

# Strawberries

The strawberry, a member of the rose family, has grown wild in Europe and the Americas for hundreds of years. Although ancient Romans valued the fruit for its therapeutic, medicinal qualities, it was not domesticated until the eighteenth century. Wild strawberries grow on foggy coastal cliffs and shady forest floors. The cultivated strawberry, as it is known today, was the result of a chance cross between a wild Virginia species and a Chilean species.

Today there are many varieties of cultivated strawberries. California is the leading producer of strawberries in the United States. The fruit favors cool, moderately foggy conditions, so most strawberry farms are found in coastal areas. A number of strawberry varieties have been developed to grow in the specific microclimates of Northern California's coast.

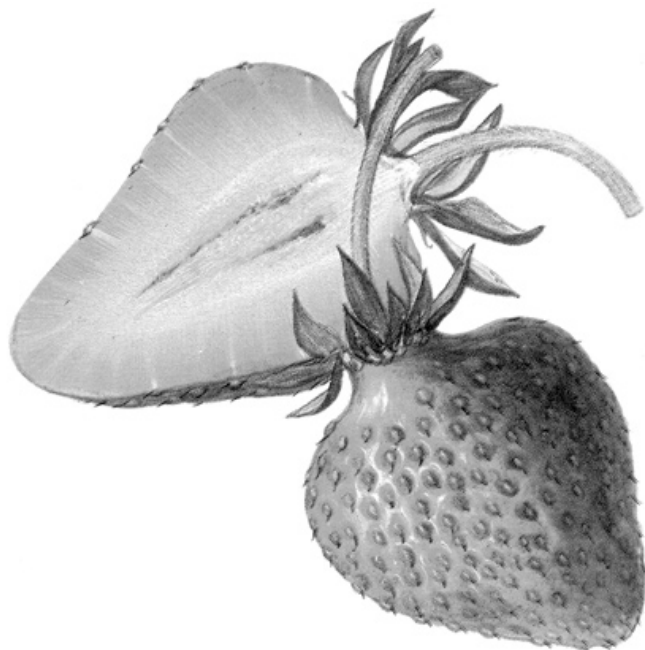
## Seasonality and Growing Conditions

Strawberry plants are perennials, but most farmers grow them for only one year. Plants may be started from seed or by transplanting shoots called runners.

There are two modern hybrid categories of strawberries: spring-bearing and ever-bearing. Spring-bearing berries produce most of their fruit during the early part of the season, which begins in March. These varieties include the Sequoia, which produces large, intense fruit, and the Chandler, which is the earliest-bearing type. Ever-bearing berries, such as Fern, Seascape, and Hecker, produce medium-sized fruit throughout the season, which extends until October.

Strawberries thrive in sandy, well-drained soil with lots of moisture. Raised beds help to provide good drainage, which inhibits fungal

1. Drip irrigation and heavy mulch help the plants the moisture they need. Many





farmers use plastic to cover the soil around the plants to control both weeds and pests. By warming the soil, the plastic covering improves crop yields and helps to ripen the berries and protect them from decay. Cool winters also help the plant produce more fruit at harvest-time.

Organic strawberry farmers rely on hand-removal of insect pests and grow beneficial flowers, such as rose, sweet clover, baby's breath, and sunflowers, to help attract insects that eat pests. Weeds are removed by hand, and the plastic ground covering is tucked around berry plants to help exclude pests. Keeping the soil smooth around the base of the plants also helps to prevent fruit decay.

### **Selection, Storage, and Nutrition Information**

Strawberries generally do not ripen after picking. When ready for harvest, only completely ripe berries should be picked. The most difficult part of the farmer's job is to see that the strawberries are transported to market without bruising or crushing the fruit. Gentle handling and careful picking by hand is time-consuming and labor intensive.

In the market, look for berries that are fragrant, unblemished, deep red in color, and without mushy or juicing spots. Although hard to find, the tiny, sweet, wild *fraises des bois* (strawberries of the woods, or wild strawberries) originating in France are considered to be the most intensely flavorful strawberry. Strawberries should not be washed until ready to use. To wash, quickly spray the fruit with water as they tend to absorb liquid, which dilutes the flavor of the fruit and destroys the texture. Store strawberries in a moisture-proof container in the refrigerator for up to three days. Avoid storage in a plastic bag, which makes the fruit mushy.

Strawberries are high in vitamin C and folate and are a good source of fiber.

# Strawberry Lemon-Limeade

Preparation Time: 20 minutes  
 Cooking Time: 5 minutes  
 Total Lesson Time: 60 minutes  
 Recipe Level: Easy

## Background

This is a very easy recipe to make. It is not imperative to cook the sugar and zest if there is not a hot plate available, but cooking does make it a much tastier drink. If you prefer, you may substitute other berries (raspberries, blueberries, etc.) for the strawberries or use only limes or lemons.

When introducing this recipe, discuss with students the differences between strawberries and lemons. Explain how lemons and limes grow on trees, whereas strawberries grow on small, low-lying plants. Have students compare their structures: lemons and other citrus have skins that can be peeled and cooked and have pith, sacs, and seeds; strawberries have a very thin skin, and their seeds are embedded in the skin. Strawberries are sweet and may be eaten whole, but lemons and limes are too sour for most people to eat directly from the tree.

## Objectives

*Students will be able to:*

Demonstrate a working knowledge of the following words: *zest*, *simmer*, and *garnish*.

Compare the anatomical structure of strawberries, lemons, and limes.

## Ingredients

*For a class of 20:*

- 2 pints strawberries
- 12 lemons
- 9 limes
- 18 cups water
- 2 cups sugar
- 2 trays ice

## Materials

*For the class:*

- colander
- hot plate
- 2 half-gallon pitchers
- blender
- measuring cups
- ladle
- small saucepan
- small strainer
- 3 small mixing bowls
- vegetable peeler
- knife
- cutting board
- pot holders

*For each group of 4:*

- 2 cutting boards
- 2 knives
- 4 vegetable peelers
- 3 bowls
- 4 small cups
- napkins
- journals
- 1 citrus juicer

**Preparation**

1. Have students wash their hands. Discuss proper methods of handling food.
2. Wash the strawberries and put them in the colander to drain. Wash all the citrus.
3. Divide the lemons, limes, and strawberries into five equal portions, one for each student group, saving two lemons for garnish.

**Safety Precautions**

Review safety precautions for using knives and the hot plate. Unplug the blender before putting utensils or hands into it.

**Making the Recipe**

1. Provide each group of students with ingredients and materials.
2. Demonstrate stemming the strawberries, peeling the zest off the lemons and limes, and juicing the citrus. To peel the zest, use a peeler and carefully peel off just the colored portion of the peel, leaving the white, pithy portion on the fruit. Students will peel the zest off half of the lemons and limes and use a citrus juicer to extract the juice.
3. Have each group stem, peel, and juice the fruits as demonstrated and place them in separate bowls. Save two lemons for garnish.
4. Collect the bowls and place them on the demonstration table. Have students gather around the demonstration table. Select two students to pour the lemon juice and the lime juice through the strainer to catch all the seeds.
5. Ask two students to measure  $1\frac{1}{2}$  cups water and 2 cups sugar, then add the water, sugar, and all the zest to a small saucepan. Slowly bring the mixture to a boil and simmer on low heat for 5 minutes.
6. While the sugar simmers, help two volunteers purée the strawberries and  $1\frac{1}{2}$  cups water in a blender. As the sugar syrup cools, have three students pour an equal amount of lemon and lime juice in each of the pitchers. Have students add equal portions of the strawberry purée to the pitchers. Stir the mixture thoroughly.
7. While still waiting for the sugar to cool, have the class make the lemon garnish, which will be a thin slice of lemon for each cup.
8. When the syrup is cool, add it to the pitchers. Stir the mixture thoroughly. Have students taste for sweetness and add more sugar if needed. Serve over ice or as it is with the garnish.
9. Clean up materials. If you have a school or classroom compost or worm bin, place the food scraps there.

# Strawberry Shortcake

Preparation Time: 30 minutes  
 Cooking Time: 15 minutes  
 Total Lesson Time: 60 minutes  
 Recipe Level: Advanced

## Background

Strawberry shortcake is a classic American dessert. Students will prepare strawberries so that their juice will flow over the baked shortcakes.

Ripe, sweet strawberries are fragile and require careful handling. They should be washed just before using, with their calyxes (the green leafy part) still on, to minimize the amount of water they absorb.

## Objectives

*Students will be able to:*

Demonstrate a working understanding of the following terms: cut butter into flour, preheat, bake, and whip.

Prepare a recipe that involves baking.

## Ingredients

*For a class of 20:*

### *Filling*

5 pints strawberries  
 3/4 cup sugar

### *Shortcakes*

3/4 teaspoon salt  
 3 tablespoons sugar  
 6 teaspoons baking powder  
 3 cups flour  
 3/4 cup butter  
 1 cup heavy cream

### *Topping*

3 cups whipping cream  
 3/4 teaspoon vanilla extract

## Materials

*For the class:*

colander  
 egg beater  
 wooden spoon  
 oven  
 rolling pins  
 3 medium mixing bowls  
 biscuit cutter or small  
 drinking glass  
 cutting board  
 3 measuring cups  
 baking sheet  
 2 serving spoons  
 measuring spoons  
 fork  
 pot holders  
 potato masher

*For each group of 4:*

2 cutting boards  
 2 knives  
 4 bowls  
 4 forks  
 napkins  
 journals

**Preparation**

1. Have students wash their hands. Discuss proper methods of handling food.
2. Wash strawberries in the colander and allow them to drain.
3. Set aside 20 strawberries, then separate the remaining strawberries into five equal portions, one for each student group.
4. Preheat the oven to 400°F.

**Safety Precautions**

Review safety precautions for using knives and the oven.

**Making the Recipe**

1. Demonstrate stemming and slicing the strawberries, pointing out it is best to try to cut them all to the same thickness (about 1/2-inch thick).
2. Have student groups slice their strawberries and place them in a bowl.
3. Give each group an equal portion of the 20 strawberries you had set aside. Demonstrate crushing them with a fork in a separate bowl. Have students crush their strawberries.
4. Collect the bowls and place them on the demonstration table. Have students gather around the demonstration table. Have two students add the sliced strawberries, crushed strawberries, and sugar to the large mixing bowl. Mix well, cover, and set aside. While the mixture sits, it should become very juicy.
5. For the shortcake recipe, have selected students measure out all the ingredients, stir together the dry ingredients in a medium mixing bowl, and cut the butter into small slices. Add the butter pieces to the flour mixture. Demonstrate how to cut the butter into the flour: use the tips of your fingers to rub the butter pieces into the flour mixture until it resembles a coarse cornmeal. Allow students to assist.
6. When the mixture is ready, have two students add 1 cup heavy cream and stir until the flour is just moistened. Turn out the dough and let a few students knead the dough briefly and roll it out about 1/2-inch thick on a floured surface. Have each student cut out a shortcake by using a biscuit cutter or small glass. Place the shortcakes on a baking sheet. Bake for 10 to 15 minutes or until the tops are lightly brown.
7. When ready to serve the shortcakes, use the egg beater to whip 3 cups cream. When the cream is ready (it should be quite thick), add the vanilla extract and sugar.
8. Cut the shortcakes in half like a sandwich. Put the bottom sections on a plate, spoon an equal portion of strawberries over each one, put on the top sections of the shortcake, then add a spoonful of whipped cream to each.
9. Clean up materials. If you have a school or classroom compost or worm bin, place the food scraps there.

# Ladybug Release

Preparation Time: Will vary, depending on availability of materials  
 Total Lesson Time: About one hour

## Background

Insects may be a major problem when growing strawberries. A technique used in sustainable agriculture to combat this problem is to use biological controls. For example, the two-spotted spider mite lives on strawberry leaves and can completely overrun the plant if the population gets too large. To combat the mites, a predator mite is released into the fields. The predator mites prey on the spider mites, reducing their population and saving the strawberries.

Similarly, ladybugs help strawberries by feeding on pesky insects called aphids. A female ladybug can lay up to 1,500 eggs. The eggs then move to the larval stage, which lasts for three to six weeks. After the adult emerges from the pupa, it takes only five to 13 days before it lays its own eggs. In the larval stage, each ladybug can eat around 400 aphids, and in the adult stage each ladybug can eat more than 5,000 aphids in its lifetime. Therefore, releasing many ladybugs results in fewer aphids in a small amount of time.

Because these insects are so beneficial to farms and gardens, places called *insectaries* breed and collect them. To get large populations of ladybugs, insectaries collect them from overwintering sites. These sites are usually in the mountains, where aggregations form after the ladybugs have migrated from valley feeding areas. Insectaries supply nurseries and farmers with ladybugs. Another way for farmers to attract ladybugs and other beneficial insects is by growing particular flowers, such as roses, sweet cover, baby's breath, sunflowers, crimson, and wild radishes, along the borders of the strawberry plants. Creating a diverse insect population is a natural way of keeping insect growth in check.

## Objectives

*Students will be able to:*

Explain how releasing ladybugs into the school garden helps the plants.

Study ladybugs up close by touching them, looking at them magnified, and noticing how long they live and how quickly they reproduce.

## Materials

A box of ladybugs (around 500 ladybugs) from a local nursery  
 Magnifying glass(es)





### Preparation

1. Buy a container of ladybugs. If none are available at the local nursery, search on the Internet for sources of insectaries.
2. If you buy the ladybugs before the day you plan to release them, store the container in the refrigerator or any cool, dark place at 40 to 60 degrees. If you store them for longer than a week (but no longer than three weeks), let the container warm to room temperature once or twice a week, sprinkle it with water, and let it sit and absorb the water for about two hours.

### Doing the Activity

1. Choose a time to release your ladybugs when it is relatively cool or overcast (e.g., the morning). Water the plants on the day you will release the bugs.
2. Have students come up to the container one or two at a time and gently scoop up some ladybugs. The bugs will crawl up their arm a bit, but remind the students that the ladybugs will not hurt them. If you have a magnifying glass, have the students look at the bugs up close. Then have each student walk calmly to a place in the garden and gently brush the bugs from their arms onto a plant of their choosing.
3. Have the students observe what the ladybugs do in the garden and have them record their observations. Discuss how the release of the ladybugs will affect the garden.
4. In the days and weeks following the release of the bugs, ask the students to notice whether ladybugs are still in the garden and, if so, whether there seem to be more or fewer than at the time they were released. Also have them notice any other changes: Are there less harmful bugs in the garden? Do the plants look healthier?
5. *Optional:* If you have a copy of *What About Ladybugs?* by Celia Godkin, read it and talk to the class about the different types of symbiotic relationships found in nature: mutualism, commensalism, and parasitism.

# Swanton Berry Farm



**The experts told Jim Cochran that it could not be done.**

The memory of the sweet fragrance and taste of strawberries his grandmother used to serve lingered in Jim Cochran's mind. So he set out to recreate those flavorful berries he remembered from childhood.

Jim started Swanton Berry Farm from two rented acres along the Pacific Coast near a tiny town called Davenport, located on the California coast between San Francisco and Santa Cruz. He expanded the farm to 80 acres, where he grows strawberries as well as artichokes, broccoli, peas, cauliflower, black raspberries, and blackberries. Swanton Berry Farm follows organic farming practices.

Jim found that instead of using fumigation and pesticides, he could employ a long-term soil-building program that involved crop rotation, biodynamic compost (a special compost that is enriched with organic material), and products made from sea kelp. He also grows and plows into the soil cover crops, such as grains and legumes, which enrich the soil for strawberries.

Creating a healthy, rich soil is only half the work of growing organic strawberries. There is also the problem of harmful insects. Without the use of pesticides, the strawberry plant is in danger of being eaten before even bearing fruit.



For example, the two-spotted spider mite lives on strawberry leaves and may completely overrun the plant. To combat the mites at Swanton, workers rely on the age-old cycles of nature. When the spider mites become so numerous that they constitute a real threat, a predator mite cultivated in nurseries is released into the fields. The predator mites do not hurt the berry bushes but love to chow down on the spider mites.

Another way to combat the insects is to grow certain flowers that attract beneficial insects. Along the borders of the strawberry beds, flowers such as roses, sweet clover, baby's breath, sunflowers, crimson, and wild radish flowers bloom, attracting insects that will also attack the spider mites.

For Jim and the people working at Swanton Berry Farm, the commitment to environmentally safe farming practices includes a commitment to fair labor policies.

Jim did not see the point in his farming if the workers were underpaid, overworked, and treated without respect. Swanton Berry Farm was one of the first strawberry farms and the first organic farm in the United States to sign a contract with a farmworkers union. Swanton Berry Farm's contract guarantees workers good hourly wages, good working conditions, health benefits for the worker's entire family, paid vacation and sick leave, and a retirement package.

He believed that the first step in creating good work conditions was to offer a chemical-free environment. The second step was to pay by the hour worked rather than by the number of boxes of strawberries picked.

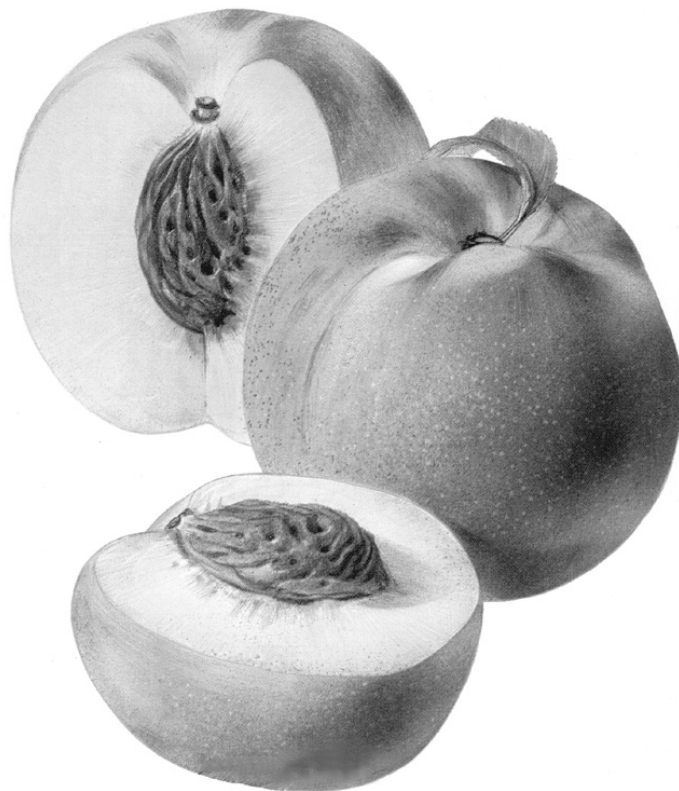
In addition, workers at Swanton are given a variety of tasks during the week so that they will not become bored with a job or harm their bodies through repetitive motions.

# Stone Fruit

Peaches, nectarines, apricots, plums, and cherries are all classified as stone fruit, or *drupes*, which means they possess a single, large seed or stone surrounded by sweet, juicy flesh. Peaches and apricots originated in western China about 4,000 years ago. Several species of plums were domesticated in Roman times in Europe and independently in China and Japan in the distant past. Cherries are thought to originate from a number of places, including Eastern Europe and Asia. The Chinese were the first to cultivate these succulent fruits, but Alexander the Great is credited with introducing them to the Greco-Roman world. Today, California is the leading producer of stone fruit in the United States because of its temperate climate and rich soils.

Peaches, which were popular during colonial times right after they were first introduced to North America, can be grown in most areas. There are two categories of peaches: freestone and cling. The cling peaches have pits that are attached to the fruit and are used primarily for canning; the freestone peaches have pits that detach easily from the fruit's flesh and are used for eating out of hand and for cooking. Nectarines are varieties of peaches that have no fuzz. Nectarines have originated many times as bud spurs (mutations in a single branch) on peach trees.

Cherries are also divided into two categories: sweet and sour. Sweet cherries are used for eating out of hand (e.g., Bing, Royal Anne, and Larian). Sour cherries (e.g., Montmorency and English Morello) are used for canning and pies.





Varieties of plums have different characteristics of texture, flavor, color, time of harvest, and environmental preferences. Plums are available in a wide range of colors, including red, green, yellow, purple, and black. In recent years, plum hybrids, such as the pluot (a plum/apricot cross), have increased in popularity, and many delicious varieties are now available at farmers markets.

### Seasonality and Growing Conditions

Stone fruits are synonymous with late spring and summer. The season usually begins in mid-May with cherries and apricots; then peaches, nectarines, and plums follow. The stone fruit season generally extends until early October except for cherries and apricots, which finish in late June.

Stone fruits need warm days in summer and cool nights in winter to produce mature, ripe fruit. Good drainage is a must. Peach, plum, apricot, and nectarine trees take three to five years to bear fruit; cherries average about five to seven years. Peach and apricot trees normally are thinned to increase the size of the fruit.

Cover crops are sometimes used to add organic matter to the soil, which makes the trees healthier and better able to resist diseases.

Cherries and plums tolerate cold winters and, therefore, grow well in the northern United States, Canada, northern Europe, and Asia.

Peaches and apricots do not tolerate as much cold but grow well in California, the southern United States, southern Europe, and much of central Asia.

Dormant oil sprays are sometimes used to combat scale and mealy bugs. The spray smothers the insect eggs before they hatch. Stone fruits have very thin skins and consequently can easily rot on the trees. Some growers spray compost tea on the fruits to protect them from rotting.

### Selection, Storage, and Nutrition Information

With the exception of cherries, stone fruit is generally picked while still slightly firm. This practice minimizes crushing or bruising by the time it arrives at market.

Look for peaches and nectarines with smooth, firm, deep golden-hued skin; plums with taut skin and a dull matte finish; and golden-hued apricots. Stone fruit should be purchased ripe. If necessary, place unripe fruit in a paper bag on a counter. Refrigerate stone fruit only if it is overly ripe.

Apricots are high in vitamins A and C and are a good source of potassium. They are also a good source of fiber, as are cherries and nectarines. Peaches, cherries, and nectarines are a good source of vitamin C. Plums are high in vitamin C.

# Nectarine & Peach Smoothies

Preparation Time: 20 minutes  
 Cooking Time: None  
 Total Lesson Time: 45 minutes  
 Recipe Level: Easy

## Background

Nothing is easier to make or more appealing to kids than a batch of fruit smoothies. You can substitute the kinds of fruit you use as the seasons pass or mix and match in any season.

## Objectives

*Students will be able to:*

Demonstrate a working knowledge of the following words: *purée*, *smoothies*, and *stone fruit*.

Describe the different fruits in the stone fruit family.

Compare nectarines and peaches.

## Ingredients

*For a class of 20:*

6 nectarines  
 6 peaches  
 4½ cups plain, unsweetened  
 yogurt (or milk)  
 4½ cups orange juice  
 6 tablespoons honey

## Materials

*For the class:*

colander  
 blender  
 2 large pitchers  
 1 large mixing bowl  
 measuring spoons  
 measuring cups  
 knife  
 cutting board

*For each group of 4:*

2 cutting boards  
 2 knives  
 2 bowls  
 4 cups  
 napkins  
 journals

**Preparation**

1. Have students wash their hands. Discuss proper methods of handling food.
2. Wash nectarines and peaches, scrubbing off peach fuzz, in particular, and place them in the colander to drain.

**Safety Precautions**

Review safety precautions for using knives. Unplug the blender before putting utensils or hands into the blender jar.

**Making the Recipe**

1. Demonstrate cutting the peaches and nectarines into wedges and then cutting them from their pits. Show the different parts of the fruit: pit, skin, and flesh or meat.
2. While students prepare the wedges for the recipe, have them examine the parts of each fruit and make notes in their journals about the texture, size, color, shape, and smell of each part of each fruit. Have students place the wedges in bowls.
3. Collect the bowls and place them on the demonstration table next to the blender. Have students gather around the demonstration table. Ask two students to put all the fruit in a large mixing bowl and mix. Add the measured yogurt, orange juice, and honey.
4. Ask students how many batches they think it will take to blend the ingredients for the smoothies. Have students divide the ingredients into equal batches and place each batch separately into the blender. Blend each batch until smooth and pour into the pitchers.
5. When all is puréed, serve in a cup. While students drink the smoothies, discuss the differences among the fruits.
6. Clean up materials. If you have a school or classroom compost or worm bin, place the food scraps there.

# Plum Jam

Preparation Time: 20 minutes  
 Cooking Time: 2 hours  
 Total Lesson Time: 2 hours and 30 minutes  
 Safety Suggestions: Advanced

## Background

Any kind of plum may be used for this jam as long as it is flavorful and has a good sweet-tart balance, such as Santa Rosa. The cooking time includes one hour for the plum mixture to sit and one hour to simmer and stir. You will want to coordinate this recipe with other class lessons so that students can periodically stir the jam while it simmers. This recipe works well if your class prepares the plum jam before lunch so that the jam can sit for a while and then be cooked after lunch during a reading or writing period.

## Objectives

*Students will be able to:*

Demonstrate a working knowledge of the following words: *plum*, *stone fruit*, and *jam*.  
 Compare the parts of different varieties of plums.

## Ingredients

*For a class of 20:*

3 lbs plums  
 (one or several varieties)  
 2½ cups sugar  
 2 lemons  
 water  
 whole wheat bread or crackers

## Materials

*For the class:*

large, heavy-bottomed  
 cooking pot  
 colander  
 measuring spoons  
 measuring cup  
 serving spoon  
 potato masher  
 cherry pitter (optional)  
 hot plate  
 pot holders  
 cutting board  
 knife

*For each group of 4:*

2 cutting boards  
 2 knives  
 2 plates  
 2 bowls  
 napkins  
 journals

**Preparation**

1. Have students wash their hands. Discuss proper methods of handling food.
2. Wash plums and place them in the colander to drain.
3. Divide plums into five equal portions, one for each student group.

**Safety Precautions**

Review safety precautions for using knives and the hot plate. Hot jam has the potential for causing serious burns. Make sure that students use extreme care when stirring the jam.

**Making the Recipe**

1. Demonstrate how to cut the plums in half and then cut them from their pits. Show the different parts of the fruit: pit, skin, and flesh or meat.
2. Give each group a portion of the plums to prepare. While they prepare the plums for the recipe, have them examine the plums and make notes in their journals about the texture, size, color, shape, and smell of each part of each fruit. Have students place prepared plums into bowls. Have students save the pits in another bowl.
3. Collect the bowls and place them on the demonstration table next to the hot plate. Have students gather around the demonstration table. Ask two students to gather the fruit in the cooking pot. Have another two students measure and add sugar into the mixing bowl. Ask two other students to quarter the lemons and squeeze the juice into the pot. Allow students to take turns mashing the plums. Place four to six pits in the mixture so the aroma permeates it. Let it sit for an hour.
4. Place the pot on medium heat and cook for one hour, stirring frequently to prevent scorching or burning. It works well to assign student pairs to stir at five-minute intervals while the rest of the class is reading or writing.
5. When the jam is thick (in about one hour), take it off the hot plate and let it cool. Have the kids serve themselves by putting some jam on bread or crackers. Refrigerate and consume within three to five days.
6. Clean up materials. If you have a school or classroom compost or worm bin, place the food scraps there.

# Cities and Farms

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Preparation Time: None  
Total Lesson Time: 30 to 60 minutes

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## Background

Can you imagine a farm where your house is? Well, that is probably how it was 100 years ago. Even the sites of big cities, such as San Francisco and Los Angeles, were once some of the richest and most productive farming areas in the United States. Fragrant orange groves once covered the fertile plains surrounding Los Angeles. Vegetables and pears grown in the rich peat soils of the Delta were floated down to waterfront markets in San Francisco by barge. Apricot, plum, and cherry trees covered the Santa Clara Valley, which was nicknamed the Valley of Heart's Delight. Wheat grown right around Mount Diablo was of such good quality that it was in demand all over the world. Fresno was once, not so long ago, a farming town, and it is now a large, sprawling city.

But the climate that was good for farming was also good for people. In 2001, more than 33 million people were living in California. In 20 years there will be 15 million more. Much of the good farmland has been paved over. Planners, policymakers, and farmers are working hard to figure out how to preserve agricultural lands. After all, people need fresh food; and being close to beautiful orchards, natural fields and streams, and healthful open spaces makes people feel good.

## Objectives

*Students will be able to:*

Name ways in which cities and farms are connected.

Describe why local farms are important to people.

## Materials

*For the class:*

Van Dyke Ranch farm profile  
map of California

*For each group of 4:*

drawing paper  
crayons, marking pens, or colored pencils

**Doing the Activity**

1. Have students read the farm profile, either individually or as a class. Lead a discussion about some of the challenges the Van Dykes have faced because of the increasing population in their area.
2. On the board, write the words “cities” and “local farms” and ask students to name some of the benefits of cities and some of the benefits of local farms.
3. Point out to students that California needs both cities and local farms and that the trick is to find a balance that is best for all. You might use the analogy of schoolwork and play: What would happen if students had only schoolwork all day or if they only played all day? How is a balance of schoolwork and play good for children? Why is a balance between cities and farms important? What would happen if there was no room for local farms? What would happen if there was no room for cities?
4. Ask students if they can think of ways that cities and local farms depend on each other or are connected. Where appropriate, make arrows between items on the two lists to show these connections.
5. Give pairs or small groups of students a piece of drawing paper and ask them to draw a picture showing a city and surrounding farms that are in balance. They should draw and label different connections between the two that would help them stay in balance (for example, transportation between the two, enough food for the city and enough customers for the farms, and so on).
6. Ask volunteers to share their drawings, pointing out the features that keep the city and local farms in balance.
7. For older students: Display a map of California and ask students to identify cities and farming areas. Remind them of the farm profiles they have read in class and the locations of those farms. Ask them to record in their journals their thoughts about the changing balance of farms and cities. For homework, students interview an adult who has lived in the area for at least ten years. They record his or her responses about the ways in which the balance of farms and cities has changed. Students may share their findings in the next class meeting.

# Van Dyke Ranch

**Dark, glossy red cherries and pale, pink-orange apricots hang like ornaments from the dark green trees all over the Van Dyke Ranch. It is harvesttime.**

The sweet fragrance of cut apricots drying in trays under the summer sun fills the air. The plump cherries swing from their stems as a gentle breeze brings welcome relief from the heat.

“The quality of the fruit is beautiful,” says Betty Van Dyke, who owns and operates the farm near Gilroy with her three grown sons, Kurt, Peter, and Eric. Betty took over the ranch from her father, who had farmed with his father in Cupertino. Farming has been in the Van Dyke family since Betty’s grandparents came from Yugoslavia at the turn of the twentieth century.

In the 1950s, Betty’s father was forced by subdivision development to sell the Cupertino farm and move the ranch to two pieces of land (107 acres and 53 acres) near Gilroy.

“Dad was an incredible workhorse,” says Betty. In fact, he *was* the horse, pulling the plow himself before they could afford a tractor. Betty worked side by side with her father until his death in 1978. Before he passed away, he said to Betty, “I see you know what to do. Now it is all up to you.”

Betty had learned from her dad that using as few pesticides as possible and depending on cover crops, rock minerals, and other natural methods kept the land healthy and produced the best-tasting fruits.

The Santa Clara Valley is perfect for growing cherries and apricots, she explains, because of the high water table and gravelly soil that drains well, along with warm days and cool nights. This environment and thoughtful organic farming practices give the Van Dyke cherries and apricots exceptional flavor.

Yet sadly, the Van Dyke Ranch may be threatened by the suburban sprawl and water politics of nearby development. Betty and her sons have learned the hard way that running a successful farm means not only sound farming practices, hard work, and smart marketing but also political activism.

The Van Dyke Ranch is located in an area that the Santa Clara County government has designated for agriculture only; however, the area is in danger of being developed. Betty’s son Peter, who was appointed a member of the Agricultural Advisory Committee of the Santa Clara Valley Water District, says, “Since our local water district came under the jurisdiction of the county government a few years ago, our water rates have tripled. Besides that, our electricity rates for pumping water have quadrupled.”

These rising costs make it difficult for farmers in the county to turn a profit from their produce. All around them, land is selling at ever-rising prices, making it tempting for struggling farmers to sell their land to developers who would build subdivisions.



“We love what we do,” Peter explains, “but we are struggling to make ends meet. It is depressing to see nearby land selling for almost \$100,000 per acre.” Adding to this problem is the loss of skilled farmers who are getting out of the business and are not being replaced by people new to farming.

For now, the Van Dykes are holding on to their ranch. Instead of selling their land, they are trying to make their business more profitable. For years, the Van Dykes dried 90 percent

of their apricots. But with more demand and better prices for fresh apricots, the Van Dykes decided to sell more fresh apricots. Other strategies include opening a fruit stand, selling fruit juice and baby food, and growing late-season summer vegetables.

These are all steps that the Van Dykes hope will keep their ranch going for generations to come.

# Locations of Farms Profiled in Spring–Early Summer

FARM	CITY
<b>1 T&amp;D Willey Farms</b>	<b>Madera</b>
<b>2 Berkeley Youth Alternatives Garden Patch</b>	<b>Berkeley</b>
<b>3 Fong Farm</b>	<b>Winters</b>
<b>4 Heath Family Farm</b>	<b>Orland</b>
<b>5 Swanton Berry Farm</b>	<b>Davenport</b>
<b>6 Van Dyke Ranch</b>	<b>Gilroy</b>

