



LATE SUMMER-FALL



WINTER



SPRING-EARLY SUMMER



Seasonal Recipes, Activities & Farm Profiles

*Kids Cook Farm-Fresh Food*

That Teach Ecological Responsibility



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# A Message from the State Superintendent of Public Instruction

During my tenure as State Superintendent of Public Instruction, I have been a strong advocate of a garden in every school. More than 3,000 schools have responded to this call, either to improve child nutrition or, simply, to provide a fun, hands-on learning experience for their students. Increasingly, these schools are linking the gardens to curriculum to teach content standards. Some teachers have even developed entire experiential learning cycles from planting seeds to placing food on the table.

Cooking in the classroom is an important part of that cycle. *Kids Cook Farm-Fresh Food* is an activities guide for students in grades two through seven that links local agriculture to the pleasures of dining. This guide is designed to introduce students and teachers to fresh, seasonal, locally grown produce. The guide links food and nutrition to the concept of organic and sustainable agriculture, which is a commitment to growing and distributing food in an environmentally sound, economically viable, and socially just manner.

California agriculture is large, diverse, complex, and dynamic. The aim in focusing on sustainable and organic agricultural practices in this document is to introduce students to a type of agricultural production most similar to the experience they may have in their school gardens. Students should be familiar with all forms of California agriculture, and the California Department of Education will be publishing a curriculum guide on agricultural literacy and awareness.

In many parts of California, students have the opportunity to visit local farms. The farm profiles in *Kids Cook Farm-Fresh Food* provide a personal look at some of California's family farmers. The guide helps students to develop a deeper understanding of where food comes from,

the role land plays in supporting all life, and how farmers bring life from the land.

Among the states, California is unique in the breadth of farm commodities it produces. The foods used in the following recipes represent the bounty of the California harvest available during the year. Through the recipes, the students will also recognize that food is a language that expresses cultural diversity.

The recipes are based on the belief that children can appreciate a variety of complex tastes and textures and that children will enjoy learning from the art of cooking. It is my hope that school food service programs will receive the support necessary to serve more fresh California agricultural commodities year-round. Students will then understand the connection of food from seed to the table, of this activity guide to the cafeteria, and of California agriculture to healthy nutrition.

This activity guide supports the academic content standards by subject and grade level, so it includes a matrix outlining this relationship. Above all, the guide links standards to the real world through gardens, recycling, nutrition, cooking, and the environment.

Please join me in preparing some of these recipes. I am an avid gardener and cook and have learned many lessons from my garden and from cooking for friends and eating around the table with them. I commend this book to teachers, classroom volunteers, and students throughout California.



DELAINE EASTIN  
State Superintendent of Public Instruction



# Acknowledgments

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Many people assisted in the development of this publication. Key roles were played by the following persons: editor and contributor Leslie Comnes, designer Noreen Rei Fukumori, associate coordinator Carly Strouse, lead recipe developer Kelsie Kerr, and photographers Karen Preuss, Kate Kline May, and Sibella Kraus. Significant roles were also played by contributors Karola Saekel, Elizabeth Meyers, Laurel Miller, and Anna Jennings; curriculum reviewers Ellyn Hament, Lori Mann, and Martha Salzman; sustainable agriculture activity adviser Alan Tangren; and the many farmers who were interviewed for farm profiles. Although circumstances on some farms have changed, those profiles represent accurate snapshots into the lives of family farmers at the time the profiles were written.

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I deeply appreciate the contributions that many talented and dedicated people made to the production and revision of *Kids Cook Farm-Fresh Food*. Any mistakes that remain are my own. I am especially grateful to Ann Evans for her belief in this project and her patience, skill, and spirit that guided it to completion.

*Sibella Kraus*



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# California Agriculture

## Diverse and Sustainable

*Kids Cook Farm-Fresh Food* is an introduction to California's diverse farm-fresh produce, explaining how farmers grow it in ways similar to the students' own gardens at school. The hope is that learning how to cook the produce and discovering the delicious flavors of the colorful fresh fruits and vegetables will provide students an incentive for lifelong, healthful eating habits and an interest in the working landscape of California.

Ask typical third-graders where their food comes from, and they are likely to say, "the market." Yet, if pressed for more detail about how it gets to the market, they probably do not have a clear answer. In this busy, technologically advanced world, people rely on many modern conveniences for shopping and eating to save time. However, such conveniences as supermarkets and fast-food restaurants may disconnect people from the original source of food: the farms.

In the past people were aware of the important role farming played in their lives. Many people worked on farms or lived in farming communities. Fresh fruits, vegetables, dairy products, and meats were bought directly from nearby producers. Farms provided healthful, open spaces around cities. Today, however, most people live in urban areas. Although California still has bountiful agriculture, fewer and fewer of its residents are aware of the impact farming has on their lives.

Children, especially, have lost touch with how and where food is grown. They lack an understanding of the ecosystems, the land, the people, and even the plants that produce their food.

The story of where food comes from can quickly turn into a world geography lesson. It is the tale of California's diverse and beautiful working landscape and the creative, entrepreneurial people who cultivate the countryside. Specifically, this guide introduces readers to a lesser-known but growing niche of California's vast agricultural productivity, that of organic and sustainable agriculture. Agriculture is an important part of the state's economy and environment. The state's natural resources and human resources are diverse, with a great capacity for food production.

*Organic* refers to a particular method used to produce food and fiber. Organic farming systems do not use chemical pesticides or fertilizers. Instead, the systems are based on the development of biological diversity and the maintenance and replenishment of soil fertility. Organic farmers' primary strategy in controlling pests and diseases is prevention.

Organic farmers also rely on a diverse population of soil organisms, insects, birds, and other organisms to keep pest problems in check. When pest populations get out of balance, growers implement various strategies, such as the use of insect predators, mating disruption, traps, and barriers. As a last resort, botanical or other non-toxic pesticides may be applied under restricted conditions. Weeds are controlled through increased cultivation as well as through cover crops, mulches, controlled burns, crop rotation, and similar management methods.

### **A Growing Market**

In 2002 approximately 2,300 California growers were registered with the California Department



of Food and Agriculture as practicing organic agriculture. In California 79,000 acres of cropland are in organic food production, representing \$247 million in gross sales.

Approximately 1 percent of the U.S. food supply is grown by using organic methods. In 2000 this amount represented more than \$3.5 billion in retail sales. Over the past six years, sales of organic products have shown an annual increase of at least 20 percent. Of a total \$400 billion in food sales to Americans, organic food sales count for \$7.7 billion, the fastest-growing category in the supermarket.

Until recently California and a number of other states regulated the term *organic* by state law. The U.S. Department of Agriculture (USDA) now regulates the term *organic* for all states through a mandatory certification process. This means that farms may claim to be organic only if they follow particular farming practices and standards.

*Certified organic* refers to agricultural products that have been grown and processed according to strict uniform standards, verified annually by independent state or private organizations. Certification includes inspection of farm fields and processing facilities. Farm practices inspected include long-term soil management, buffering between organic farms and neighboring conventional farms, product labeling, and recordkeeping. Processing inspections include review of the facility's cleaning and pest control methods, ingredient transportation and storage, recordkeeping, and audit control.

**Sustainable Agriculture**

One definition of sustainable agriculture is found in federal legislation that authorized the national Sustainable Agriculture Research and Education Program. It defines sustainable agriculture:

An integrated system of plant and animal production practices having a site specific application that will, over the long term:

- Satisfy human food and fiber needs;
- Enhance environmental quality and the natural resource base upon which the agricultural economy depends;
- Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
- Sustain the economic viability of farm operations; and
- Enhance the quality of life for farmers and society as a whole.

**Agricultural Production**

Almost one-third of the land in California is devoted to agriculture. For example, California encompasses almost 100 million acres of land, and about 28 million acres are used for agriculture. About half of this total is pasture and rangeland, another 39 percent is cropland, and the remainder is divided between woodland and other land.

California produces a breadth of farm commodities, including animals and animal products, fruit and tree nuts, vegetables, field crops, and nursery and floriculture products. Dairy products, such as milk and cheese, are the top commodities in California.



Although this guide tells the stories of those who operate smaller-scale farms oriented toward local and state markets, many export-oriented agricultural producers are a part of a global food system. Between 16 and 19 percent of California’s agricultural production is exported to international markets annually, primarily to east Asia, Canada, and the European Union. The agricultural sector also affects the state and local economies by providing 7.4 percent of the state’s jobs.

### **Diversity**

Perhaps the most distinguishing feature of California agriculture is its diversity—diversity of farms, farmers, and crops. About 97 percent of California’s 74,126 farms are family- or individually operated. Although the “average” California farm operates on 374 acres, most of the state’s farms are much smaller in terms of acreage and sales. Large farms (\$1 million in gross income) still account for most of the total acreage and sales.

The number of women reported as farm operators almost doubled between 1978 (7.6 percent) and 1997 (13.6 percent). California also has a greater share of farm operators with ethnic

origins compared with the United States average—Hispanic (6 percent) and Asian or Pacific Islander (4.5 percent.)

Almost half of the state’s farm operators do not consider farming their principal occupation, and many spend more days employed off the farm than on it. Nevertheless, those men and women provide hope and inspiration for future generations to find a way to work and preserve a productive and healthy landscape in California.

### **Foodshed**

Just as a watershed refers to a specific geographic area, a *foodshed* refers to a farming region around a metropolitan area that produces and distributes food for the surrounding population. Though agricultural products are marketed throughout California, the nation, and around the world, some farmers produce for the local market—their foodshed.

Eating seasonal foods from the foodshed often gives people a greater understanding of the natural and human resources nearby and inspires an interest in supporting their own health and well-being.

# Nutrition Information About Fruits and Vegetables

All fruits and vegetables have nutrients and other protective factors required for lifelong good health. Fruits and vegetables provide carbohydrates that are necessary for energy; dietary fiber that helps maintain a healthy digestive tract and balance blood sugar levels; and an array of vitamins and minerals, such as folate, vitamins A and C, and potassium, that are necessary to maintain good health and to prevent diseases.

Many great-tasting fruits and vegetables are low in calories and are filled with nutrients that help reduce the risk of cancer, heart disease, diabetes, obesity, and some types of blindness. Research shows that eating five or more servings of fruits and vegetables every day reduces the risk of contracting these diseases.

Several plant families contain phytochemicals, natural plant substances that work with nutrients and dietary fiber to protect the body against disease. Some of the fruits and vegetables containing these naturally occurring phytochemicals are highlighted in this publication. Examples are as follows:

Tomatoes contain phytochemicals that may prevent carcinogens from forming, shield cells from carcinogens, or neutralize cancer-causing free radicals. Eating tomatoes may reduce the risk of prostate cancer and heart attack.

Naturally occurring phytochemicals that may help protect the body against cancer, fatty plaque in the arteries, dangerous blood clotting, and loss of eyesight are found in sweet potatoes, persimmons, citrus fruit, carrots and other orange and deep-yellow produce, and dark, leafy salad greens.

Cooking greens, such as kale, bok choy, collards, turnip and mustard greens, kohlrabi, and watercress, as well as broccoli, cauliflower, and Brussels sprouts, contain naturally occurring phytochemicals that may help protect the body's DNA, lower the risk of hormone-related cancers, and boost the body's ability to fight cancer.

Strawberries and other berries contain natural phytochemicals that may aid the immune system and help lower blood cholesterol.

A food serving that contains 20 percent or more of the U.S. Department of Agriculture recommended daily value (DV) for a particular nutrient is considered a high source of that nutrient. A serving containing 10 to 19 percent of the recommended DV is considered a good source.

Additional information on these and other fruits and vegetables is provided throughout this publication.

Source: *Why Eat More Fruits and Vegetables?* Sacramento: California Department of Health Services, 1999 (brochure).



# How the Guide Works

The intent of this activity guide is to introduce children—through direct experience—to the pleasures of fresh, seasonal, locally grown produce. By exploring local produce and by cooking seasonal foods in class, students learn about the ecological, economical, and social benefits of sustainable agriculture and the diverse farm-fresh produce available in California.

The guide contains ideas for activities, recipes, profiles of farmers practicing sustainable agriculture, and correlations to academic standards. Growing food and eating are central human experiences through which many aspects of life may be revealed and examined. The guide helps schoolchildren understand the connections between their own health, healthful food, and a thriving regional, sustainable agriculture.

## Organization

The guide is designed to connect schoolchildren to the foods they eat and includes crops that are harvested in each season. It is organized in three modules: Late Summer–Fall, Winter, and Spring–Early Summer. In this way students can prepare recipes using crops that are at their peak and taste their very best. The Late Summer–Fall module features six crops that are typically harvested in late summer and autumn. The Winter module highlights six winter crops, and the Spring–Early Summer module details six spring and early summer crops. Because of California’s moderate climate, some of the featured crops have extended growing seasons for many months of the year. In addition to information about that season’s featured crops and recipes that use them, each module contains activities that help to teach students about sustainable agriculture.

## Use by Teachers

The guide is also designed to allow teachers flexibility in using it within their curriculum. The activities may be used to teach about cooking and nutrition, sustainable agriculture, and environmental science or to supplement language arts or social science programs. Each chapter provides teachers with background information on a specific crop. The recipes and activities also include teacher instructions to help prepare and teach the lessons.

A typical way that teachers use this guide is to introduce a particular crop through a comparative tasting lesson. Teachers subsequently choose one recipe to make with the class, conduct the related activity, and read the farm profile either with or to students in class, depending on the grade level. Some teachers coordinate lessons from the guide with activities in the school garden. All the components work together to help students explore key concepts about nutrition, cooking, and sustainable agriculture.

The guide suggests using journals to assess student learning. It includes prompts throughout for students to record evidence of their understanding through drawings, diagrams, and writing (see “Use of Student Journals to Assess Learning”). It also suggests opportunities for students to share their findings with the class through class discussions, presentations, and projects.

The suggested extension ideas and resources listed in the appendixes offer opportunities to continue investigations. Contact information is provided for teachers who want to plan field trips to farms, farmers markets, or school gardens. Parent and teacher associations are good sources of information about funding for field trips, equipment, and food for the recipes. A glossary contains definitions of terms used in cooking.

# Suggestions for Success



No one knows students' capabilities better than the teacher. Use your judgment in choosing lesson plans, adapting them to an individual class and grade level, and implementing the following suggestions for success.

## Cooking with Kids

Cooking is an activity that requires close supervision and careful planning. For this reason, 20 students is the maximum number recommended for a safe and quality cooking experience. If you have more than 20 students, plan a way to cook with half of the class at a time. While one-half cooks, the other half might read and discuss the farm profiles, do the related agriculture activity with a parent volunteer, or finish up math or other work.

Successfully cooking with kids also depends on you, the teacher, anticipating potentially dangerous situations and planning ahead. Choose recipes that are suitable for your students' skill level; each crop includes at least one easy recipe that requires minimal cutting and cooking and often includes one that is more advanced.

Try to get at least one and preferably two family volunteers to help with the cooking; those extra sets of hands, eyes, and ears will really help things go more smoothly. Follow the suggestions noted below to further ensure safety and success:

## Health and Safety

- Have all children wash their hands with soap and water before cooking. Discuss hand care, such as keeping hands away from mouth, nose, and hair while preparing ingredients or cooking.
- Clear off tables and clean them with soap and water before cooking.
- Supervise children carefully when using knives. Demonstrate how to keep fingers safe by making an "o" with the hand that is not cutting and placing it firmly on the food being cut.
- Students must agree to use knives properly. Knives with serrated blades with blunt and rounded tips (such as a dinner knife) are good choices.
- Demonstrate using and holding knives safely. Demonstrate the safe way of cutting a fruit or vegetable by holding it on a cutting board while cutting. Emphasize that students are to use knives only at the cutting board.
- Discuss with students proper behavior around hot plates, blenders, and ovens. Always have pot holders handy and show children how to use them to handle hot pans.
- Be aware of any food allergies the students may have.





### **Materials**

Prepare a bucket, box, or trash can for compost waste to place in the school compost, if available. Ask students to bring simple ingredients from home to save on cost and to enable students to feel good about contributing. To reduce disposable items such as paper plates and plastic utensils, many teachers ask students to bring in their own personal set of utensils and a small bowl or covered plastic container. Students may label and keep them in class for other cooking activities and snacks.

### **Setting Up a Demonstration Table**

Many of the recipes involve demonstrating how to prepare the produce or actually cooking the recipe. Set up a table for these demonstrations that includes all the materials you will need and that allows everyone to see what you are doing.

### **Observation**

- Ask students to use their five senses to observe each sample crop before cutting.
- Ask students to record in their journal their observations about the samples.
- Give students time to share their observations along with their predictions about how the sample will change when the recipe is ready to eat.

### **Working Together**

For preparing ingredients and cooking, groups of four students work best. Each pair of students within the group can work together to prepare the sample and discuss observations.

- Individual students should be responsible for recording observations in their own journals.
- You may offer opportunities for children to taste the recipe as it is made and suggest adjustments to seasonings.
- You may review social skills and table manners before the students begin eating.
- While eating, students can share observations and insights.

### **Cleanup**

- Each group is responsible for cleaning its table, cutting boards, knives, bowls, and utensils.
- Groups may take turns to clean class utensils, bowls, and pots.
- Leftovers may be saved for a snack, shared with another class, or taken home.
- If you have a school or classroom compost or worm bin, the cleanup should include composting of food scraps.

# Activity or Recipe Format

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Preparation Time:	Preparation time for recipe or activity. Does not include shopping time.
Cooking Time:	For recipes that require cooking, the time for cooking.
Total Lesson Time:	Time for entire lesson, including allowance for discussion, observation, and journal writing. If more time is needed, teachers may postpone the activity to another time or eliminate it.
Recipe Level:	Level of cooking skill required to make the recipe: Easy recipes require little, if any, cutting and cooking. Advanced recipes require more cutting or cooking.

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## **Background**

Basic information about the recipe or activity is provided.

## **Objectives**

The student outcomes that the lesson will address are presented.

## **Ingredients**

All the needed ingredients are presented for a class of 20 students to make the recipe and get a generous taste. Quantities and directions may be adjusted in accord with the size of your class and the students' abilities. Substitutions are suggested for ingredients that may not be available or ripe.

## **Materials**

*For the class:*

The needed materials and equipment are presented for a class of 20 students to perform the activity or make the recipe.

*For each group of 4:*

The needed items are presented for each group of four students to make the recipe or perform the activity.

## **Preparation**

The preliminary steps before the class starts the activity or recipe are presented.

## **Safety Precautions**

Safety precautions should be reviewed with the class. They are located in the subsection Health and Safety under "Suggestions for Success."

## **Doing the Activity or Making the Recipe**

Step-by-step instructions are presented for doing the activity or making the recipe with a group of 20 students. These are general guidelines. Teachers may deviate from them, depending on their teaching style, the class situation, or their learning objectives for the lesson. Experienced cooks often take this flexible approach as they adapt recipes for the best fresh ingredients available.



# Comparative Tasting Format

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Preparation Time:	20 minutes
Cooking Time:	None
Total Lesson Time:	45 minutes

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## **Introduction**

Explain that over the next period of time, the class is going to cook and eat fruits and vegetables that are grown locally. Before they begin, the students are going to do some thinking about food. Ask them why they eat. Acknowledge the many reasons but focus attention on the need for energy.

Explain that plants have an important and unique role in the earth's food web. Ask if anyone knows what that role is. Explain that plants make their own food. Plants capture energy from the sun, carbon from the air, and water from the ground and make their food. People and other animals cannot make their own food. They must eat plants or animals that eat plants to get energy.

Food is the vehicle for passing the sun's energy through the food web, and food is also the vehicle for cycling matter through the food web. Ask students to draw a picture of a plant, showing what the plant needs to make food.

Teachers can review photosynthesis, the carbon cycle, or the role of chloroplasts in cells, depending on the grade level.

## **Background**

This activity is designed to be a generic lesson plan for an introduction to any crop in the guide. In this activity, students have the opportunity to taste and compare the different varieties of a single crop. Most fruits and vegetables come in many varieties that offer different sizes, colors, textures, and tastes. Although a few varieties are available at the supermarket, additional varieties will be found on a trip to a farmers market. For the best results, choose crops when they are in peak season and find the freshest produce possible. If you shop at a farmers market, talk to the farmers; they can give you suggestions for the best-tasting choices and give you interesting background information to share with your students. Produce managers at the local supermarket are also knowledgeable about seasonal varieties.

As an introduction to a new fruit or vegetable, this activity allows students to practice observations using all their senses. Students will investigate the different varieties with their five senses while they prepare for and actually do the comparative tasting. It is also a good activity for building students' vocabulary.

## **Objectives**

*Students will be able to:*

Use their senses to observe different aspects of a variety of fruits or vegetables during a comparative tasting.

Record their observations in their journals using descriptive words and drawings.

**Materials***For the class:*

- 4 or 5 varieties of the crop, with 5 samples of each variety
- colander
- 20 toothpicks
- 2 or 3 kitchen towels

*For each group of 4:*

- 2 cutting boards
- 2 serrated knives with rounded tips
- 2 plates
- 4 napkins
- journals

**Preparation**

1. Wash the fruit or vegetables, and dry them in the colander.
2. Clean and set up tables.
3. Have students wash their hands. Discuss proper methods of handling food.

**Safety Precautions**

Review safety precautions for using knives (see the subsection Health and Safety under “Suggestions for Success”).

**Doing the Activity**

1. Announce to students that they will have an opportunity to use all five senses to examine the different varieties of the fruit or vegetable.
2. Show each variety to the class, explaining its name and where and when it is grown.
3. On the board, make a sample chart for recording observations using five senses for each variety. Have students copy the chart into their journals.
4. Explain that student groups will examine each variety and record their observations on the chart in their journals.
5. Provide each table with its materials and a sample of each variety. Students examine the varieties and record their observations. Ask students to share their observations with the class.
6. Have students cut each variety so that everyone in the group gets an equal share. Ask students to examine the cut fruits or vegetables and to record their observations.
7. Tell students they may now taste each variety, noting its taste, texture, and sound. They should record their observations in their journals.
8. After eating, lead a class discussion on the five senses and on each variety’s appearance, texture, taste, smell, and sound.
9. Clean up materials. If there is a school or classroom compost or worm bin, place food scraps there.

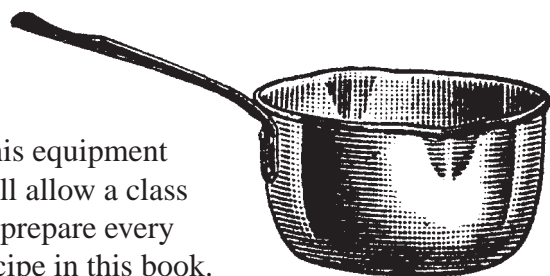


# Cooking Equipment

The recipes and activities in this guide may be prepared with everyday kitchen equipment and materials, much of which can be borrowed from home or from the school cafeteria. Try to choose sizes appropriate for a large family. Remember that 20 children is the maximum number of students that is recommended for a safe and quality cooking experience.

If you have the resources for a more permanent set-up, a rolling cart equipped with all the necessary cooking equipment can be a wonderful asset for the school. Properly cared for, it can be used by many classes over many years.

The following kitchen kit includes all the equipment and materials needed for a class of 20 students to perform all the recipes in this guide except those involving an oven. All equipment and materials listed are available at most large drugstores, department stores, or discount stores. The cost of the kit will depend on the quality of materials but may range from \$450 to \$700. Better-quality equipment will last longer and give more satisfactory results; it is often well worth the added expense. A portable convection oven will add about \$250 to the cost.



This equipment will allow a class to prepare every recipe in this book.

As all resourceful teachers and classroom volunteers know, a few pieces of equipment will suffice for many of the recipes. Equipment may be obtained through donations or at thrift stores. For assistance with funding, contact your school's parent-teacher association for information. See also Appendix B, "Farm to School Resources."

## Class Equipment

- 2 electric hot plates
- 2 large (12- to 14-inch) nonstick frying pans or skillets
- 1 blender
- Assorted sizes of pots with lids
- 1 steamer insert for saucepan
- 1 chef's knife
- 2 large wooden spoons
- 2 spatulas
- 1 set of tongs
- 3 whisks, assorted sizes
- 1 egg beater
- 3 mixing bowls, assorted sizes
- 1 colander
- 1 ladle
- 1 slotted spoon
- 1 potato masher
- 1 can opener
- 1 salad spinner
- 2 large plastic tubs
- 5 sponges with rough side
- 1 bottle of dishwashing liquid
- 4 kitchen towels
- 4 pot holders
- 2 baking sheets
- 2 large baking pans or dishes
- 2 canisters for salt and pepper
- 1 food mill
- 1 rolling cart
- 3 large plastic containers to store equipment
- first aid kit

## Additional Optional Equipment

- electric skillet
- food processor

## Student Equipment

- 10 small plastic cutting boards
- 10 serrated knives with rounded ends
- 5 vegetable peelers
- 5 sets of measuring spoons
- 5 sets of measuring cups
- 5 box graters
- 5 small citrus juicers
- 5 medium whisks
- 20 spoons
- 20 plastic bowls
- 20 plastic plates

# Use of Student Journals to Assess Learning

A student journal is an excellent means for assessing students' progress and understanding of the activities in this guide. Through a journal, students can organize their thinking, plan and reflect on their learning, and make connections to learning activities over time and across disciplines.

Journals can be open-ended and creative, with sketches, musings, and notes; or they can be more directed, with students writing on topics you assign. Consider the following tips for making the most of student journals:

- A three-ring binder filled with lined and unlined paper works best as a journal. Students can easily insert recipes, farm profiles, and activity sheets directly into this binder. Students may also make journals by stapling together a booklet of lined and unlined paper and then taping or gluing student pages and other information.
- Tell your students that many cooking and agricultural professionals use journals to take notes on experiments, record data they collect, or write down observations or new ideas they want to try.
- Note that the recipes and activities include prompts for students to record evidence of their understanding through drawings, diagrams, and writing. In addition, after reading the farm profiles, you may ask students to write a summary including the main ideas and several facts they found interesting. You

may also ask students to use their journals to record information about the recipes they try (for example, what did they like about the food or how would they improve the recipe next time) and the results of the activities.

- Have students choose pages from the journal that best demonstrate what they have learned. Ask them to create a table of contents that directs you to these samples. Schedule conference times to talk with students about their work.
- Use a rubric to assess students' learning as reflected in their journals. A rubric can help you assess the quality of student work by describing what high-, medium-, and low-level products should contain. You can use one like the sample below or develop one based on the specific learning outcomes you have in mind for your students.

## Sample Rubric for Student Journals

### Quality of Work

- 5—All components are complete and well organized.
- 4—All components are complete, and 75 percent of them are well organized.
- 3—Components are not complete; 50 percent of them are well organized.
- 2—Components are not complete; 25 percent of them are well organized.
- 1—Components are not complete; they show minimal organization.



# Correlation to California Content Standards

The learning activities in *Kids Cook Farm-Fresh Food* help to support each of the content standards noted in the table below in full or in part.\* Each standard is linked to one or two lessons. In many cases there are more lessons supporting a standard than those noted in the table. Although the correlation is not complete, the table shows many ways to use the readings, recipes, and activities to apply the standards.

Grade 2	Related English– Language Arts Content Standards	Related History– Social Science Content Standards	Related Mathematics Content Standards	Related Science Content Standards
	<p>Reading Comprehension 2.7: Interpret information from diagrams, charts, and graphs. <i>Activity: See Making Compost “Tea,” p. 78.</i></p> <p>Writing 2.1: Write brief narratives based on their experiences: a. Move through a logical sequence of events. <i>Activity: Use recipes and student journals to describe the experience, p. xxi.</i></p> <p>Listening and Speaking 1.4: Give and follow three- and four-step directions. <i>Activity: Use recipes.</i></p> <p>Listening and Speaking 1.5: Organize presentations to maintain a clear focus. <i>Activity: See Frozen, Canned, or Fresh: Which Do You Prefer? p. 88.</i></p>	<p>2.2.4 Compare and contrast basic land use in urban, suburban, and rural environments in California. <i>Activity: Read and discuss farm profiles.</i></p> <p>2.4.1: Describe food production and consumption long ago and today, including the roles of farmers, processors, distributors, weather, and land and water resources. <i>Activity: Read and discuss farm profiles.</i></p>	<p>Number Sense 4.1: Recognize, name, and compare unit fractions from <math>\frac{1}{12}</math> to <math>\frac{1}{2}</math>. <i>Activity: See recipes.</i></p> <p>Number Sense 4.2: Recognize fractions of a whole and parts of a group (e.g., one-fourth of a pie, two-thirds of 15 balls). <i>Activity: See recipes.</i></p> <p>Measurement and Geometry 1.1: Measure the length of objects by iterating (repeating) a nonstandard or standard unit. <i>Activity: See Pre-Sprouting and Sowing Carrots, p. 112.</i></p> <p>Statistics, Data Analysis, and Probability 1.1: Record numerical data in systematic ways, keeping track of what has been counted. <i>Activity: See Frozen, Canned, or Fresh: Which Do You Prefer? p. 88.</i></p> <p>Statistics, Data Analysis, and Probability 1.4: Ask and answer simple questions related to data representations. <i>Activity: See Frozen, Canned, or Fresh: Which Do You Prefer? p. 88.</i></p> <p>Mathematical Reasoning 1.0: Make decisions about how to set up a problem. <i>Activity: See Frozen, Canned, or Fresh: Which Do You Prefer? p. 88.</i></p>	<p>Life Sciences 2(a): Know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another. <i>Activities: See Seed Saving and Sowing, p. 22; Pre-Sprouting and Sowing Carrots, p. 112.</i></p> <p>Life Sciences 2(d): Know there is variation among individuals of one kind within a population. <i>Activity: See Pre-Sprouting and Sowing Carrots, p. 112.</i></p> <p>Life Sciences 2(f): Know flowers and fruits are associated with reproduction in plants. <i>Activity: See Seed Saving and Sowing, p. 22.</i></p> <p>Investigation and Experimentation 4(a): Make predictions based on observed patterns and not random guessing. <i>Activity: See Making Compost “Tea,” p. 78.</i></p> <p>Investigation and Experimentation 4(b): Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. <i>Activity: See Making Compost “Tea,” p. 78.</i></p>

\*The four academic content standards were approved by the State Board of Education and were published by the California Department of Education (1997–2000). Visit the State Board Web site to view each of the academic content standards <<http://www.cde.ca.gov/standards/>>.

**Grade 2**  
(Continued)**Related English–  
Language Arts  
Content Standards****Related History–  
Social Science  
Content Standards****Related Mathematics  
Content Standards****Related Science  
Content Standards**

Mathematical Reasoning 2.2: Make precise calculations and check the validity of the results in the context of the problem.

*Activity: See Frozen, Canned, or Fresh: Which Do You Prefer? p. 88.*

Investigation and Experimentation 4(e): Construct bar graphs to record data, using appropriately labeled axes.

*Activity: See Making Compost “Tea,” p. 78.*

Investigation and Experimentation 4(g): Follow oral instructions for a scientific investigation.

*Activity: See Making Compost “Tea,” p. 78.*

**Grade 3****Related English–  
Language Arts  
Content Standards****Related History–  
Social Science  
Content Standards****Related Mathematics  
Content Standards****Related Science  
Content Standards**

Reading Comprehension 2.5: Distinguish the main idea and supporting details in expository text.

*Activity: Read farm profiles and write in student journals, p. xxi.*

Reading Comprehension 2.7: Follow simple multiple-step written instructions (e.g., how to assemble a product or play a board game).

*Activity: See recipes.*

Listening and Speaking 1.8: Clarify and enhance oral presentations through the use of appropriate props (e.g., objects, pictures, charts).

*Activity: See Crop Rotation, p. 144.*

3.5.1: Describe the ways in which local producers have used and are using natural resources in the past and the present.

*Activity: Read and discuss farm profiles.*

Number Sense 3.2: Add and subtract simple fractions.

*Activity: See Activity or Recipe Format, p. xvii.*

Number Sense 3.3: Solve problems involving addition, subtraction, multiplication, and division of money amounts in decimal notation and multiply and divide money amounts in decimal notation by using whole-number multipliers and divisors.

*Activity: See A School Produce Stand, p. 66.*

Algebra and Functions 2.1: Solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit).

*Activity: See Calculating Farm Profit or Loss, p. 100.*

Measurement and Geometry 1.1: Choose the appropriate tools and units (metric and U.S.) and estimate and measure the length, liquid volume, and weight/mass of given objects.

*Activities: See all recipes and Pre-Sprouting and Sowing Carrots, p. 112.*

Physical Sciences 1(a): Know energy comes from the Sun to Earth in the form of light.

*Activity: See Comparative Tasting Format, p. xviii.*

Physical Sciences 1(b): Know sources of stored energy take many forms, such as food, fuel, and batteries.

*Activity: See Comparative Tasting Format, p. xviii.*

Life Sciences 3(a): Know plants and animals have structures that serve different functions in growth, survival, and reproduction.

*Activity: See Pre-Sprouting and Sowing Carrots, p. 112.*

Grade 3 (Continued)	Related English– Language Arts Content Standards	Related History– Social Science Content Standards	Related Mathematics Content Standards	Related Science Content Standards
			<p>Mathematical Reasoning 2.6: Make precise calculations and check the validity of the results from the context of the problem.</p> <p><i>Activity: See Making Compost “Tea,” p. 78.</i></p>	<p>Investigation and Experimentation 5(a): Repeat observations to improve accuracy and know that the results of similar scientific investigations seldom turn out exactly the same because of differences in the things being investigated, methods being used, or uncertainty in the observation.</p> <p><i>Activity: See Making Compost “Tea,” p. 78.</i></p> <p>Investigation and Experimentation 5(b): Differentiate evidence from opinion and know that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed.</p> <p><i>Activity: See Making Compost “Tea,” p. 78.</i></p> <p>Investigation and Experimentation 5(c): Use numerical data in describing and comparing objects, events, and measurements.</p> <p><i>Activity: See Making Compost “Tea,” p. 78.</i></p> <p>Investigation and Experimentation 5(d): Predict the outcome of a simple investigation and compare the result with the prediction.</p> <p><i>Activities: See Uncovering Cover Crops, p. 174, and Making Compost “Tea,” p. 78.</i></p> <p>Investigation and Experimentation 5(e): Collect data in an investigation and analyze those data to develop a logical conclusion.</p> <p><i>Activity: See Making Compost “Tea,” p. 78.</i></p>



Grade 4	Related English– Language Arts Content Standards	Related History– Social Science Content Standards	Related Mathematics Content Standards	Related Science Content Standards
	<p>Reading 1.1: Read narrative and expository text aloud with grade-appropriate fluency and accuracy and with appropriate pacing, intonation, and expression. <i>Activity: Read crop descriptions and farm profiles.</i></p>	<p>4.1.3: Identify the state capital and describe the various regions of California, including how their characteristics and physical environments (e.g., water, landforms, vegetation, climate) affect human activity. <i>Activity: Read and discuss crop descriptions and farm profiles.</i></p>	<p>Number Sense 2.1: Estimate and compute the sum or difference of whole numbers and positive decimals to two places. <i>Activity: See A School Produce Stand, p. 66.</i></p>	<p>Life Sciences 2(a): Know plants are the primary source of matter and energy entering most food chains. <i>Activity: See Comparative Tasting Format, p. xviii.</i></p>
	<p>Reading 2.4: Evaluate new information and hypotheses by testing them against known information and ideas. <i>Activity: See Finding the Right Soil for Your Plant, p. 56.</i></p>	<p>4.1.5: Use maps, charts, and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation. <i>Activity: Use maps showing farm locations.</i></p>	<p>Number Sense 3.1: Demonstrate an understanding of, and the ability to use, standard algorithms for the addition and subtraction of multidigit numbers. <i>Activity: See A School Produce Stand, p. 66.</i></p>	<p>Life Sciences 2(c): Know decomposers, including many fungi, insects, and microorganisms, recycle matter from dead plants and animals. <i>Activity: See Making a Worm Compost Bin, p. 166.</i></p>
	<p>Writing 2.4: Write summaries that contain the main ideas of the reading selection and the most significant details. <i>Activity: Read crop descriptions and farm profiles and write summaries in student journals, p. xxi.</i></p>	<p>4.4: Explain how California became an agricultural and industrial power, tracing the transformation of the California economy and its political and cultural development since the 1850s. <i>Activity: Read and discuss crop descriptions and farm profiles.</i></p>	<p>Number Sense 3.3: Solve problems involving multiplication of multidigit numbers by two-digit numbers. <i>Activity: See Calculating Farm Profit or Loss, p. 100.</i></p>	<p>Life Sciences 3(b): Know that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all. <i>Activities: See crop description of sweet potatoes, p.48; Finding the Right Soil for Your Plant, p. 56; and Farm Profile: Nakashima Farms, p. 58.</i></p>
	<p>Listening and Speaking 1.1: Ask thoughtful questions and respond to relevant questions with appropriate elaboration in oral settings. <i>Activities: See Finding the Right Soil for Your Plant, p. 56, and Uncovering Cover Crops, p. 174.</i></p>		<p>Statistics, Data Analysis, and Probability 1.1: Formulate survey questions; systematically collect and represent data on a number line; and coordinate graphs, tables, and charts. <i>Activity: Frozen, Canned, or Fresh: Which Do You Prefer? p. 88.</i></p>	<p>Life Sciences 3(c): Know many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter. <i>Activity: See Seed Saving and Sowing, p. 22.</i></p>
	<p>Speaking Applications 2.1(a): Relate ideas, observations, or recollections about an event or experience. <i>Activity: See Comparative Tasting Format, p. xviii.</i></p>		<p>Mathematical Reasoning 2.4: Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work. <i>Activity: See Making Compost “Tea,” p. 78.</i></p>	<p>Investigation and Experimentation 6(b): Measure and estimate the weight, length, or volume of objects. <i>Activity: See Pre-Sprouting and Sowing Carrots, p. 112.</i></p> <p>Investigation and Experimentation 6(c): Formulate and justify predictions based on cause-and-effect relationships. <i>Activity: See Uncovering Cover Crops, p. 174.</i></p>

**Grade 5****Related English–  
Language Arts  
Content Standards**

Reading 1.1: Read aloud narrative and expository text fluently and accurately with appropriate pacing, intonation, and expression.

*Activity: Read crop descriptions and farm profiles.*

Reading 2.3: Discern main ideas and concepts presented in texts, identifying and assessing evidence that supports those ideas.

*Activity: Read crop description and farm profiles and record thoughts in student journals, p. xxi.*

**Related Mathematics  
Content Standards**

Number Sense 2.1: Add, subtract, multiply, and divide with decimals; add with negative integers; subtract positive integers from negative integers; and verify the reasonableness of the results.

*Activity: See A School Produce Stand, p. 66.*

Number Sense, 2.5: Compute and perform simple multiplication and division of fractions and apply these procedures to solving problems.

*Activity: See recipes and Activity or Recipe Format, p. xvii.*

Statistics, Data Analysis, and Probability 1.2: Organize and display single-variable data in appropriate graphs and representations (e.g., histogram, circle graphs) and explain which types of graphs are appropriate for various data sets.

*Activities: Making Compost “Tea,” p. 78, and Frozen, Canned, or Fresh: Which Do You Prefer? p. 88.*

Mathematical Reasoning 2.6: Make precise calculations and check the validity of the results from the context of the problem.

*Activity: See A School Produce Stand, p. 66.*

**Related Science  
Content Standards**

Life Sciences 2(f): Know plants use carbon dioxide (CO<sub>2</sub>) and energy from sunlight to build molecules of sugar and release oxygen.

*Activity: See Comparative Tasting Format, p. xviii.*

Life Sciences 2(g): Know plant and animal cells break down sugar to obtain energy, a process resulting in carbon dioxide (CO<sub>2</sub>) and water (respiration).

*Activity: See Comparative Tasting Format, p. xviii.*

Investigation and Experimentation, 6(g): Record data by using appropriate graphic representations (including charts, graphs, and labeled diagrams) and make inferences based on those data.

*Activity: See Making Compost “Tea,” p. 78.*

Investigation and Experimentation 6(h): Draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.

*Activity: See Making Compost “Tea,” p. 78.*



Grade 6	Related English– Language Arts Content Standards	Related Mathematics Content Standards	Related Science Content Standards	Related Home Economics Careers and Technology Education Challenge Standards
	<p>Reading 1.1: Read aloud narrative and expository text fluently and accurately and with appropriate pacing, intonation, and expression.</p> <p><i>Activity: Read crop descriptions and farm profiles.</i></p>	<p>Number Sense 2.3: Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations, that use positive and negative integers and combinations of these operations.</p> <p><i>Activities: See A School Produce Stand, p. 66, and Calculating Farm Profit or Loss, p. 100.</i></p>	<p>Ecology 5(b): Know matter is transferred over time from one organism to others in the food web and between organisms and the physical environment.</p> <p><i>Activity: See Comparative Tasting Format, p. xviii.</i></p>	<p>Food and Nutrition, Meal Planning and Preparation 4.1: Describing and using safe and sanitary ways of handling and preparing food.</p> <p><i>Activity: See Suggestions for Success, p. xv.</i></p>
	<p>Reading Comprehension 2.4: Clarify an understanding of texts by creating outlines, logical notes, summaries, or reports.</p> <p><i>Activity: Read crop descriptions and farm profiles and record notes or summaries in student journals, p. xxi.</i></p>	<p>Algebra and Functions 2.2: Demonstrate an understanding that rate is a measure of one quantity per unit value of another quantity.</p> <p><i>Activity: See Calculating Farm Profit or Loss, p. 100.</i></p>	<p>Ecology 5(c): Know populations of organisms can be categorized by the functions they serve in an ecosystem.</p> <p><i>Activity: See Lady Bug Release, p. 184.</i></p>	<p>Food and Nutrition, Meal Planning and Preparation 4.2: Identifying the functions and the safe use of food preparation equipment.</p> <p><i>Activities: See Suggestions for Success, p. xv, and recipes.</i></p>
	<p>Listening and Speaking Strategies 1.3: Restate and execute multiple-step oral instructions and directions.</p> <p><i>Activity: See recipes.</i></p>	<p>Mathematical Reasoning 2.7: Make precise calculations and check the validity of the results from the context of the problem.</p> <p><i>Activities: See A School Produce Stand, p. 66, and Calculating Farm Profit or Loss, p. 100.</i></p>	<p>Ecology 5(e): Know the number and types of organisms an ecosystem can support depends on the resources available and on abiotic factors, such as quantities of light and water, a range of temperatures, and soil composition.</p> <p><i>Activities: See Crop Rotation, p. 144, and Farm Profile: T&amp;D Willey Farms, p. 148; Finding the Right Soil for Your Plant, p. 56, and Farm Profile: Nakashima Farms, p. 58.</i></p>	<p>Food and Nutrition, Meal Planning and Preparation 4.3: Preparing simple, nutritious meals using basic food preparation techniques.</p> <p><i>Activity: See recipes.</i></p> <p>Transferable, Employability, and Leadership Skills 3.2: Applying creative thinking skills to identify new ways to perform tasks or solve problems.</p> <p><i>Activity: See A School Produce Stand, p. 66.</i></p>
		<p>Resources 6(b): Know different natural energy and material resources, including air, soil, rocks, minerals, petroleum, fresh water, wildlife, and forests, and know how to classify them as renewable or nonrenewable.</p> <p><i>Activity: See Farm Profile: Van Dyke Ranch, p. 196.</i></p>	<p>Resources 6(b): Know different natural energy and material resources, including air, soil, rocks, minerals, petroleum, fresh water, wildlife, and forests, and know how to classify them as renewable or nonrenewable.</p> <p><i>Activity: See Farm Profile: Van Dyke Ranch, p. 196.</i></p>	<p>Transferable, Employability, and Leadership Skills 3.3: Considering multiple options for solving problems and applying appropriate problem-solving strategies.</p> <p><i>Activities: See A School Produce Stand, p. 66, and Calculating Farm Profit or Loss, p. 100.</i></p>
			<p>Investigation and Experimentation 7(d): Communicate the steps and results from an investigation in written reports and oral presentations.</p> <p><i>Activity: See Making Compost “Tea,” p. 78.</i></p>	<p>Transferable, Employability, and Leadership Skills 5.2: Identifying steps in planning, producing, promoting, and selling a product or service related to a home economics career pathway.</p> <p><i>Activity: See A School Produce Stand, p. 66.</i></p>

Grade 7	Related English– Language Arts Content Standards	Related Mathematics Content Standards	Related Science Content Standards	Related Home Economics Careers and Technology Education Challenge Standards
	<p>Writing Applications 2.5: Write summaries of reading materials:</p> <p>a. Include the main ideas and most significant details.</p> <p><i>Activity: Write summaries of crop descriptions and farm profiles in student journals, p. xvi.</i></p>	<p>Number Sense 1.7: Solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest.</p> <p><i>Activity: See A School Produce Stand, p. 66.</i></p> <p>Mathematical Reasoning 2.8: Make precise calculations and check the validity of the results from the context of the problem.</p> <p><i>Activity: See Calculating Farm Profit or Loss, p. 100.</i></p>	<p>Structure and Function in Living Systems 5(b): Know organ systems function because of the contributions of individual organs, tissues, and cells. The failure of any part can affect the entire system.</p> <p><i>Activities: See Fooling Moths—Natural Pest Control, p. 34, and Farm Profile: Apple Farm, p. 36.</i></p> <p>Structure and Function in Living Systems 5(f): Know the structures and processes by which flowering plants generate pollen, ovules, seeds, and fruit.</p> <p><i>Activities: See Seed Saving and Sowing, p. 22; Fooling Moths—Natural Pest Control, p. 34, and Farm Profile: Apple Farm, p. 36.</i></p> <p>Investigation and Experimentation 7(c): Communicate the logical connection among hypotheses, science concepts, tests conducted, data collected, and conclusions drawn from the scientific evidence.</p> <p><i>Activity: See Making Compost “Tea,” p. 78.</i></p> <p>Investigation and Experimentation 7(e): Communicate the steps and results from an investigation in written reports and oral presentations.</p> <p><i>Activity: See Making Compost “Tea,” p. 78.</i></p>	<p>Food and Nutrition, Meal Planning and Preparation 4.1: Describing and using safe and sanitary ways of handling and preparing food.</p> <p><i>Activity: See Suggestions for Success, p. xv.</i></p> <p>Food and Nutrition, Meal Planning and Preparation 4.2: Identify the functions and the safe use of food preparation equipment.</p> <p><i>Activity: See Suggestions for Success, p. xv, and recipes.</i></p> <p>Food and Nutrition, Meal Planning and Preparation 4.3: Preparing simple, nutritious meals using basic food preparation techniques.</p> <p><i>Activity: See recipes.</i></p> <p>Transferable, Employability, and Leadership Skills 3.2: Applying creative thinking skills to identify new ways to perform tasks or solve problems.</p> <p><i>Activity: See A School Produce Stand, p. 66.</i></p> <p>Transferable, Employability, and Leadership Skills 3.3: Considering multiple options for solving problems and applying appropriate problem solving strategies.</p> <p><i>Activities: See A School Produce Stand, p. 66, and Calculating Farm Profit or Loss, p. 100.</i></p> <p>Transferable, Employability, and Leadership Skills 5.2: Identifying steps in planning, producing, promoting, and selling a product or service related to a home economics career pathway.</p> <p><i>Activity: See A School Produce Stand, p. 66.</i></p>