

The Possibilities of Plants

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Educational Objectives

- Participants will learn how to use plants beyond consumption and decoration.
- Participants will learn the history of alternative uses for plants.
- Participants will learn the Native American cultural significance of certain plants.

NOTE:

This lesson does not provide medical advice or advocate for any medical treatment. You should seek the advice of your doctor or healthcare provider for medical treatment. Some plants can be toxic, have interactions with medicines or have other negative effects.

We commonly think of plants as food or

for gardening and beautification, but they actually have a long history of alternative uses. Plants can be used as building materials – such as wood, insulation, plaster and roofing – and they're also often used for heat and lighting, coming from things like wood alcohol, sod, tinder, oil and wax. Plants are even used for clothing, making materials such as cloth, buttons, needles, pins and stuffing. Plants are a part of everything we do, including dyes and paper, soaps and deodorants, even disinfectants, brushes and adhesives.

Humans' use of plants has been key to our survival because they provide sustenance, shelter and medicinal qualities. However, plants also play an important role in art, mythology, religion, literature and entertainment. Plants influence language, politics and culture. Think of the olive branch as a symbol of peace, red roses for love, evergreens at Christmas, and four-leaf clovers for good luck – plants are so engrained in our cultural practices, we often don't even realize it.

In North America, many plants have cultural significance to Native Americans. There is also a history of plant usage by pioneers and early settlers. Examples of various uses of some familiar plants include:

- **Vanilla Grass (Sweetgrass, Holy Grass)** – Known for its sweet vanilla scent, it was often burned as an air purifier. Native American

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Lavender can be used in soaps and oils to help with stress, pain and sleep.

women braided it into their hair to symbolize Mother Earth. Each of the three strands making up the braid has a specific meaning: mind, body and spirit.



Vanilla Grass is also commonly known as Sweetgrass or Holy Grass.

- **Wild Garlic** – The bulbs and leaves were eaten raw or fried with grease and greens or used as a seasoning. It was also made into teas and extracts for health benefits.
- **American Lotus** – It is considered to have magical powers. In a popular cultural myth, if a brave wanted to make a woman fall in love with him, he would rub the root in the palm of his hands and then trick the girl into shaking hands with him. If she did this within a week, she would decide to marry him. The root was also boiled to make a red dye that was used as a decorative skin stain.
- **Elderberry** – An important food for some tribes in late summer, only the blue or purple berries are edible, but they need to be cooked to destroy the alkaloids and improve the taste. Native Americans used the berries to make beverages, puddings and baked goods. The branches were used as arrow shafts, and twigs and berries were used to make dyes.
- **Mountain Laurel** – It is sometimes called the spoon tree because Native Americans used the wood to make spoons and tools to dig with. Be sure not to consume this plant because it's very poisonous to humans and animals.
- **American Dogwood** – The leaves and inner bark were smoked with tobacco in

the sacred pipe ceremony of many Native American tribes. Peeled twigs were used as toothbrushes due to their whitening effect on teeth. Bark was used to make a dye to make light red, dark red, black, khaki or yellow colored dyes depending on what other plants were mixed with it.

- **Sassafras** – Native American tribes used the leaves and roots as a spice. Colonists used the young shoots as a component when making beer. Filé is made from powdered leaves and is an important ingredient in many Cajun foods. The lumber was used for boats, crates and fence posts. During the bubonic plague in Europe, doctors believed the odor would repel the virus and they put it in the front of nose beak masks. In 1976, the FDA made it illegal to sell sassafras tea, its roots, or the oil because of safrole in it, which is a carcinogen that causes liver cancer.
- **Chamomile** – It can be used as a sleep aid, help reduce stress and can support wound healing. It's sometimes used topically on chemotherapy patients to treat skin irritation or taken orally to treat nausea.
- **Rosemary** – Can be used as a mosquito repellent and hair rinse.
- **Tarragon** – This plant has numbing properties if chewed. In ancient times, it would be used to treat toothaches. Talk to your dentist before trying this.



Chamomile is commonly used to make tea and drank before bed as a sleep aid.





Adding fresh thyme to boiling water and then mixing with a light vegetable-based soap can be used to clean hard surfaces in your house.

- **Thyme** – It's a natural disinfectant and antiseptic due to an oil it contains called thymol. Add fresh thyme to boiling water and then mix with a light vegetable-based soap. Pour the solution into a spray bottle and use it to clean hard surfaces in your bathroom, kitchen or other areas of the house.

Essential Oils

The earliest records of essential oils appear in ancient India, Persia and Egypt. Initially, the production process entailed pressing the plants for direct extraction of the oil. In Arab cultures, essential oils were distilled, and this process prevailed into the European Middle Ages. Essential oils have been used throughout modern history in a variety of ways, even getting a surge of popularity in the 2000s.

Though they have many uses, essential oils can be toxic and should never be consumed. General safety recommendations include researching each oil, paying attention to cautions, following recommendations for dilution and identifying a knowledgeable person who can reliably answer your questions. For any medical treatment, refer to your healthcare provider.

Research has shown that essential oils may boost mood, reduce stress, improve sleep, increase attentiveness, kill bacteria and fungi, relieve headaches, and reduce

anxiety, pain, inflammation and nausea. Some common essential oils are:

- **Lavender oil** – It's reported to help with stress, pain and sleep and has historically been used as a cleaning agent in hospitals. There have also been studies that show using lavender oil (and tea tree oil) can disrupt hormones in young boys.
- **Tea tree oil** – An antiseptic, antimicrobial and antifungal, it can be used to treat acne and athlete's foot. Since it is neurotoxic, do not diffuse if you have small children or animals at home.
- **Peppermint oil** – This oil has anti-inflammatory properties, is an antifungal and is antimicrobial. It can help reduce itching, lift moods and support memory. Peppermint tea can help settle stomachs.
- **Lemon oil** – It is extracted from the peel. It is known to help reduce anxiety and depression, reduce pain, ease nausea and kill bacteria. One study has shown potential positive outcomes for treatments of Alzheimer's disease. There have also been reports that lemon oil – as well as lime, orange, grapefruit, lemongrass and bergamot – can increase skin sensitivity to sunlight.
- **Lemongrass oil** – It's known to help relieve stress, anxiety and depression. It has antibacterial properties and can prevent human



Lemon oil can be used to help reduce anxiety and depression in some.

fungal growth. Be sure to use a carrier oil before applying to skin.

Activities

1. **Root vegetable stamps** – With a few simple supplies, you can make ink/paint stamps to decorate anything from paper to fabric.

Supplies:

- Sturdy root vegetables like potatoes, carrots, turnips or beets
- Small cookie cutters, metal are best
- Sharp kitchen knife
- Tempera paint or ink
- Blank paper, cards, butcher paper, wrapping paper or cloth

Instructions:

1. Cut vegetables in half.
2. Press cookie cutters into the center of the root.
3. Use a knife to cut around the edge of the cookie cutter.
4. Slide off the ring of vegetable you've just cut.
5. Remove cookie cutter. You should now have your stamp shape.
4. Dip the vegetable in paint or ink and press to the paper product.

Fun fact: Beet stamps can be used for a while using their own juice as the dye.

2. Guessing game:

- Bring samples or pictures of common herbs.
- Ask the group to identify the herb and list possible uses
- *Be sure to remind the group that plants can be toxic and medical treatments should always be done under the guidance of a healthcare professional.*

List of common herbs <https://web.extension.illinois.edu/herbs/directory.cfm>

Sources

USDA Culturally Significant Plants https://efotg.sc.egov.usda.gov/references/public/va/NRCS_CulturallySignificantPlants_2010.pdf

Plants for a Future Other Uses: <https://pfaf.org/user/otheruses.aspx>

NIH National Center for Complementary and Integrative Health: Herbs at a Glance: <https://www.nccih.nih.gov/health/herbsataglance>

Cleveland Clinic 11 Essential Oils: Their Benefits and How to Use Them: <https://health.clevelandclinic.org/essential-oils-101-do-they-work-how-do-you-use-them/amp>

University of Minnesota Are Essential Oils Safe? <https://www.takingcharge.csh.umn.edu/are-essential-oils-safe#:~:text=In%20general%2C%20however%2C%20essential%20oils,15%20minutes%20in%20an%20hour>

NIH National Center for Complementary and Integrative Health: Herbs at a Glance: <https://www.nccih.nih.gov/health/herbsataglance>

Page 2 Vanilla Grass (Sweetgrass, Holy Grass) Photo: https://www.flickr.com/photos/plant_diversity/35842630483