

Song of the Seven Herbs

Garden produce is nutritious, delicious, and sometimes even medicinal!

Gardening Connection:

A variety of herbs can be grown in a school garden and used for culinary, medicinal, or aromatic purposes.

Time

Required:

2- 45 minute sessions + garden growth time

-Grade Level:

Grades 2 - 8

EDUCATOR

NOTE:

To guarantee the safety and quality of the herbs students will taste, please grow them yourself or purchase herbs from natural food stores or reputable online retailers. Be aware of any food allergies, and have students taste herb preparations in small amounts. Use care when handling fresh nettles, as they will sting. Select herbs appropriate to your region and do not cultivate noxious weeds such as dandelion.

OBJECTIVES

Students will be able to:

1. Identify herbs that can be grown in a school garden
2. Describe various culinary, medicinal, and aromatic uses for herbs.
3. Cultivate herbs in a School garden.

BACKGROUND

Herbalism is the use of herbs for their therapeutic or medicinal value. An herb is a plant or plant part valued for its medicinal, aromatic or savory qualities.

Many pharmaceuticals commonly used today are of herbal origin. About 25% of the prescription drugs dispensed in the United States contain at least one active ingredient derived from plant material. Some are made from plant extracts; others are synthesized to mimic a natural plant compound.

Many Native American tribes use herbs for medicinal purposes and most herbs have a story(ies) that describes how the tribes came to find the plants and use them. Many cultures have studied and used plants for medicine. Herbs have been discovered in use as far back as the Ice Age. Common current and historical uses for the seven herbs featured in this activity are summarized below.

MATERIALS

- [Song of the Seven Herbs](#) book by Walking Nightbear & Stan Padilla
- Stinging Nettle (dried leaves)
- Yarrow (dried flowers)
- Dandelion (fresh plant and dried root or leaf if available)
- Violet (dried leaves & flowers)
- Chicory (dried root)
- Wild Rose (dried fruit or rose hip)
- Sunflower (fresh whole plant)
- 4 x 6 Index cards
- Clear packing tape
- Colored pencils

Subjects

Language Arts (literature, writing)
History (herbs for medicinal purposes)
Social Studies (Native American culture)
Science (herbs for medicinal purposes)
Art (draw and label)

Vocabulary

Herbalism
Medicinal
Therapeutic

Project Connections

PLT - Native Ways
Peppermint Beetle
The Closer You Look
Tipi Talk

Seven Herbs Background Information

This information comes from www.gardensablaze.com.

Yarrow-Taken internally as a tea, as with many herbs, Yarrow is believed to aid in digestion and possibly increase appetite. In case of common cold and fever, it causes the body to perspire, thereby eliminating toxins causing the illness. Yarrow is also believed to be a kidney and urinary tract cleanser because of its antiseptic properties, and may be useful for some liver problems. Undocumented traditional uses through history have also included relief from symptoms of stomach cramps, rheumatism, menstrual cramping, hypertension, flatulence, diarrhea, and as a general tonic. For external use, make a tea with the flower tops and use the resulting liquid for as an astringent for acne, skin toner and hair conditioner. Used for centuries on wounds, cuts, scrapes, rashes, and burns, the leaves and stems can be crushed and used on the spot to help stop bleeding and aid in healing benefits.

Chicory- Chicory teas taken internally are believed to be effective in treating jaundice and liver problems. Additionally, as with many other herbs, a tea made from roots or leaves appears to be useful for those with digestive problems. Save a little tea and try dipping a cotton ball into it for a refreshing and soothing eye wash. You can also add a spoonful or two of honey to thicken and use as syrup for a mild laxative for kids. For external use, bruise fresh Chicory leaves and apply to areas affected by gout, skin eruptions, swellings, skin inflammations, and rheumatism.

Dandelion- The Dandelion has remarkable nutritional value, being very high in vitamins A and C, with more beta carotene than carrots and more potassium than broccoli or spinach, not to mention healthy doses of iron and copper for good measure. Medicinally, Dandelions are considered very safe and effective as a general tonic that helps strengthen the liver, gallbladder, pancreas, spleen, stomach, and intestines, improving bile flow and reducing inflammation in cases of hepatitis and cirrhosis. Dandelions also help to dissipate gallstones and are believed to improve kidney function, thereby improving overall health and clearing skin problems. Dandelion tea is the perfect choice for those with the above problems or those who lead relatively sedentary lifestyles and who experience discomfort associated with this, such as constipation, digestive disorders, indigestion, and general sluggishness and fatigue. Tea may also be of benefit for many of the problems associated with diabetes and low blood sugar. Externally, the white sap from the stems or roots can be applied directly to ease the pain of sores and bee stings, and is useful in the elimination of warts, acne, and calluses. Dandelion coffee is made by grinding roasted roots, and makes a nice substitute for regular coffee, but without the caffeine. People who can't tolerate much coffee can drink as much as they please and reap the health benefits without any side-effects. For the sweets lover, ground root mixed with warm milk and a little sweetener makes a very tasty and nutritious creamy beverage with few calories.

Violet- The leaves and flowers of Violets do have expectorant properties, and work well in cases of respiratory disorders such as bronchitis, colds, and coughs. By making a Tea to use as a gargle, or making a syrup by adding honey to thicken the tea are also valid ways to use this plant to combat these symptoms. Ingesting a tea made of violet leaves is reportedly also effective as a laxative and for insomnia, and there are reports in the literature that Violets contain an aspirin-like substance that in a tea may be helpful in reducing the symptoms of hangovers. This aspirin-like effect has also been reported as being effective externally in reducing headache and neck pain. Pound the leaves into a paste, adding water and oatmeal as needed, then apply to a warm compress and place on the back of the neck. This also works for the pain of rheumatism when applied to the affected area. Violets have antiseptic properties that may be helpful in relieving symptoms of various skin eruptions and sores when made into an Ointment and applied as needed. Although it is reported that ingesting large quantities of Violet seed may cause vomiting, these plants are safe, and as such are a good plant for the inexperienced herbalist to use for experimentation.

This information is taken from naturesherbal.com

Wild Rose- Wild roses are edible and medicinal. The fruit or hip can be eaten raw or cooked, remove the tiny hairs and seeds in the center. They are used in making jelly and jams and can also be dried to make a tea. Flower petals are great in salads adding a light flavor and beautiful color. The dried leaves are used as a tea substitute. Used as a medicinal plant all over the world for thousands of years wild roses are mentioned many old manuscripts and even in the tombs of Egyptian pharaohs. Wild roses are astringent, carminative, diuretic, laxative, nervine and tonic. An infusion of the leaves has been used as a spring tonic. An infusion of the hips and roots is used in the treatment of colds, fevers, influenza, minor infectious diseases, scurvy, diarrhea, dysentery, and as a treatment for stomach complaints and gastritis. The dried flowers are used in the treatment of heartburn. The infusion has also been used as an analgesic to treat nervous headaches. Its pectoral qualities make it useful as a gargle for coughs and sore throat. A strong decoction of the whole plant is used to treat bladder infection, kidney problems, inflammations, stress, menstrual pains and nervousness. The main constituents responsible for these uses are citric acid, flavonoids, fructose, malic acid, sucrose, tannins, vitamins A, B3, C, D, E, and P, calcium, phosphorus, iron, rutine, hesperidin and zinc. Five wild rose hips are said to be much higher in vitamin C than a whole lemon. Wild roses are being investigated as a food that is capable of reducing the incidence of cancer and also as a means of halting or reversing the growth of cancers. Rose hips are also known to lower saturated fats and triglycerides, helping to control blood pressure and good for the heart. The seed is rich in vitamin E and an oil extracted from the seed is used externally in the treatment of burns, scars and wrinkles. A poultice of the chewed leaves is used in an emergency to allay the pain of bee stings.

This information came from www.treeandeducation.com.

Sunflower- The seeds found on the sunflower are commercially used for food and for extracting edible oil. There are many varieties of sunflowers. They are cultivated not only for commercial purpose, but in many gardens, as an ornamental plant. The crushed leaves and the seeds can be made into a poultice is used for application over bruises, wounds and ulcers. The flowers and the dried or fresh leaves are prepared as tea in pulmonary diseases, bronchitis, coughs, asthma, dysentery and whooping cough. The oil extracted from the raw seeds is recommended for chest diseases. The drink made from the seeds is good for headache, nervous conditions, pulmonary and bronchial diseases and colds.

This information comes from www.umm.edu.

Stinging Nettle- Stinging nettle has been used for hundreds of years to treat painful muscles and joints, eczema, arthritis, gout, and anemia. Today, many people use it to treat urinary problems during the early stages of an enlarged prostate (called benign prostatic hyperplasia or BPH), for urinary tract infections, for hay fever (allergic rhinitis), or in compresses or creams for treating joint pain, sprains and strains, tendonitis, and insect bites. Caution: Stinging Nettle can be a painful plant to handle.

PROCEDURES

Engage

Read “Song of the Seven Herbs” by Walking Nightbear and Stan Padilla. Discuss the seven herbs that were used in the book: stinging nettle, yarrow, dandelion, violet, chicory, wild rose, and sunflower.

Explore

Students will use observation skills and 4 senses to explore as many of the 7 herbs as are available. These activities may be set up around the room as learning stations, or done one at a time as a whole class.

- **Sight & touch:** Complete the activity *The Closer You Look* from Project Learning Tree using either a dandelion or a sunflower (in place of the tree parts used in the activity as written).
- **Smell, sight, & touch:** Blindfold the students and place a pinch of dried or fresh herb in their hand. Have students describe the smell of the herb, and guess which of the 7 herbs they are holding. Remove blindfolds and have students explore the herbs using their senses of sight, smell and touch.
- **Taste:** Prepare tea from three of the seven herbs. The herbs most commonly available as prepared teas are nettles (leaves), dandelion (leaves and/or root) and yarrow (flowers). To make the tea, steep a tablespoon of the dried herb in 4 cups of boiling water for 5 minutes. Strain, cool, and serve. Have students guess which herb they are tasting.
- **Smell, sight, touch & taste:** Correctly identify all of the herbs from the activities above. Have students create herb identification cards. On a 4 x 6 index card, write the name of the herb at the top and tape a small sample of the herb below. Make a sketch of the herb (teacher may provide them with a photograph of the whole plant) and write a short description of the identifying characteristics of the herb (smell, touch, taste, look).

Dandelion



Looks like:

Smells like:

Tastes like:

Feels like:

Explain

Divide students into seven small groups, and assign each an herb from the book to research. Have students report on the following:

- What are the medicinal properties of the herb?
- What other uses (aromatic, culinary, landscaping, etc.) are there for the herb?
- What cultures use the herb, and where do they live?
- What stories are associated with the use of this herb?
- How many of these herbs are still used today and sold for medicinal purposes?
- Has this herb been used in any currently available prescriptions?

Elaborate

Have students choose herbs to grow in the school garden, and research culinary, medicinal, and aromatic uses for each. It may not be advisable to cultivate all 7 of the herbs from the story (dandelion will spread to the garden and surrounding lawns and fresh nettles will sting when touched), but there are many other fascinating choices readily available to grow from seed or transplant. See resources section for guidance on herb crops most commonly cultivated in Kansas. Herbs may be grown in containers, on the edge of a garden bed, or in an herb spiral. An herb spiral garden is a great way to showcase many herbs in a small space – see resources section for more information.

Evaluate

Have the students work in small groups to do a poster presentation for each of the seven herbs presented in the book.

If an herb garden is planted on school grounds, poster presentations on each herb in the garden may be posted in a hallway or area close to the garden entrance. Host a garden party or “poster exhibit opening” where students prepare foods seasoned with herbs from the garden for snacks.

Extension Ideas

See resources section for botany careers website and have students research careers working with herbs. Invite some professionals working in related fields to do a career presentation at your school.

Among the careers available to a person who enjoys the **outdoors** are positions as an ecologist, taxonomist, conservationist, forester, or plant explorer. Your work may take you to foreign and exotic lands. It may allow you to live and work in the great outdoors. A person with a **mathematical background** might find biophysics, developmental botany, genetics, modeling, or systems ecology to be exciting fields. Someone with an interest in **chemistry** might become a plant physiologist, plant biochemist, molecular biologist, or chemotaxonomist. Many people do not realize that most of the basic biological processes are the same in both plants and animals. Plants, however, are easier to grow and manipulate.

Plant structure may appeal to a person who enjoys microscopy and the beauty of intricate form and design. Persons fascinated with **microscopic organisms** often choose microbiology, phycology or mycology. On a larger scale, ornamental horticulture and landscape design requires artistic use of plant form and color. A person concerned about the **world food supply** might study plant pathology (diseases) or plant breeding. At larger universities there are frequently separate departments specializing in different applied subdisciplines of botany. Some examples are: Agronomy (field crops), Horticulture (ornamentals, fruits and vegetables), Microbiology (microbes such as bacteria and fungi) and Plant Pathology (diseases of plants). Plant biologists who enjoy **working with people** have a wide range of opportunities in teaching and public service.

Related Readings:

The Legend of the Bluebonnet by Tomie dePaola

The Legend of the Indian Paintbrush by Tomie dePaola

Woman Who Outshone The Sun by Alejandro Cruz Martinez

Medicinal Wild Plants of the Prairie by Kelly Kindscher

Resources:

Website of the herb study at KU Med in Lawrence:

<http://nativeplants.ku.edu/>

How to grow herbs in Kansas:

<http://www.kansasgreenschools.org/files/Herbs.pdf>

How to make an herb spiral garden:

<http://tipnut.com/herb-spiral/>

Careers in Botany:

<http://www.botany.org/bsa/careers/bot-spec.html>