

Classroom Bites

# Herbs



Oregano



Chives



Basil



Cilantro

## Did You Know

- Herbs are often defined as the leaves and flowers of plants that are used for flavor, fragrance, or medicine.
- The part of the plant used defines it as an herb or a spice. For example, when using the green leaves of the plant *Coriandrum sativum*, it is the herb cilantro, and when using the seeds, it is the spice coriander.
- Although herbs are not a large part of Montana’s agricultural landscape, the number of Montana farms producing herbs has increased substantially over the last 10 years.
- Wild mint and beebalm (wild bergamot) are herbs native to Montana. Traditionally, mint tea was so commonly drunk amongst Apsaalooke (Crow) people, that one of the Apsaalooke words for “mint” is the same as the word for “tea.” Mint tea was also brewed by Chipewa-Cree people to treat colds, headaches, coughs,

and fevers. Sélish (Salish), Ktunaxa (Kootenai), and Qaeisp’è (Pend d’Oreilles) tribes used beebalm for medicinal purposes, including to cure colds and treat mouth and throat infections.

## Selection

Select herbs that are free of disease, discoloration, or damage. Harvest or purchase only enough herbs for immediate use, unless planning to dry or freeze them.

## Storage

Gently wash and dry herbs after harvest or purchase. Trim the bases of the stems, place them in a jar with an inch of water, cover loosely with a plastic bag, then transfer to the refrigerator. Freeze or dry herbs that will not be used within a week after purchase.



| Herb                       | Bay Leaf  | Parsley   | Chives  | Dill   | Lavender  | Sage   | Tarragon  |
|----------------------------|---|---|---|--|---|--|---|
| Taste                      | Bitter, minty, pungent  | Bright, peppery   | Mild onion flavor   | Pungent, tangy   | Floral, minty   | Minty, slightly bitter, citrus   | Licorice, lemon flavor  |
| Plant Family (common name) | Lauraceae (laurel family)   | Apiaceae (carrot family)  | Amaryllidaceae (amaryllis family)   | Apiaceae (carrot family)   | Lamiaceae (mint family)   | Lamiaceae (mint family)  | Asteraceae (daisy family)   |
| Fun Facts                  | In ancient Greece, famous athletes and artists were crowned with wreaths of bay leaves. | There are two main types of parsley: curly and flat leaf (Italian). | Wild chives are native to Montana and can be found growing wildly in the western region of the state. | Both the leaves and seeds of dill plants are used, and their flavors differ substantially. | In 77 A.D. Romans documented the use of lavender to repel insects and treat insect bites. | Sage is of the genus <i>Salvia</i> . <i>Salvia</i> is derived from <i>salvus</i> , which means healthy in Latin. | Tarragon’s root system resembles coiled snakes, making medieval healers falsely believe it was a cure for snakebites. |
| Native Region              | Mediterranean   | Southern Europe   | Europe, Northern Asia, North America  | Mediterranean, Western Asia  | Mediterranean   | Mediterranean  | Central Asia, Siberia   |

## Cooking

**Garnish.** Use whole leaves or chop them into smaller sizes, and sprinkle onto any dish for added flavor and color.

**Dressings.** There are many herbs that can enhance the flavor of homemade dressings. A cilantro lime dressing is perfect for topping Mexican-inspired dishes, while a lemon dill dressing pairs well with Mediterranean dishes.

**Oils.** Herb-infused oils can be a very flavorful addition to bread and pasta, however, it's important to follow food safety guidelines when infusing oil at home. For directions and safety recommendations visit <https://www.extension.uidaho.edu/publishing/pdf/PNW/PNW664.pdf>.

**Cook.** Delicate herbs, such as basil, chives, cilantro, dill, mint, marjoram, and sage should be added to hot dishes towards the end of cooking to preserve flavor. While less delicate herbs, like thyme, rosemary, and oregano are added much earlier in the cooking process. Bay leaves and sprigs of less delicate herbs can be added to stews, soups, and sauces while they are simmering, and removed before serving.

**Bake.** Chives, parsley, rosemary, and oregano are a few examples of herbs that are popular additions to baked goods. They can be mixed into dough before baking.

**Freeze.** Herbs should be frozen at their peak freshness and are best used within 3-6 months.

**Dry.** When harvesting from a garden or purchasing too much at the market, drying herbs is an effective way to reduce food waste while continuing to add flavor to your meals in the colder months. A simple method is air-drying. After cleaning the herbs, hang them in small bunches in a warm, dark, well-ventilated area until the leaves are crispy. A dehydrator may also be used. Store dried herbs in airtight containers away from heat and sunlight. Use within a year for the best flavor.

**Substitute.** It is important to note that the general rule when substituting fresh for dried herbs is about 3 to 1. For example, use 1 Tbsp of dried sage for every 3 Tbsp of fresh sage.

## Book Nook

*Rooftop Garden*, by Danna Smith

*The Story of Food: An Illustrated History of Everything We Eat*, by DK

*The Spice Alphabet Book*, by Jerry Pallotta

*Herbs A to Z*, by The St. Louis Society

*A Kid's Herb Book*, by Lesley Tierra



## Nutrition Information

Although herbs are normally consumed in small quantities, adding herbs can provide many health benefits. Herbs contain vitamins, have anti-inflammatory properties, and are rich in antioxidants. Many herbs are a source of Vitamins C, K, and A, and numerous studies have shown positive health impacts of consuming certain herbs, such as lowering cholesterol and protecting against cancer. Herbs can also be used to enhance flavor without adding sugar, salt, or fat.

## Activities

### Tasty Testing

*National Agriculture in the Classroom*

### Grades

3-5

### Standards

#### Agricultural Literacy Outcomes

- Culture, Society, Economy & Geography
  - Provide examples of agricultural products available, but not produced in their local area and state (T5.3-5.e)
- Plants and Animals for Food, Fiber & Energy
  - Discuss similarities and differences in food, clothing and shelter, and fuel sources among world cultures (T2.3-5.a)

### Objectives

Students discover the geographic regions where basil, oregano, and cilantro have cultural significance, understand the role of evaporation in herb drying, and recognize the different properties of dried and fresh herbs.

### Materials

- *The Wonderful World of Herbs*, 1 per student
- *The Wonderful World of Herbs Answer Key*
- Ruler
- *Herb Observation Rubric*, 1 per student
- Dried herbs (oregano, cilantro, and basil)
- Fresh herbs (oregano, cilantro, and basil)
- Small sampling cups, 6 per student

## Directions

### Engage:

Begin by asking students

- Which herbs does your family cook with at home?
- What herbs are in foods you like?
- Record responses on chart paper. At this point, students may respond with herbs or spices. That's okay, accept all responses. Record responses in two columns, with spices on one side and herbs on the other. Do not label columns.
- After adequate time brainstorming, ask the students, "What heading would you place above these columns?" Explain the difference between herbs and spices. Herbs are typically leafy green or flowering plants, while spices are dried seed, bark, berries, or fruit and are often ground.
- Tell the students that today they will be exploring herbs around the world.

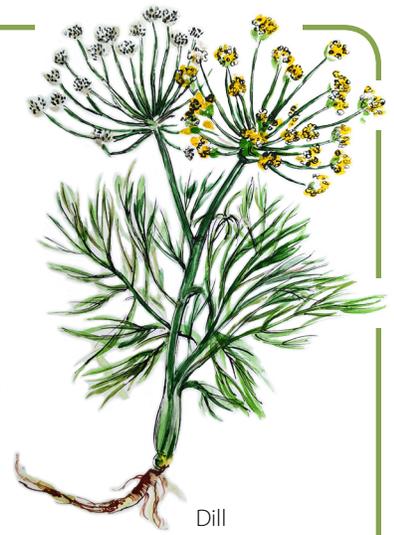
### Complete:

- Distribute *The Wonderful World of Herbs*. Students will read the text and answer the related questions. Allow the students 5-10 minutes to complete the fill-in-the-blank portion of the activity.
- Review answers and facilitate a related discussion.
- If necessary, demonstrate how to find coordinates on a map. As a class, identify the x-axis (the equator) and the y-axis (the prime meridian). Review the points of a compass and their related quadrants. Students will integrate the information from the text with the latitude and longitude coordinates to plot and label each location on the map. Allow 10-20 minutes to complete the activity.
- Have the students share the name of each country plotted on the map, popcorn-style. Remind the students that the use of plants as herbs has been important to all cultures since before history was recorded.
- Collect the handouts and assess for completeness and accuracy.

### Observe:

- To prepare for this activity, place a small sample of each dried herb and each fresh herb in six separate tasting cups. Label the fresh herbs with their common names. Label the dry herbs A (for cilantro), B (for oregano), and C (for basil). Prepare a set for each student (or pair of students).
- Explain to the students that they will use their senses to gather information about herbs. Describe how when you taste something, approximately 10,000 taste buds respond to the food stimuli by sending

messages to the brain. In addition, our olfactory system (our sense of smell) sends messages to the brain. These messages integrate to create our perception of flavor. Our taste experiences inform our behavior and are often stored as memories.



- Guide students to compare the fragrances of fresh and dried herbs. Instruct the students to match each fresh herb to the herb's dried version, using only their sense of smell. For example, instruct the students to smell fresh basil. Then, smell all three dried herbs and attempt to identify which is dried basil. Repeat this process for cilantro and oregano. Reveal the identity of the herbs (A: cilantro, B: oregano, C: basil). Direct the students to label their previously unknown samples correctly.
- Distribute the *Herb Observation Rubric*. Review the rubric with the class, emphasizing the importance of providing detailed and descriptive observations. They will taste each sample individually and record their observations in the appropriate cell. Have the students complete their rubric.
- After completing their observations, discuss:
  - Favorite or least favorite herbs of the six samples.
  - Similarities and differences between dry and fresh herbs.
  - Similarities and differences between different herbs.
  - Strength of flavor in dry and fresh herbs.

### Summarize:

After conducting these activities, review and summarize the following key concepts:

- Herbs are plants useful for culinary, cosmetic, industrial, medicinal, landscaping, decorative, and fragrance purposes.
- Herbs are different than spices. Herbs are typically leafy green or flowering plants, while spices are dried seed, bark, berries, or fruit and are often ground.
- Herbs are important to all cultures.

## Gardening

Herbs are a perfect addition to any Montana garden, as they can be grown in beds, containers, and even indoors. Most thrive with at least 6 hours of direct sunlight and well-drained soil, but their specific requirements will differ. Many hardy herbs can be planted several weeks before the last frost, while tender herbs should be planted outdoors only once the danger of frost has passed. In Montana, outdoor herbs are harvested between June and September. Take note of whether herbs are perennials or annuals. A perennial is a plant that lives more than two years, whereas an annual plant only lives one year. The local climate can impact whether a plant is a perennial or annual. For example, rosemary does not do well outdoors in cold winters, like in Montana. However, it thrives in warmer growing zones year-round and can become 4-6 feet tall.

## Recipes

### Melon Mint Salad

Source: John C. Stalker Institute ([johnstalkerinstitute.org](http://johnstalkerinstitute.org))

#### Servings

6

#### Ingredients

- 1 1/2 tsp Honey
- 1 1/2 tsp Lemon juice
- 1 lb Watermelon, *cubed*
- 1 lb Honeydew, *cubed*
- 1 lb Cantaloupe, *cubed*
- 2 Tbsp Fresh mint leaves, *chiffonade or minced*

#### Preparation

1. In a small bowl, combine honey and lemon juice. Stir well and set aside.
2. Wash the outside of each melon.
3. Cut away melon rinds and cut melon into 1 inch cubes.
4. In a large bowl, add melon cubes and combine. Pour honey and lemon mixture over melon and mix lightly to combine.



Mint

5. Sprinkle mint over melon mixture and mix lightly to combine.
6. Cover and refrigerate until ready to use or serve immediately.

### Nut Free Basil Spinach Pesto

Developed by: Anna Holloway

#### Servings

6

#### Ingredients

- 1 1/2 cups Fresh spinach, *packed*
- 3/4 cup Fresh basil leaves, *packed*
- 1 Garlic clove, *peeled*
- 1 Tbsp Lemon juice
- 2 Tbsp Parmesan cheese, *grated*
- 1/4 tsp Salt
- 1/4 tsp Ground black pepper
- 3 Tbsp Olive oil



Basil

#### Preparation

1. Place spinach, basil, garlic, lemon juice, parmesan, salt, and pepper in a blender or food processor.
2. Slowly pulse the blender or food processor while pouring in the olive oil.
3. Blend for 30 seconds or until smooth. Scrape sides of blender or food processor as needed.
4. Serve immediately with pasta, sandwiches, wraps, meats, pizza, etc.
5. Pesto can be stored in an airtight container in the refrigerator for up to 5 days or frozen.

## Dig Deeper

For sources and photo credits along with more recipes, lessons, quick activities, resources, and guides, visit: [mtharvestofthemoth.org](http://mtharvestofthemoth.org).



Sage

## 4 Montana Harvest of the Month: Herbs



The Montana Harvest of the Month program showcases Montana grown foods in Montana communities. This program is a collaboration between Montana Farm to School, Office of Public Instruction, Montana Team Nutrition Program, National Center for Appropriate Technology, Montana State University Extension, Gallatin Valley Farm to School, FoodCorps Montana, Montana Organic Association, and Montana Department of Agriculture. More information and resources are available at: [mtharvestofthemoth.org](http://mtharvestofthemoth.org).

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