



..... THIS MONTH
WE'RE HARVESTING

Herbs!

In This Issue



AND MORE!



FEBRUARY

NEWSLETTER

Farmer Spotlight

BAI THAO - BAI THAO FARM
SANGER, CA

Bai Thao has been interested in farming since birth. "I was born in Laos, but I grew up here. My grandparents farmed, my parents farmed, and now I farm. It's part of our family history," Thao explained.

In 1989, Thao and her family immigrated to the U.S. from Thailand, and she has spent much of her life in California. For the past ten years, Thao has been growing herbs and vegetables on her 40-acre farm in Sanger. She grows a variety of culinary herbs including lemongrass, cilantro, Thai basil, mint, and dill.

In February, tractors begin preparing the ground for an early spring planting. Typically, tractors are used to disc the fields, make the beds, and install the drip tape. "Drip irrigation allows us to use less water, and to have better control over how we apply water. We save water and time," Thao said. Planting begins once frost is no longer a risk, usually in late February or early March. Thao and her crew plant seeds by hand on the prepared beds. "Most herbs don't like



extreme temperatures. Frost will damage the plants, and the Central Valley's high temperatures will cause plants to produce flowers prematurely, so our herbs are planted twice each year—in the spring and fall," Thao explained.

When the herbs are ready for harvest, Thao will call local buyers and see what they need. "We harvest everything to order—exactly what our buyers need. They place an order, and we go into the fields and cut it," Thao explained. The harvesting crew uses scissors to cut the stems, which are sold in bunches or by the box, depending on the order. Herbs are highly perishable, so they are kept in a shady location in the field and transported to the buyer the same day.

Thao sells her herbs to several grower-shippers in the Central Valley. Upon arrival at the packinghouse, fresh market herbs are cooled, sorted, and packaged. Often, the buyers will package the herbs under a specific label and distribute them to retail locations. One of Thao's top-selling herbs, mint, is purchased by consumers for use in a variety of dishes, including salads, drinks, and sauces.

FOOD for FUEL



Dried herbs offer a concentrated flavor and are typically used in small amounts as seasoning. When eaten fresh, herbs have a more mild flavor and can be eaten in larger amounts, similar to leafy greens.

HERE ARE SOME OF THE HEALTH BENEFITS OF
INCLUDING FRESH HERBS IN YOUR DIET:

Healthy BONES & BLOOD

Basil is a significant source of vitamin K which helps make various proteins that are needed for blood clotting and the building of bones.

Happy GUT

Used for centuries to treat digestive issues like gas, bloating, and indigestion, the menthol found in mint has a relaxing effect on gastrointestinal tissue.

Quick RECOVERY

Packed with antioxidants, cilantro is a good source of vitamins A, C, K, and E, and may help fight infections and reduce inflammation.



HERB BUTTER IN A JAR



It is easy to make delicious herb butter within minutes with this classroom-friendly recipe! All you need is some heavy cream, herbs of your choice, and strong muscles for shaking everything up. Students will observe the physical changes that occur from shaking the jar, which separates the solid fat molecules from the liquid. With the addition of herbs, this recipe makes a yummy spread for your favorite whole grain bread.

Ingredients:

- Heavy whipping cream, at room temperature
- Variety of fresh herbs
- Whole grain bread

Tools: Cutting board, chef's knife, jar with leak-proof lid, plastic knife

Photo and activity adapted from deliciousmeetshealthy.com

Directions:

1. Wash your produce under running water. Pat dry with paper towels. Prepare the herbs by removing and finely chopping the leaves.
2. Fill the leak-proof container approximately half-full with heavy whipping cream. Add a half-teaspoon of fresh herbs of your choice.
3. Close the container tightly. Shake the container vigorously. The liquid will begin to thicken. Keep shaking until you see the liquid separate from the solid, approximately ten minutes.
4. Drain and discard the liquid.
5. Spread butter over a slice of whole grain bread and enjoy.

★ CLASSROOM Connection ★ Tasty Testing

The use of plants as herbs has been important to all cultures since long before history was recorded. Remarkably, they are even more widely used today—for culinary, industrial, medicinal, landscaping, decorative, and fragrance purposes. In this lesson, students will conduct their own research to learn more about herbs and how they can be used for our benefit.

Objectives

In this lesson, students will use their five senses to recognize the different properties of fresh and dried herbs.

California Standards: NGSS: 2-PS1-1, MS-LS-1.8

Materials: Dried herbs: oregano, cilantro, and basil; fresh herbs: oregano, cilantro, and basil; small sampling cups (six per student), and student worksheet (page 3).

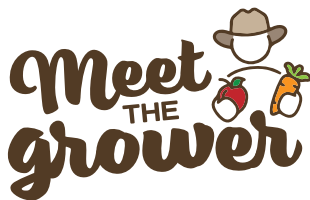
Procedure:

1. 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).
2. Read the mini book, *The Wonderful World of Herbs*. Explain to students that they will use their senses to gather information about herbs.
3. Describe how when you taste something, approximately 10,000 taste buds respond to the food stimuli by sending messages to the brain. These messages integrate to create our perception of flavor. Distribute the prepared herbs.
4. Invite students to compare the fragrances of fresh and dried herbs. Challenge students to match the fresh herb to the herb's dried version, using only their sense of smell. Reveal the identity of the herbs (A: cilantro, B: oregano, C: basil). Direct students to label their samples.
5. Distribute the student worksheet. Students will taste each sample and record their observations in the appropriate cells. Have students complete their worksheet.
6. After completing their observations, discuss:
 - Favorite or least favorite herb.
 - Similarities and differences between fresh and dried herbs.
 - Similarities and differences between different herbs.

Tasty Testing

Use your senses to recognize the different properties of fresh and dried herbs.
Record your observations in the table below.

	BASIL		OREGANO		CILANTRO	
	FRESH	DRIED	FRESH	DRIED	FRESH	DRIED
SKETCH What does the sample look like?						
COLOR What is the specific color?						
TEXTURE What does it feel like?						
TASTE What adjective describes the taste?						
FLAVOR How strong is the flavor on a scale from 1-10? 1 is weak, 10 is strong						



SubHerb Farms is a producer of fresh frozen culinary herbs which they supply to major restaurant chains and grocery stores. In this video, viewers will meet Mathew Ortiz, SubHerb's lead agronomist. Ortiz shares about some of their most popular herbs—basil, rosemary, and cilantro—and his passion for helping growers produce flavorful ingredients for companies like Starbucks and Panera Bread.



SCAN ME

DIG DEEPER

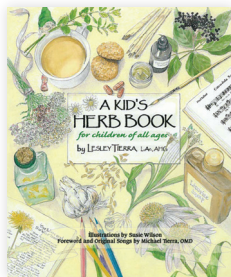
These books, websites, and other resources will help you and your students learn more about herbs.

BOOKS

A Kid's Herb Book

by Lesley Tierra

This book is packed with 264 pages of illustrations, facts and lore, coloring pages, songs, stories, projects, activities, recipes, and much more. Readers will learn all about the cultivation and uses of herbs.



A Kid's Guide to How Herbs Grow

by Patricia Ayers

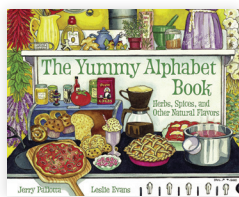
Readers will learn all about the various uses of herbs as condiments, seasonings, and medicines. This book provides an introduction to how herbs grow and shares tips for planting an herb garden.



The Yummy Alphabet Book

written by Jerry Pallotta and illustrated by Leslie Evans

With this book, readers embark on an in-depth (and alphabetical) exploration of culinary herbs, spices, and natural flavors from around the world.



WEBSITES

learnaboutag.org

The California Foundation for Agriculture in the Classroom provides free resources to teachers. The resources highlight many of California's 400 agricultural commodities, including herbs.

herbsociety.org

For almost 100 years, the Herb Society of America has provided information and resources about the cultivation, use, and delight of herbs. Their website includes resources for kids, including activities, experiments, and book recommendations.

RESOURCES

Lesson Plan: Tasty Testing (Grades 3-5)

By California Foundation for Agriculture in the Classroom

In this science investigation, students investigate the functions of roots, recognize the difference between a tap and fibrous root system, and identify the roots of some plants as edible.

Project Based Learning: Water Ops for Growing (Grades 6-8)

By College and Career Awareness Team at Utah State University

In this technology-rich unit, students practice engineering skills as they design and build a smart watering system for a small herb garden.

Lesson Plan: Herbs and Spices of the World (Grades 9-12)

By National Center for Agricultural Literacy and Florida Agriculture in the Classroom

In this lesson students will recognize the difference between a spice and herb, learn how herbs and spices are grown on farms around the world, and participate in a culinary challenge to season popcorn for various cultural cuisines.

