



..... THIS MONTH
WE'RE HARVESTING

Herbs!

In This Issue



AND MORE!

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.



FLORAL FOCACCIA



Easy to grow herbs are a flavorful addition to any backyard garden, but not everyone has the time or resources to grow their own food. In this activity, students will use fresh herbs and vegetables to create their own edible gardenscape on delicious Italian focaccia bread. Students will need access to an oven and help from a grown-up for this activity.

Ingredients:

- One envelope active dry yeast
- 1 tbsp honey
- 2½ cups lukewarm water
- 5 cups all-purpose flour
- 1 tbsp kosher salt
- 6 tbsp extra virgin olive oil, divided
- Assorted herbs and vegetables

(Photo and activity adapted from theproducemoms.com)

Directions:

1. In a medium-sized bowl, whisk together the yeast, honey, and warm water. Add in flour and salt and mix with a rubber spatula until a rough dough forms.
2. Pour 4 tablespoons of olive oil into a large mixing bowl. Transfer the dough into the large mixing bowl and turn to coat in the olive oil. Cover the bowl with plastic wrap and chill in the refrigerator for 8 hours, or up to one day. The dough will double in size.
3. Coat your baking sheet(s) with butter.
4. While the dough is still in the bowl, use forks to lift one side of the dough and fold it towards the middle. Gently press down. Turn the bowl a 1/4 turn and repeat this step three times. This should deflate the dough and form it into a ball.
5. Pour any excess oil from the bowl onto the baking sheet(s). Transfer the dough. Let the dough rise uncovered in a warm spot until it doubles in size, about 2 hours.
6. Place the oven rack in the middle of the oven and preheat to 450 degrees.
7. Gently stretch the dough to cover the baking sheet. The dough should be about an inch thick.
8. Dimple the dough all over by firmly pressing your fingers into it. Brush with remaining olive oil and sprinkle with kosher salt.
9. Wash produce under running water and gently pat dry with a towel. Decorate the bread with assorted herbs and vegetables to create a gardenscape.
10. Bake for 20-30 minutes or until the bread is golden brown all over. Remove and brush with more olive oil or melted butter.

CLASSROOM Connection

Digging Deeper with Herbs

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

Students will understand the difference between an herb and a spice. They will choose three different herbs and investigate the herbs' origins, characteristics, and common uses. Students will record their findings and present them to the class.

Standards: CC ELA: W.3.7, W.3.8, W.4.7, W.4.8, W.4.9, W.5.7, W.5.8, W.5.9, W.6.7, W.6.8, W.6.9, W.7.9, W.8.9

Materials: A common herb in fresh and dried forms; jars of easily recognizable herbs and spices; internet access; student worksheet (page 3).

Procedure:

1. Show students a common herb in fresh and dried form. Invite students to share how the two examples are similar and different. Explain to students that although they might look different, all herbs are plants that have culinary (cooking), medicinal, and/or aromatic uses.
2. Explain that all herbs originate from plants, but so do spices. Both are typically used as seasonings. So, what's the difference? Spices typically come from the bark, buds, fruit, roots, seeds, or stems of plants and trees; while herbs are the more gently fragrant leaves of plants.
3. Show students a variety of herbs and spices (a document projector can magnify them for the class) and have students determine if each is an herb or a spice. Herbs such as parsley, bay leaves, oregano, summer savory, thyme, sage, basil, and marjoram are all leaves. Spices may include cinnamon (bark), anise (seed), ginger (root), allspice (fruit/berry), coriander (seed), and peppercorn (fruit/berry).
4. Explain that students will use the internet to learn more about herbs. They will choose their own herbs, but should choose with caution—spices will not be included in this activity.
5. Distribute the graphic organizer worksheet to the class. Walk through the worksheet with the given example, and help students identify credible online sources. Assist students with accessing the internet. Challenge students in grade four and above to provide basic bibliographic information for sources.
6. At the end of their research time, students will select one herb and share what they learned with the class. Depending on time and resources available, students may choose to present their findings with a one-page infographic, digital presentation (such as Prezi or PowerPoint), video presentation (such as Flipgrid), or a written brochure.

Digging Deeper with Herbs

Herbs have a wide variety of uses. Research the origin, characteristics, and common uses of three herbs of your choice. Once you finish your research, you will choose one herb and present your findings to the class.

Herb	Origin	Characteristics	Common Uses
Marjoram	The Mediterranean, North Africa, and Western Asia	Bright green leaves are smooth and oval. Taste is mild and described as "fresh" and "citrusy."	Used to garnish salads, soups, and meat dishes. With anti-inflammatory and antimicrobial properties, marjoram is used to treat a variety of ailments, including infections.
1. _____			
2. _____			
3. _____			

Sources: _____

Did you know?



The British pronunciation is "herbs" with an audible "h" while American pronunciation is "erbs" with a silent "h."

virtual



In this video, the Unruh family introduces viewers to their unique method of growing herbs. Located in Iowa, Rolling Hills Greenhouse grows herbs year-round (even when there's snow on the ground!) thanks to a soil-free farming practice called hydroponics.



SCAN ME

DIG DEEPER

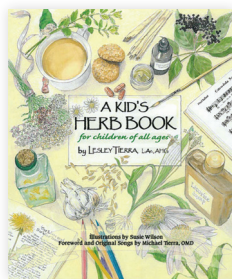
These books, websites, and other resources will help you and your students learn more about herbs.

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

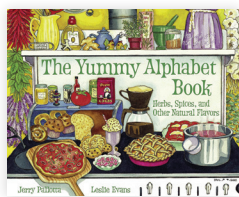


Readers will learn all about the various uses of herbs as condiments, seasonings, and medicines. This book provides an introduction to how herbs grow and shares tips for planting an herb garden.

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.

