

ABUNDANT CALIFORNIA

TABLE GRAPES: CELEBRATING THE HARVEST

OVERVIEW

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GRADE LEVEL: 3-5



CENTER FOR ECOLITERACY



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Center for Ecoliteracy
David Brower Center
2150 Allston Way, Suite 270
Berkeley, CA 94704-1377

For more information about this activity, email info@ecoliteracy.org or visit www.ecoliteracy.org.

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CALIFORNIA FOOD
FOR CALIFORNIA KIDS®

TABLE GRAPES: CELEBRATING THE HARVEST

LESSON OVERVIEW

What kid doesn't love grapes? These fun-to-eat little treats are also sweet tasting. The grapes we eat fresh are called table grapes, and are different from those made into raisins, grape juice, or wine. Table grapes are harvested by hand at the peak of ripeness, a process that requires skilled farmworkers.

In this lesson, students reflect on the important role of farmworkers by reading about the 1960s grape strike led by Cesar Chavez, Dolores Huerta, and others, and by planning a grape harvest celebration in their classroom. They also do a comparison tasting of different table grapes. In doing so, they not only learn about grapes and the grape harvest, but they also pay tribute to some of the people we depend on for our food.

For the taste test, use different varieties of fresh, California-grown grapes available from farmers markets or at your local grocer. For the harvest celebration, you may choose to highlight crops from your school garden in addition to grapes.

FOOD SYSTEM EMPHASIS

Harvesting

GRADE LEVEL

3-5

LENGTH

One to two 50-minute periods for taste testing and planning, with additional time for the celebration itself

LEARNING OBJECTIVES

Students will:

- Compare the tastes and textures of different table grape varieties grown in California.
- Learn about some of the people who harvest our food.
- Plan a harvest celebration focused on grapes.

STANDARDS CONNECTIONS

NEXT GENERATION SCIENCE STANDARDS

- ESS3.C: Human Impacts on Earth Systems. Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments.

CA HISTORY-SOCIAL SCIENCE CONTENT STANDARDS FOR CALIFORNIA PUBLIC SCHOOLS. KINDERGARTEN THROUGH GRADE 12

- 4.4. Students 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

COMMON CORE STATE STANDARDS - ENGLISH LANGUAGE ARTS

- RF.3.3, RF.4.3, RF.5.3. Read grade-level text with purpose and understanding.
- W.3.4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. W.4.4., W.5.4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

VOCABULARY

- **Boycott** - (verb) to refuse to buy or do something as a way to protest; (noun) a situation where people refuse to buy or do something as a way to protest
- **Harvest** - (noun) the gathering in of crops that are ripe; (verb) to collect or gather ripe crops

- **Plant variety** – a group of plants within a species that have similar characteristics
- **Protest** – (verb) to object strongly and publicly; (noun) the act of objecting strongly to something
- **Strike** – (verb) to refuse to work in protest over wages or other working conditions
- **Vine** – a plant with a long stem that grows along the ground or climbs on supports

MATERIALS

- Copies of “10 Cool Facts about Grapes,” “The Delano Grape Strike,” and “Planning a Harvest Celebration” student handouts
- Copies of “Taste Test” and “Fruit and Vegetable Adjectives” student handouts from *Savoring California: A Comparative Tasting of California Fruits and Vegetables* (<http://www.ecoliteracy.org/sites/default/files/CEL-CA-Thursdays-Tasting-Lesson.pdf>)
- Several different table grape varieties (see Preparation)
- Food or drinks for celebration
- Materials for chosen activities

PREPARATION

- Make copies of the student handouts. For the “Fruit and Vegetable Adjectives” student handout, you may make one copy for each small group or table, or project it onto a screen for the whole class to see. For “The Delano Grape Strike” student handout, you may choose to read the story aloud to students rather than make copies.

For Taste Test

- Purchase several different varieties of California-grown grapes, or use grapes from your school garden.

- Wash the grapes. For each variety, leave one grape cluster whole, and remove the remaining grapes from their stems and cut them in half. Place the whole cluster and cut-up grapes on a serving tray. Provide toothpicks for picking up samples.
- Read over the *Savoring California: A Comparative Tasting of California Fruits and Vegetables* lesson (<http://www.ecoliteracy.org/sites/default/files/CEL-CA-Thursdays-Tasting-Lesson.pdf>).

For Harvest Festival

- Decide on a location for the celebration. You might hold it next to your school garden or in your classroom or the school auditorium. Make the necessary arrangements for the location you choose.
- Choose a date and time for the celebration.
- As part of the celebration planning, students may decide what refreshments they would like to have. About a week before the celebration, ask parents for their help in providing food and drink, making clear what to bring and when and where to bring it. Communicate any food allergies or other restrictions as necessary.
- Plan to invite families and other community members to the celebration.

SAFETY NOTES

- Have students wash their hands thoroughly before conducting the taste test, and before serving or eating any food or drink at the celebration.
- Be aware of any grape seed allergies.

DIRECTIONS

- 1 Ask students whether they like grapes. Discuss their responses, encouraging them to articulate reasons for their views. Direct students to read the “10 Cool Facts about Grapes” student handout and encourage them to share any other facts they know about grapes.

- 2 Show students the grapes you have prepared for the taste test. Conduct a comparison tasting of the grapes, following the suggestions in the *Savoring California: A Comparative Tasting of California Fruits and Vegetables* lesson (<http://www.ecoliteracy.org/sites/default/files/CEL-CA-Thursdays-Tasting-Lesson.pdf>). Encourage students to use descriptive terms for the grapes, with the “Fruit and Vegetable Adjectives” student handout as a guide.
- 3 Describe how grapes are harvested (see Background), and invite students to imagine being a farmworker harvesting grapes. You might say, for example: “Imagine working outside all day in the hot summer sun. You move along the grapevines, checking for the ripest clusters. You carefully clip the ripe grapes from the vine and bend down to pack them into boxes. As you work the row, you repeat these steps again and again.” Ask students how they would feel doing this work.
- 4 Have students read the “The Delano Grape Strike” student handout or read it aloud to them. Lead a discussion about how the farmworkers worked together to make their situation better. Discuss other jobs that farmworkers do to help grow grapes, such as planting, sowing, pruning, and weeding.
- 5 Propose to participants that the class plan a harvest celebration to honor the people who help to bring us grapes and other food, as well as to celebrate the harvest.
- 6 Ask students how they would want to celebrate the grape harvest. Ask them what kind of food or drink they want to include in the celebration. List their ideas on the board. Be sure that the students include at least one activity that honors or thanks those who work to bring food to our tables. For example, they might:
 - invite a local grape farmer or farmworker to speak to the class (see Resources for possible places to find one);
 - create grape-related decorations;
 - make a bulletin board or slide show display of the life cycle of grapes;

- read stories about grapes (see Resources);
- invent a game to play about grapes;
- conduct a grape taste test;
- prepare a grape salad or other grape recipe;
- drink grape juice.

Be sure that the students include at least one activity that honors or thanks those who work to bring food to our tables.

- 7 If necessary, help students narrow down the activities to a manageable number. Help each team of two to four students choose an activity to plan and carry out. For example, a team might be in charge of creating a bulletin board or a slide show presentation.
- 8 Give each team a copy of the “Planning a Harvest Celebration” student handout. The team should list the jobs that would be involved in their activity and then decide who will be doing what task. Check each team’s completed handout to make sure that students have thought of every job and have divided up the jobs fairly.
- 9 On the day of the celebration, help students set up the event activities they have planned.
- 10 Enjoy the celebration!

EXTENDED LEARNING

- Use Harvest of the Month materials to explore other aspects of table grapes (see Resources). http://harvestofthemonth.cdph.ca.gov/documents/Summer/Grapes/Grapes%20-%20Educator%27s%20Newsletter_FINAL.pdf.
- Interview a family member, friend, or neighbor about their traditions for celebrating the harvest. See “Food Traditions” Interview lesson: <https://www.scribd.com/document/337307805/CEL-Food-Traditions-Interview-Lesson>.

- Learn more about Cesar Chavez and the movement to improve farmworkers' work and living conditions by reading one or more student-friendly books about him (see Resources).

RESOURCES

- *Harvest of the Month: Grapes*. http://harvestofthemonth.cdph.ca.gov/documents/Summer/Grapes/Grapes%20-%20Educator%27s%20Newsletter_FINAL.pdf.
- Possible resources for having a farmer come to your school:
 - Farm-Based Education Network. <http://www.farmbasededucation.org/>.
 - California Farm to School Network. <http://www.cafarmentoschool.org/about/>.
 - Bring the Farmer to Your School (in Los Angeles). <http://seela.org/bring-the-farmer-to-your-school/>.
- Books on Cesar Chavez:
 - *Cesar Chavez in His Own Words* by Sara Machajewski. Gareth Stevens Publishing, 2016.
 - *Harvesting Hope: The Story of Cesar Chavez* by Kathleen Krull. Harcourt, 2003.
 - *A Picture Book of Cesar Chavez* by David A. Adler and Michael S. Adler. Holiday House, 2010.
 - *Side by Side: The Story of Dolores Huerta and Cesar Chavez/Lado a Lado: La Historia de Dolores Huerta y César Chávez* by Monica Brown. Harper Collins, 2010. (This book is bilingual, written in both English and Spanish.)
 - *Strike: The Farmworkers' Fight for Their Rights* by Larry Dane Brimner. Calkins Creek, 2014. (Although the text of this book is geared for adults, it includes lots of good photographs appropriate for students.)

ASSESSMENT

Invite students to write a thank-you note to a farmer or farmworker, expressing their appreciation for the work they do to keep us fed.

In addition, ask students to evaluate their participation in planning the harvest celebration by rating how well they:

- performed their own tasks
- listened to each other's ideas
- worked with others in carrying out the activity

BACKGROUND

Table grape is the term for the grapes we eat fresh out of hand. Sweet and juicy, these grape varieties are often also seedless. Different grape varieties are used to make a range of products, including raisins, jam, jelly, juice, vinegar, wine, and grape-seed oil.

THE HISTORY OF TABLE GRAPES

While there are six grape species native to North America, most of the grapes we use today are varieties of the species *Vitis vinifera*. People first cultivated *Vitis vinifera* grapes around 6000 BCE, near what is now northern Iran. By 500 BCE, people were growing grapes throughout North Africa and much of Europe. When Europeans colonized North America, they brought *Vitis vinifera* grapes with them.

In the 1700s, Franciscan missionaries planted the first wine-making grapes in California. In 1839, the first table grape vineyard was planted in California.

In 1970, the average American ate 2.5 pounds of grapes each year. Today, the average consumption is 8 pounds a year.

HOW GRAPES GROW AND ARE HARVESTED

Scientifically speaking, grapes are actually berries, because they are small, juicy fruits with multiple seeds inside. Grapes grow on vines that must be supported by trellises and, if left unpruned, can reach 115 feet long. Grapevines can live 50 years and more, producing grapes year after year.

Unlike other fruits, grapes do not get any sweeter after picking. They must be harvested fully ripe, so the timing of the harvest is critical. To determine when the fields are ready, growers measure the grapes' sugar content, color, and berry size. During the harvest, trained professionals work down the rows of vines, choosing which clusters are ripe enough to clip.

Once picked, grapes are packed by hand into shipping containers, often right in the field. Fresh grapes can be easily damaged by rough handling, warm temperatures, and excessive moisture. They are quickly moved to cold storage facilities, and then shipped to their destinations in refrigerated trucks, rail cars, or ships.

CALIFORNIA TABLE GRAPE CROP

California's warm, dry climate is ideal for growing grapes. Ninety-nine percent of the table grapes grown in the United States come from California. The state produces over 60 different varieties of table grapes, with the most popular being:

- **Thompson seedless**, a pale-green oval-shaped seedless grape with a sweet flavor; it is eaten fresh and also made into raisins and juice
- **Flame seedless**, a large, round seedless red grape that is juicy and sweet
- **Crimson seedless**, a late-season, medium-sized seedless red grape that is crisp and juicy
- **Red globe**, a very large, seeded red grape with a firm flesh
- **Sugraone**, a slightly elongated, seedless green grape with a low-acid, sweet flavor and a crunchy texture
- **Scarlet royal**, a mid-season, seedless red grape that is sweet and beautiful

The California table grape season begins in late spring, when the first grapes are harvested in the Coachella Valley in the southern end of the state. By mid-July, Coachella's season ends and harvest moves north to the San Joaquin Valley, where it continues through late fall. This sequential harvesting means that California table grapes are available from May through January. During the winter months, growers prune and train the vines to produce the best-quality grapes and optimum yield.

A BRIEF HISTORY OF THE 1960S DELANO GRAPE STRIKE

Farmworkers are vital to our country's food system, and we rely on their labor to put food on our tables. In the 1960s, the working and living conditions of these farmworkers were often very poor, with low wages, meager housing, and little, if any, medical attention. In addition, labor surpluses meant that employers could easily replace any worker who demanded better conditions.

In September 1965, hundreds of Filipino farmworkers in Delano, California, went on strike after grape growers reduced their pay. The workers refused to harvest the ripened grapes. A few weeks later, the National Farm Worker's Association, led by Cesar Chavez, joined the strike.

Under Chavez's leadership, the Delano grape strikers adopted a principle of nonviolence, vowing not to fight back even if violence was used against them. This approach earned them sympathy from the general public, including student and church groups. In 1966, Chavez led a 340-mile march from Delano to Sacramento to draw attention to the ongoing strike, with more than 8,000 farmworkers and supporters participating in some or all of the march.

In 1968, the strikers called for a national boycott of California-grown table grapes to support the strike. At its height, more than 14 million Americans took part in the boycott. After almost five years, under pressure of the extended boycott, the Delano grape growers signed contracts that improved the living and working conditions of the farmworkers.

The strike ended in 1970, but low wages, exposure to pesticides, and work-related health problems continue to be issues for farmworkers today. Many of the people who work hard to feed our families often struggle to feed their own families.

HEALTH BENEFITS OF TABLE GRAPES

Table grapes are good sources of vitamins C and K, as well as antioxidants called polyphenols.

SELECTING TABLE GRAPES

When choosing grapes, select ones that are firm, plump, and firmly attached to the stems. Their stems should be green and flexible. Avoid sticky, moldy, or shriveled grapes, or stems that are dry and brittle.

Don't worry if you see a powdery-white coating on your grapes. This "bloom" occurs naturally and protects grapes from drying out or decaying. It is safe to eat.

To store grapes, keep them in the refrigerator, unwashed and in the bag they came in. They should keep up to two weeks. Rinse in cold water before eating.

10 COOL FACTS about grapes



1. Table grapes are the **grapes we eat fresh**. They are usually different varieties than the ones people dry into raisins or crush into juice.



2. Grapes are really berries! Like other berries, they are small, juicy fruits with multiple seeds inside.

3. “Seedless” table grapes actually do have seeds. They are just **hard to see** because they don’t have the hard coat that normal seeds have.

4. The average person in the United States eats about **8 pounds** of table grapes a year!

5. Grapes come in many colors, including red, green, purple, pink, and gold.



6. California

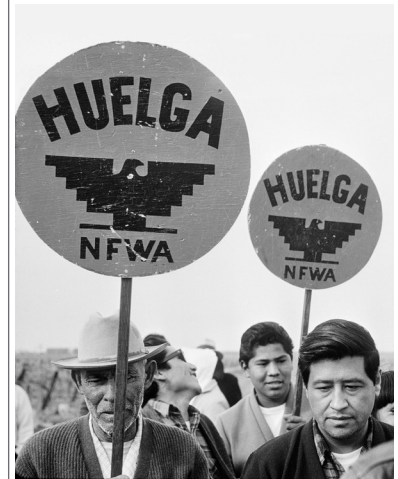
produces nearly all of the table grapes grown in the United States. In fact, **99 percent of them!**

7. Grapes grow best where it’s hot and dry. Most of California’s table grapes are grown in the **San Joaquin Valley and the Coachella Valley**, where they get lots of sunshine.



8. Grapes grow on vines that can grow up to 115 feet long! **Grapevines can live 50 to 100 years.**

9. Grapes are good sources of vitamins C and K, which our bodies need to grow. They also contain lots of **antioxidants** (an-tee-OX-i-dents).



10. Table grapes were at the heart of a **farmworkers’ protest** in the 1960s, the Delano Grape Strike.

THE DELANO GRAPE STRIKE

The grapes we eat fresh are all picked by hand. That means that someone—a farmworker—harvested each cluster from the vine. Farmworkers work very hard to feed us all and to support their own families.

Back in the 1960s, farmworkers' pay was very low. They sometimes had to live in shacks that gave little shelter from the heat or cold. And, they worried that if they complained, they would lose their jobs.

In September 1965, a group of farmworkers in Delano, California, got together to discuss what they could do. It was harvest time and the table grapes were ripe and ready to pick. The farmworkers decided to strike, refusing to harvest the grapes until they had better working conditions.

This was not an easy decision, because being on strike meant no pay at all. But, the strikers pooled their money, shared their food, and supported one another. They were determined to stick together, no matter how long it took.

Cesar Chavez and Dolores Huerta led the strike. Inspired by Martin Luther King, Jr. and Mahatma Gandhi, they encouraged the strikers to remain peaceful. They showed how nonviolence could be more powerful than violence.



To attract attention to the strike, Chavez led a 340-mile march from Delano to the state capitol in Sacramento. Hundreds of strikers participated in the march, which took more than three weeks. All over the country, people saw the peaceful march on the news and cheered on the strikers.

But the strike continued. After two and a half years, the strikers were tired. Most had lost their homes, their cars, and their other belongings. Many were ready to give up.

Chavez and the other strikers decided to go to ordinary Americans for help. They asked families to boycott, or stop buying, grapes. Over the next two years, more than 14 million Americans joined the boycott, giving the farmworkers the support they needed.

After almost five long years, the farmworkers finally triumphed. Their strike ended in 1970, when Delano grape growers signed contracts that gave farmworkers better pay and other benefits. By working together, being creative, and staying strong, the farmworkers had succeeded in making their lives better.



Today, there are many public symbols of appreciation for Cesar Chavez and Dolores Huerta, such as this statue in Napa Valley.

STUDENT HANDOUT

PLANNING A HARVEST CELEBRATION

Team Activity for Celebration: _____

List the jobs that need to happen for this activity to be successful. For each job, decide who will do it, what items are needed, and how and when it will happen.

Job	Who will do this job?	What is needed?	How will it be done?	When will it be done?



ABOUT THE CENTER FOR ECOLITERACY

The Center for Ecoliteracy is an internationally recognized leader in systems change innovations in education for sustainable living. Since 1995, the Center has engaged with thousands of educators from across the United States and six continents. The Center offers publications, seminars, academic program audits, coaching for teaching and learning, in-depth curriculum development, keynote presentations, and technical assistance. Books authored or coauthored by the Center for Ecoliteracy include *Ecoliterate: How Educators Are Cultivating Emotional, Social, and Ecological Intelligence* (Jossey-Bass, 2012); *Smart by Nature: Schooling for Sustainability* (Watershed Media, 2009); and *Ecological Literacy: Educating Our Children for a Sustainable World* (Sierra Club Books, 2005).

CREDITS

Project Director Zenobia Barolow

Author Leslie Comnes

Designer Karen Brown

Proofreader Mark Rhynsburger

Project Manager Alexa Norstad

PHOTOS

Cover iStock-185925494_grapes_Hyrma; iStock-108483523_grapevine_AndreaAstes; iStock_000017989383_bee_Antagain

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