different reactions to new foods.

Assessing the Learning

Ask students to create portfolios of their artwork. Work together to organize an invasive species art show. Display the works at the local library or other community building.

Extending the Learning

Check out native uses of invasive plants. Our invasives are often valued plants in their native homes. Here are a few uses from other cultures and eras to start the students thinking!

Common Reed Grass

People around the world have used *Phragmites* spp. for food, decoration, weapons (arrow shafts), weaving (basketry), building (mat weaving for house construction), writing (pen points for calligraphy pens), paper making, and even musical instruments (flutes and bagpipes).

Garlic Mustard

This herb is high in vitamins A and C. Europeans used it in salads and as a garlic or onion substitute in recipes. People even used it to clean wounds and abrasions, because it contains an antiseptic.

Yellow Flag (Iris)

All parts of the yellow flag plant can cause vomiting and diarrhea, but it is used medically to treat several ailments. The flowers and roots make yellow and black/brown dyes, respectively.

Purple Loosestrife

The scientific name for loosestrife, *Lythrum*, comes from the Greek word for blood; so it makes sense that loosestrife's medicinal uses include astringents. Tonics made from flowering branches, leaves, and roots have been used to treat dysentery, wounds, and ulcers.

Kudzu

Japanese and Chinese people use kudzu for both its culinary and herbal properties. Some doctors use kudzu to reduce hypertension; others are experimenting with kudzu to reduce the cravings associated with alcoholism.

Leaf Pounding

Take out your frustration by hammering the pigments out of invasive plants and on to fabric or paper!

Materials

- Freshly-picked leaves of invasive plants ¹
- Paper or fabric ²
- Wood (use a wood chopping block or smooth scrap wood)
- Paper towels or paper ³
- Hammers (any hammer with a flat head will work)

Directions

1. Working on the ground, place materials in this order: wood, paper toweling, fabric or paper to print, leaf (try both right side up and upside down to find the best way to print), and paper toweling.
2. Hammer over the entire leaf surface. Start with gentle taps to slowly break down the cells of the leaf. Gradually increase the power of your hammering until the print is the way you want it.
3. Gently separate the paper towel from the paper or fabric. If little pieces of crushed leaves are stuck to your print, wait until they dry before brushing them off.
4. If you want to do multiple leaves on the same piece of paper, do them one at a time. You can even overlap them!
5. Heat set the image on paper or fabric with an iron set for the fabric content. Iron each section for 45 to 60 seconds. Be careful not to scorch it.
6. **Optional:** Highlight the edges and veins of your design with a permanent, fine tip marker.



buckthorn leaf
pounded on
paper



buckthorn
leaf
with highlights

¹ Most leaves will work, but remember that the amount of “juice” and pigment in leaves varies by species, season, and rainfall. You will probably get slightly different results each time you try this craft! Flowers also make very interesting prints, but they are a little harder to work with. See the reference book listed below for tips on working with flowers.

² For a quick and easy activity, pound on paper. Try a smooth white or cream-colored paper without a glossy finish. Card stock, bond, or linen papers seem to work well. Be sure the students realize the print will fade with time. For a more lasting finished product, you can pound the leaves on fabric that has been pretreated to accept and hold the pigments. Some art stores sell prepared for dyeing (PFD) fabric. If you can't find PFD fabric, use the reference book listed below for directions on how to pretreat fabric yourself. You can also pound the prints on paper and scan them! Then you can use the prints to make stationery, book covers, and even iron-on transfer prints!

³ Use better quality paper towels. The cheap ones just don't stand up well to repeated hammering. The number of paper towels depends on the “juiciness” of the leaves. Fresh spring leaves might need several layers to soften the blow. Fall leaves might not need any padding. Simply use a piece of paper to protect your work surface.

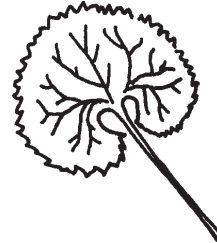
For more information check out **The Art and Craft of Pounding Flowers** by Laura C. Martin.

Natural Dyeing

The color of natural dyes depends on the season, cooking pot, mordant, fabric, duration, concentration, and numerous other factors! Just experiment and keep track of exactly what you do. If you happen onto a good "recipe," repeat it. Just don't be surprised if your results are different. Each time you try natural dyeing, you will invent a new color!

Materials

- Garlic mustard leaves
- Knives and chopping blocks or scissors
- Large pots (2)
- Natural fibers or fabrics for dyeing (cotton, linen, wool)
- Aluminum potassium sulfate (alum)
- Hot plates (2), firepit, or stove



garlic mustard leaf

Directions

1. Gather plant material for dyeing.
2. Make the dye solution. Chop plant material into small pieces and place in a pot. Add twice as much water as plant material. Bring to a boil, then simmer for about an hour. Strain.
3. Choose the fabric. Linen, cotton, and wool work best for natural dyes.
4. Get the fabric ready for the dye bath so the color will set in the fabric.
 - Find the dry weight of the material to be dyed. Divide this weight by four, and weigh out that much alum mordant. Stir the mordant into water.
 - Presoak the fabric 40 minutes in a separate bath of warm water.
 - Add the fabric to the water with alum and simmer for an hour (180° - 200° F).
 - Rinse the material and squeeze out excess. Rinse with cool water until the water runs clear.
5. Add the fabric to the dye. Simmer one hour, stirring occasionally for evenness of color.

Thanks to Marc Imlay of the Maryland Native Plant Society for these directions.

Other Non-native Dyes

This recipe for garlic mustard yields a bright sap green color. Try purple loosestrife flowering shoots in full bloom for a purple, green, or black dye. Use buckthorn berries for a dark brown, almost black, dye.



garlic mustard
in bloom

Twig Beads

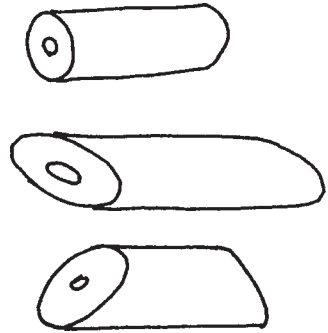
After removing shrubby invasives, take some time to make twig beads. Use the beads to make garlands, necklaces, or decorations for other art projects. Invasive honeysuckles, with their hollow pith, work especially well for this project.

Materials

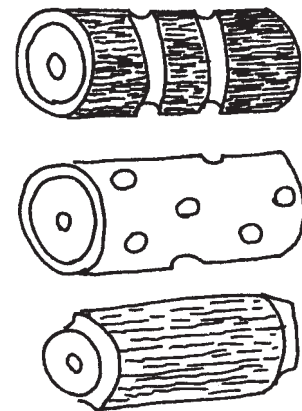
- Variety of twigs at least 3/8" in diameter (The more variety in color and texture, the more interesting the finished product.)
- Pruning shears or saws
- Vice or large clamps
- Hammers and nails or drills and bits to hollow out centers
- Carving tools
- Waxed dental floss

Directions

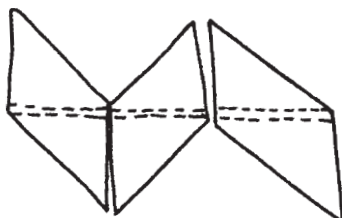
1. Cut the twigs into bead-sized lengths. Vary the diameter of the twig, the length of the bead, and the angle of the cut to make a wide assortment.
2. Make a hole through each bead. If the center is soft, use a nail and hammer. If the center is hard, you will have to drill a hole through the bead. Use a vise to hold the bead during drilling. You can also drill a hole sideways through the bead for a completely different look.
3. Decorate the beads.
 - Peel off the bark. Peel just the outer bark on some. Peel the inner and outer bark off of others.
 - Carve designs such as grooves, dots, or spirals into the bark or the wood.
4. String the beads on dental floss and allow them to dry before use.



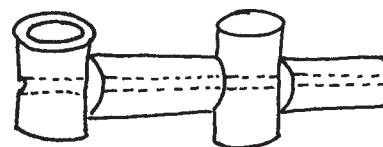
Cut beads at different angles for unique effects.



Decorate the beads by removing some or all of the bark.



Cut beads on an angle, drill holes as shown, and string to form a zig-zag pattern.



Drill holes end-to-end or sideways.

Baskets or Bird Nest Weaving

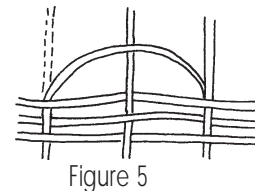
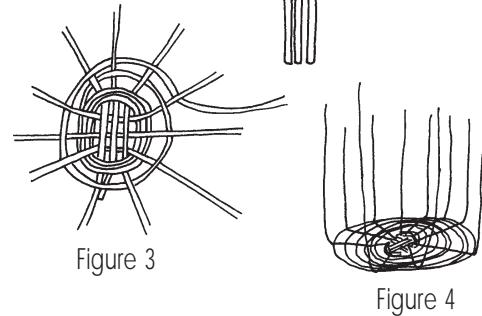
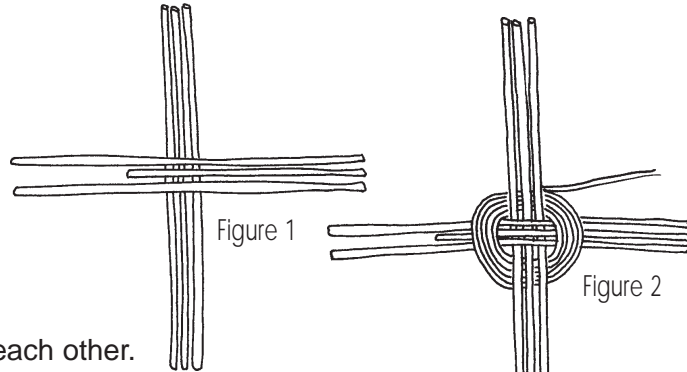
Several invasive plants can be used for basket making. Directions are given for a kudzu basket, but feel free to experiment. You can try making the base and spokes out of kudzu or willow. Then use phragmites or other grasses to weave the sides of the basket. Check with managers of local natural areas. They may be familiar with native willow species that have become invasive in wetland areas.

Materials

- Kudzu, willow, or other invasives

Directions

1. Take 5 pieces of vine about 24" long and 1 piece about 16" long.
2. Lay 3 of the long vines parallel to each other.
3. Lay the other 3 vines across the first 3, with the shortest vine in the middle. Align 1 end of the short piece with the ends of the other 2 long pieces. See Figure 1.
4. Take another long piece of thin, strong vine. Weave the 6 segments together, going over the top 3 (as a group), and under the bottom 3 about 3 times. Make sure the vines are securely fastened together. See Figure 2.
5. Do not cut this vine. It will be used for weaving.
6. Spread the vines so they are evenly spaced like spokes of a wheel.
7. Pick up the thin, long vine and start weaving over and under each spine. Pull tightly. See Figure 3. Note: The short extension of the original 16" piece becomes part of the spine next to it. Weave them together as one. This gives an uneven number of spines for weaving.
8. When you get to the end of the first vine, add another. Make sure they overlap by at least one spine so that the basket won't fall apart.
9. After making the bottom of the basket as large as desired, fold and crease all the spokes upward. See Figure 4.
10. Continue weaving up the sides, but don't go up more than 1/3 the height of the spokes.
11. Finish the basket by bending a spoke sideways past the adjacent spoke and pushing it through the space beside the third spoke. See Figure 5. You may need an awl or ice pick to tuck the spokes. Then tuck the skipped spoke beside the fourth spoke, etc. Continue all the way around the basket.
12. If the spokes stick out the bottom of the basket, cut off the excess. Finish the basket by tucking or trimming any ends that stick out. Be sure the ends are secure enough to hold the basket together before trimming them.



Other Possibilities

Pressed Leaves and Flowers

Press the leaves and flowers of invasive plants and use them in art projects.

- Make animals and scenes. See the book **Look What I Did With a Leaf!** by Morteza E. Sohi for more ideas.
- Use paint or ink and a brayer to make leaf prints on fabric or paper.
- Decorate stationery or note cards with pressed leaves.

Paper

Use fibers from phragmites or kudzu to make handmade papers.

Carvings

Use buckthorn to make:

- Rustic furniture
- Turned tool handles
- Bowls, spoons, decorative turnings

Invite a woodcarver to a work day to demonstrate techniques. If you want to try carving buckthorn, cure the wood a year before carving.

Walking Sticks

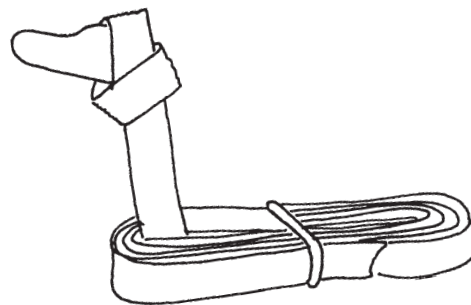
Use the roots and stems of the autumn olive to make strong walking sticks. Autumn olive is a beautiful wood!

Weed Weaving & Rope Making

Try phragmites and cattails to make mats, ropes, and decorative weaving. Experiment with wheat-weaving designs using phragmites.

Toys

Create dolls and floating ducks out of cattails. Directions for this Native American craft are available on the Internet. <www.nativetech.org/cattail/catdoll.htm>



Recipes for Revenge

Why not eat our invasive species problems! Try out some of these recipes, but be careful. Even a plant that is edible by many people may not be edible by everyone. Remember, some people are hypersensitive to foods. If you experiment with eating invasive species, take the same precautions you would take trying any new food in a foreign country.

Cooking with Garlic Mustard

- Use the leaves year-round in any recipe calling for mustard greens.
- Harvest the roots before the plant flowers and use them like horseradish.
- Save the seeds and use them as a spicy condiment.
- Young plants have a mild mustard flavor with hints of garlic and can be used raw.*
- Older, larger leaves and plants have a stronger, more bitter flavor.*
- The round leaves are less bitter than the triangular ones on the flower stalk.*
- If the plant is in full flower or has produced seeds, it will taste more bitter.*
- Pull up the entire plant gently. The roots will help keep the plant fresh until you are ready to use it. Then cut off the leaves, discard the flower stalk, wash, and use.*

Tips with (*) are from the *Garlic Mustard Challenge*, co-sponsored by the Patapsco Valley State Park and the Friends of the Patapsco Valley and Heritage Greenway (Maryland).

Winning Recipes from the *Garlic Mustard Challenge*

Garlic Mustard Pesto

Submitted by Robert Dunn, Executive Chef,
Belmont Conference Center

- 1 cup garlic mustard
- ½ cup basil
- 3 cloves garlic
- 2 ounces toasted pinenuts
- 4 ounces olive oil
- juice of 1 lemon

In food processor, combine all ingredients except olive oil. Puree and add olive oil with processor running. Toss cooked raviolis with pesto.

Mrs. Z's Garlic Mustard

Mashed Potatoes

Submitted by Steve Wecker

- 4 large baking potatoes
- ½ cup sour cream
- ¼ pound butter
- 2 slices salt pork, chopped
- ¼ cup garlic mustard leaves (chopped)
- Pepper to taste

Boil 4 large russet potatoes until soft. Peel and mash. Saute garlic mustard with salt pork. Drain. Add to potatoes with butter. Add sour cream and pepper. Bake for 25 minutes at 350°.

Garlic Mustard Pasta

Submitted by Alex Streat, age 12

- 1 pound linguine
- 2 tablespoons butter
- ½ cup garlic mustard (washed, crisped, and chopped)

Cook linguine according to directions on box. Saute garlic mustard in butter. Blend with cooked linguine. Garnish with garlic mustard stems. Serve hot or chilled.

Sally's Tossed Salad

Submitted by Sally Voris

- 4 - 6 leaves ruby red leaf lettuce
- 4 - 6 leaves romaine lettuce
- 1 - 2 handfuls tender garlic mustard leaves
- one leaf each French sorrel and bronze fennel
- 1/3 cup mandarin orange slices (drained)
- 1 slice of smoked salmon
- 1/8 cup sunflower seeds
- croutons

Wash and crisp all the leaves and tear the lettuce leaves into a salad bowl. Cut the garlic mustard leaves, the French sorrel, and the fennel into narrow strips and add to the salad. Cut the oranges and the smoked salmon into thin strips and place in the salad. Sprinkle on sunflower seeds and fresh herbed croutons. Dress lightly with Italian dressing. Serve immediately.