Yarrow is a medicine chest in itself. If you know how to use this one plant, you can help ease many health complaints including stopping bleeding, fighting infection, reducing fevers, cooling inflammation, and promoting better circulation!

Other Names: Achillea millefolium, A. lanulosa, A. alpina, squirrel tail, warrior plant, thousand leaf, milfoil

Identifying Yarrow: Yarrow is a common perennial herb. The species name millefolia means “thousand leaves” because the leaves are finely divided like a feather or a squirrel tail. White, five-petaled flowers have yellow stamens and are clustered together in an umbellate-shape on a long straight stalk. They can reach a foot high. Yarrow tends to form deep-green soft mats with strong interconnected roots. The whole plant is aromatic and smells similar to chamomile and pine. It is in the Asteraceae, or sunflower family.

Where it Grows: Yarrow is found all over the world in fields, yards, and sandy soils. It grows from rocky beaches to alpine mountain meadows. Native species, including Achillea lanulosa and the alpine species A. alpina, look identical to the European species, A. millefolia. The only way to tell them apart is by looking at their chromosomes!

Season: Flowers in late spring through summer. Leaves when they are vibrant green any time of year. Roots can be harvested anytime, but medicine is strongest in spring and fall.

How to Harvest: All parts of yarrow are medicinal, although the flowers are most commonly used. To harvest the flowers, pinch or cut the stem just below the flowering heads when flowers are fully open and vibrant. Leaves are pinched at the base and can be used fresh or dried. Roots form a dense web under the soil. Dig up a small area, remove some roots, and put back a plant start. Yarrow has the strongest smell and medicine when it is growing on windswept cliffs, mountain meadows, and sunny open fields. These plants must survive harsh conditions and they make more medicinal compounds to protect themselves.

Yarrow Medicine: Yarrow has been revered as a healing herb since ancient times. Its use has been documented in Chinese Medicine for over 3,000 years, and in Europe since at least the Middle Ages. "Warrior Plant" is a common name for yarrow among indigenous communities across Canada and the United States. When you get a wound, it helps cells in the blood called platelets stick together and form a scab. This, combined with yarrow's anti-inflammatory, astringent, and antimicrobial properties, makes it a perfect first aid remedy for healing wounds and skin irritations. Yarrow can be used topically in many ways including making a fresh plant poultice by chewing or mashing up the flowers, leaves, or roots, sprinkling the dried powder on a wound,
applying a strong tea, or making a yarrow-infused oil. Yarrow is also used internally as a tea, tincture, or vinegar to stop bleeding and cool inflammation.

Yarrow is a favorite cold and flu remedy. It has cooling, anti-inflammatory, and antimicrobial properties. Drinking hot yarrow tea brings blood to the surface of the body, thereby inducing sweating and helping to break a fever. Through thinning the blood and increasing circulation, it may also help people with lung congestion to breathe better. The aromatics in yarrow open respiratory passages, fight infection, and cool inflamed tissue. A classic cold and flu tea includes equal parts of yarrow, peppermint, and elder flower. Use 1 tablespoon per cup, steep 15 minutes, and drink it hot. The flowers can also be used as a respiratory steam by placing a handful of dried yarrow flowers or finely chopped fresh yarrow in a medium-sized bowl and pouring boiling water into it. Hold your face at a comfortable distance and cover your head with a towel and inhale the steam. This is also excellent for skin health, including oily skin and acne.

Yarrow has a bitter taste and stimulates digestion. Drinking it as tea can be helpful when someone has poor appetite due to low digestive secretions and general inflammation. Yarrow is an ingredient in many classic aperitifs and bitters—alcoholic beverages that are taken with meals to stimulate digestion.

Many Native People in the Pacific Northwest used dried yarrow and yarrow tea to keep away flies and mosquitoes. Wasco People have used yarrow as an aromatic tea when filleting salmon to keep flies away. Skokomish Elder Bruce Miller said the plant was boiled by Twana People to purify an area where sick people lie.

**CAUTION:** Yarrow is not recommended internally during pregnancy. It should be used carefully or avoided for those with coagulation disorders, and for those who are taking blood thinners.

**Ecological Relationships:** Yarrow is pollinated by bees, butterflies, and other insects. It makes a great addition to pollinator gardens.

**Growing Tips:** Yarrow is easy to grow in gardens in a sunny spot. In some areas, it will spread quickly, so you may want to contain it with a border. It may cross with nursery varieties of yarrow and turn pink, but it still has good medicine as long as it has a strong smell and a bitter taste.

**References:**
Cook, William H. *The Physic-Medical Dispensatory*. Eclectic Institute, Original, 1869.
Overview: In this activity, students learn about yarrow including its historic uses, where it grows, how to identify it, and how it is used as a topical medicine. Students build plant identification skills through observation and a drawing activity. At the end, students prepare a first aid poultice for healing wounds.

Student Wondering: Why is yarrow called “Warrior Plant”? How can I use it for healing?

<table>
<thead>
<tr>
<th>Learning Objectives</th>
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<tbody>
<tr>
<td><strong>Understandings</strong></td>
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<tr>
<td>Student will understand that…</td>
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<tr>
<td>• healing plants thrive in many environments.</td>
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<td>• yarrow is valued as a medicine around the world.</td>
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<td>• poultices are a simple way to use plants for topical skin healing.</td>
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<tr>
<td><strong>Knowledge and Skills</strong></td>
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<td>Student will be able to…</td>
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<tr>
<td>• identify yarrow by looking at the leaves and flowers.</td>
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<tr>
<td>• share why yarrow is called ‘Warrior Plant’ and name two medicinal uses for the plant.</td>
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<tr>
<td>• prepare yarrow as a poultice.</td>
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NGS Standards: Performance Expectations

- 4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Scientific and Engineering Practices | Disciplinary Core Ideas | Crosscutting Concepts
---|---|---
• Engaging in Argument from Evidence | • LS1.A: Structure and Function | • Systems and System Models

Vocabulary: common name, botanical name, genus, species, topical medicine, antimicrobial, anti-inflammatory, internal medicine

Background: Yarrow is a common plant that is found in almost every region in the United States and on every continent except for Antarctica. Yarrow is a medicine chest in itself, and has been revered as a healing herb since ancient times. It is called “Warrior Plant” because it staunches bleeding, fights microbes that cause infection, and reduces inflammation.
Materials:

- Samples of yarrow leaf and flower (enough for each pair of students or table group to observe and draw)
- Drawing Activity: Paper, drawing utensils, hand lenses or magnifying glasses, printed coloring sheet for younger students. [https://www.exploringnature.org/db/view/Yarrow-Coloring-Page](https://www.exploringnature.org/db/view/Yarrow-Coloring-Page)
- Poultice Activity: Dried yarrow to make into powder, coffee grinder, water, bowl
- Optional: Enough yarrow powder for each student to take some home, small plastic bags, labels

Preparation: Read the Yarrow Overview and the story about Achilles. Gather samples of yarrow leaf and flower for students to observe/draw. Purchase or gather materials for poultice activity. This lesson includes language and concepts that are complex for young students. Teachers can adapt the lesson to meet their students’ interest and knowledge.

LESSON: YARROW — WARRIOR MEDICINE

<table>
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<th>INTRODUCTION</th>
<th>10 MINUTES</th>
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Pass out samples of yarrow leaf and flower to each pair of students or table group.

Share: Today we are going to explore yarrow, a plant that has many **common names** including warrior plant, squirrel tail, and milfoil. Another type of name is a **botanical name**. Each plant that scientists have identified in the world also has been given a unique two-part botanical name. The first part is the **genus** and the second part is the **species**. Using a botanical name lets us know we are referring to the same plant regardless of the common name. Yarrow’s botanical name is *Achillea millefolium*. The common names and the botanical name often tell us something about the plant. (Write all the names on the board if you are inside).

Story Connection: Ask: *Has anyone heard the word/name Achilles?* Give students a chance to share what they know. You can give older students a hint by asking if they have read Greek stories or seen the 2004 film *Troy*.

Share: Achilles was a famous Greek warrior. According to legend, when he was born, his mother held him by the heel and dipped him in a vat of yarrow tea to make him invincible. He eventually died by a wound on the ankle, the only place where the yarrow had not touched. We still call this spot on our body the Achilles tendon/heel. Throughout the Trojan wars, Achilles used crushed yarrow on his soldiers to staunch bleeding and fight infection. Yarrow is called “Warrior Plant” by many nations around the world, including Native Americans.

Ask: *What do you think the species name millefolium means?* You might give students a hint by asking them to look at the leaves.

Share: *Millefolium* is named after yarrow’s finely divided leaves. Mille is a Latin word meaning “thousand” and “folium” means foliage.
THE ART OF NOTICING YARROW

10-20 MINUTES

Ask: Has anyone noticed yarrow growing around you? If so, where? Give students a chance to respond.

Share: Yarrow grows wild from ocean beaches to high mountain meadows. It also grows in fields, yards, gardens, and parks. You will find yarrow in sandy soil with full sun exposure. Plants that grow on windswept sea cliffs and mountainsides have the strongest medicine. These plants must survive harsh weather, and they make more medicinal compounds to protect themselves.

Think, Pair, Share: Distribute yarrow samples to students and have them take a minute of silence to investigate the characteristics of the plant using all of their senses. What do they notice about the leaves and flowers? How does yarrow smell when they crush it with their fingers? Have students take a minute to share what they noticed with a partner or their table group. Call on groups to share what they learned. You may want to write observations on the board. For example:

- Yarrow has divided, feathery looking leaves.
- Flowering tops have numerous, white, five-petaled flowers with yellow stamens. They are clustered on a long, straight stalk. Flower clusters are **umbel**-shaped and can reach a foot high.
- The whole plant is aromatic when crushed and is similar to the scent of chamomile and pine.

Drawing or Coloring Activity: Pass out drawing materials, paper, and hand lenses. Have students draw yarrow. Younger students can use a yarrow coloring sheet. Older students can make a yarrow poster. Encourage students to follow the ABCDE’s of scientific drawing including:

- **A** – Accurate
- **B** – Big – use the whole page
- **C** – Colorful or gives context
- **D** – Detailed – use writing and drawing together. What do you notice about color, texture, shape, size?
- **E** – Explained - “I notice… I wonder… this reminds me of…” What can you draw or write to tell the story of yarrow and its uses? Examples: drawing the Greek warrior Achilles, a squirrel’s tail, or a first aid symbol.

Optional: Test students’ plant identification skills by showing them pictures or actual plants that look similar to yarrow, including Queen Anne’s Lace (on right-hand side of picture), which has lacy leaves and umbel-shaped flowers, and Tansy, which has divided leaves and yellow flowers. See if they can identify yarrow among these look-alikes.
MAKE A YARROW POULTICE

Yarrow Medicine. **Share:** Yarrow is found on every continent except Antarctica, and it is a precious medicine to people wherever it grows. Here are some ways that yarrow is used as a **topical medicine** to heal wounds:

- **Yarrow is antimicrobial,** meaning that it fights microbes including bacteria that cause infection.
- **Yarrow is anti-inflammatory,** meaning that it reduces inflammation.
- **Yarrow stops or slows bleeding.** **Older Students:** Yarrow activates platelets, which are tiny blood cells that help our body form blood clots to stop the flow of blood when we are injured.

Yarrow is also used as an **internal medicine** to fight infection, reduce inflammation, break fevers, and promote healthy circulation. The medicine is often taken as a tea. It can also be extracted into alcohol, glycerin, vinegar, and honey. Today we are going to focus on the topical healing properties of yarrow.

**Harvesting Yarrow. Share:** All parts of yarrow are medicinal, but the flowers are most commonly used. To harvest yarrow, pinch or cut the stem just below the flowering head when the flowers are fully open.

**Ask:** What is important to consider before harvesting yarrow? Give students a chance to respond. Fill in missing information including:

- Make sure you have the right plant! Does it have feathery leaves, tiny, white flowers with five petals, and smell like yarrow? Other similar looking plants include Queen Anne’s lace and tansy.
- Avoid harvesting yarrow from roadsides or areas that might be contaminated or sprayed with herbicides or pesticides. These can make us sick!
- Do you have permission to harvest in the place you are gathering?
- Don’t take too much – leave enough yarrow for pollinators and so the plants can continue to thrive.
- How can you honor the plant? Some people have traditions of thanking the plant with a song, a prayer, or an offering. Leave the place as beautiful or more beautiful than you found it by cleaning up, picking up garbage, etc.

**Yarrow Poultice.** Talk students through making a yarrow poultice. If possible demonstrate how to do it with either fresh yarrow (flower is preferred but leaf will also work) or dried yarrow powder. Modify language based on the age you are teaching:

**Share:** Poultices are used to draw out an infection, poisonous substances, or foreign objects from our skin. Poultices can also increase circulation, reduce inflammation, stop bleeding, and activate the immune response of the tissue they come in contact with. Wounds, boils, cysts, acne and eczema, irritated skin, poor circulation, broken bones, sore muscles, and impaired breathing can be remedied with the use of poultices.

Making a poultice is quite easy. The simplest technique is to chew up plant material and place it over the afflicted area. This breaks the cell walls of the plant and releases the medicine. If you are making a poultice for someone else, you should have him or her chew the plant or mash it up to be more sanitary. A mortar and pestle, a knife and cutting board, a blender or food processor, or even two flat rocks will also work. In order to keep the herb in place, cover it with a band-aid, a clean cloth, or gauze and tape. You can also make a natural band-aid by tying a large leaf like plantain around the poultice.
Fresh yarrow flower is most commonly used for a poultice but the leaf and root will also work. If fresh plant is not available, you can use the dried, powdered herb. To stop bleeding, clean the wounds and simply place the poultice or sprinkle yarrow powder on it. Apply pressure and cover with a bandage. For other types of wounds, moisten the yarrow with hot water to make a paste. Once it cools, spread over the injured area, cover with a leaf or piece or wax paper to hold the paste in place before covering the area with a clean cloth. Alternatively, you can spread the poultice directly on the cloth before positioning over the wound. Make sure to change your poultice a couple of times a day if you are leaving it for a long period of time.

**TYING IT TOGETHER**

Choose one of the options for a closing activity:

1. **Ask:** *Share one thing you’ll remember about yarrow.* Have students do a group reflection, answer popcorn style, or do reflective writing.

2. Have students write a story about a first-aid scenario where they use yarrow for medicine.

3. Break students into two groups. Half of the students stand in a circle facing out. The other half forms a circle around them and face in. Each person is thus facing another person. Tell the group which people – those in the inner or outer circle – will speak first. Ask the first question (see below). Each person shares their answer with the person they are facing. After a minute or two, call "switch." The partner then responds with their answer to the same question. Next, call "rotate!" The students in the inner circle move one position to the right to face a new partner. Now ask another question, and so on.

   - **Name one way to identify yarrow.**
   - **Name a scenario where using a yarrow poultice would be useful.**
   - **How will this day change the way you see yarrow?**
   - **What helps you to feel strong like a warrior?**

**DIGGING DEEPER**

**Yarrow Tea** (20 minutes)

*Materials:* A portable burner or water boiler, a pot, a stirring spoon, dried yarrow flower, a strainer, cups, and a sweetener like honey or stevia. If available, provide a bag of yarrow tea for students to take home.

Add 1 tablespoon of dried yarrow herb per cup of boiling water in a container (a teapot, quart canning jar, or pot). Stir to make sure all that the herb is submerged in water. Place a tight-fitting lid on the container to retain aromatic compounds. Let steep for 10-15 minutes before pouring it through a strainer. Squeeze the liquid out of the herb if it is in a tea bag or strainer. Yarrow is a bitter tasting tea and is more palatable with a little sweetener like honey or stevia. A favorite tea for cold and flu is equal parts yarrow, elderflower, and peppermint. The flavors balance each other. Use 1 tablespoon per cup and steep for 15 minutes. Drink 1-3 cups per day.
**Yarrow Oil** (1-3 weeks to make)

**Materials:** Fresh, wilted yarrow flowers or dried, powdered yarrow, olive oil, glass jar, label, muslin cloth for straining.

Herbal infused oils are an excellent way to get medicine to the skin, muscles, tendons, and ligaments. They can be used for healing wounds, soothing sore muscles, and other topical applications. Yarrow flower infuses well in oil. Fresh yarrow is preferable, but dried, powdered yarrow will also work. Herbal oils generally last 1-2 years.

Olive oil makes a good base because it is inexpensive, accessible, has a long shelf-life, and heats well. Extra virgin, cold pressed oil is more nutritive. Other oils, including almond, apricot kernel, grape seed, hazelnut, sesame, and sunflower, can be used as well, but these oils go rancid more quickly. If you are turning the infused oil into a salve or lip balm, beeswax acts as a stabilizer and will increase the shelf life of infused oils.

1. Gather yarrow flowers, preferably in the morning or early afternoon when the plant volatile oils are at their peak. Wilt for about a day. This removes some of the water in the plant and lessens the likelihood of mold growth in your oil.
2. Finely cut or chop the yarrow to break up the plant cell walls and release the medicine. You can also use a blender or food processor to chop up the plant material. Place in a glass wide mouth jar and completely cover with oil. If your oil will be outside in a sunny spot, cover it with a lid. Stir the oil every few days and wipe condensation away from the underside of the lid. If you are keeping your oil inside in a warm place, you can place a clean cloth over the top and secure it with a rubber band. This will allow the water to evaporate off. Fresh infused oils can mold easily. To prevent this, use a jar that you can fill to the top to minimize air exposure to plant material. If herbs are sticking out of the oil find a clean rock to set on top of the herbs and hold them down. Let the oil steep for one to three weeks.
3. Strain with a muslin cloth, and compost the plant material. Allow the oil to settle for several hours to overnight. The sediment and water will fall to the bottom.
4. Pour the clear oil into a glass jar, leaving behind the water and sediment. Label your oil including the date. Store in a cool, dark place. You can add preservatives like vitamin E (1 teaspoon per cup) or a few drops of essential oil per cup of infused oil such as benzoin or rosemary. Infused herbal oils will last about a year.

**Yarrow Salve** (30 minutes)

**Materials:** Burner, double boiler, scale that measures ounces, yarrow-infused oil, beeswax, metal spoon, Pyrex container for measuring and pouring salve, salve jars or tins, labels. Optional ingredients include other healing oils like plantain, calendula, or comfrey, and essential oils like lavender, yarrow, or sweet orange.

To turn your yarrow oil into a healing salve, measure 1 part beeswax by weight on a scale to 5 parts yarrow oil by volume in a Pyrex measuring cup. Heat in a double boiler until the beeswax is just melted. Pour into glass salve jars or tins. You can use essential oils including lavender to add additional healing qualities and fragrance. Use 1-3 drops of pure essential oil per ounce of salve and add at the end so it does not evaporate.