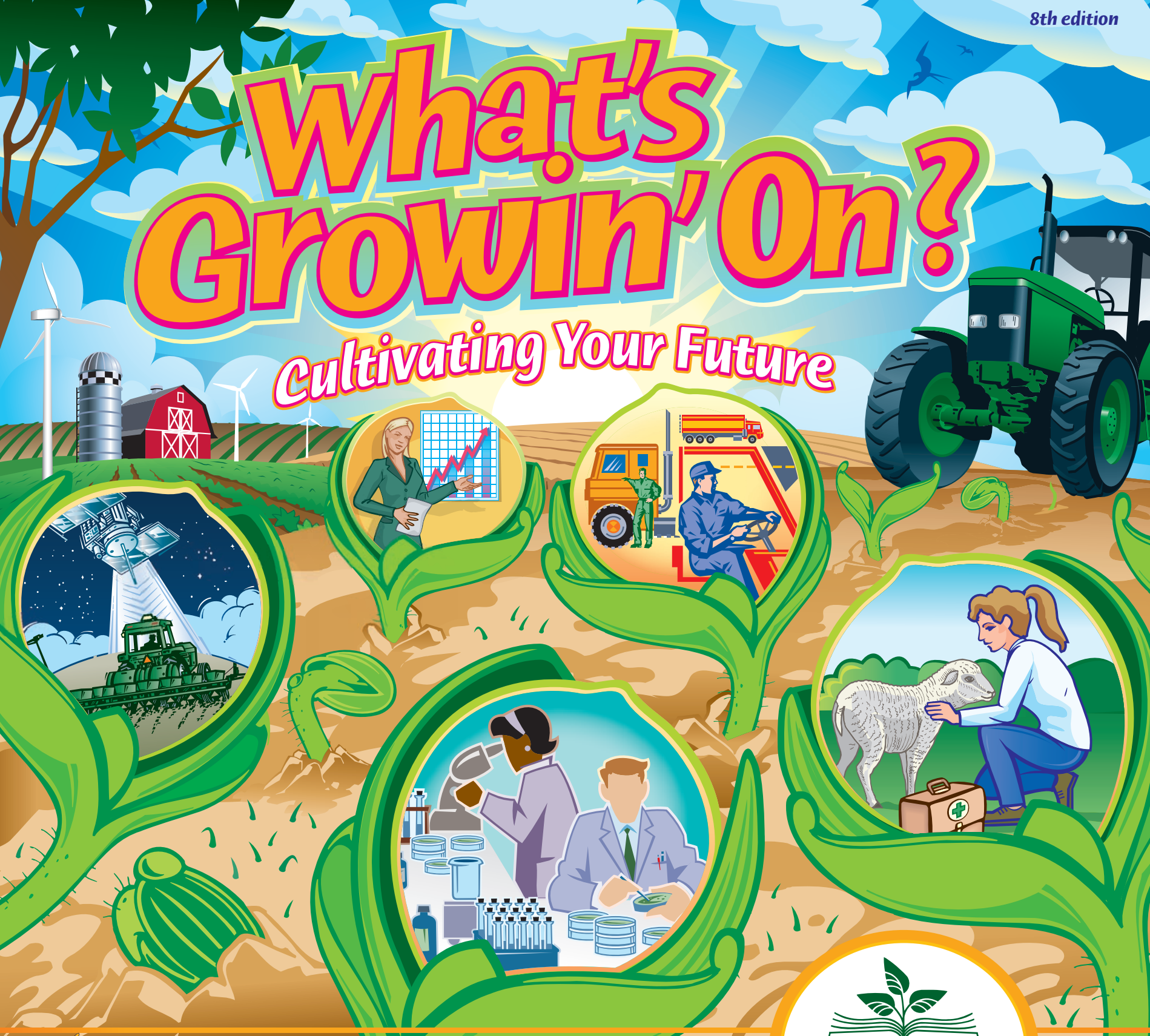


What's Growin' On?

Cultivating Your Future



Don't Wait, cultivate!

Sometimes it's hard to imagine the future... it's just so far away!

In agriculture, cultivation is the process of growing plants. When a farmer plants a seed, it is with the hope that in the future the seed will grow into a healthy, productive plant. During cultivation, a farmer must prepare the land, sow seeds, control weeds and pests, and ultimately harvest the crops. Cultivation requires an incredible amount of hard work, patience and preparation. With proper care and planning, the land will produce nutritious, useful or attractive plants for generations to come.

Just like farmers, what we do today significantly affects our future. It takes hard work, planning and patience to develop the skills needed for a successful career and future. So, what are you doing to cultivate your future? Believe it or not, the skills you are learning right now within your classroom will have a major impact on your adult life and future career. These skills, combined with your personal talents and passions, will set you on a path toward achievement.

If you work in agriculture, you're working for all of us! Agriculture is so much more than tending crops and milking cows. Today's agriculture requires an intricate web of scientists, growers, accountants, processors, marketers and even teachers to ensure that agriculture products are getting to us quickly and safely. Depending on your creativity, academic abilities, hobbies and interests, there is a fitting job for you in agriculture. But, don't take our word for it —

plant your seeds for the future
and you'll be amazed at
what will grow!

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A message for teachers

For eight consecutive years California Foundation for Agriculture in the Classroom has produced **What's Growin' On?**, a 16-page, interactive newspaper to help students discover the ways agriculture impacts their lives every day. This edition introduces readers to the abundant and diverse career opportunities in agriculture, food and life sciences. As a teacher you have the ability to prepare, or cultivate, students for these exciting careers by instilling in them important academic, critical thinking and interpersonal skills. You also have the ability to inspire and challenge students to dig deeper into the world around them. We are confident **What's Growin' On?** will help you in this commendable endeavor.

Each edition of **What's Growin' On?** is developed by educators and reviewed by leading agriculture industry experts to provide accurate and factual information about each topic. The activities on the following pages meet California Board of Education Content Standards for grades three through eight, while encouraging students to explore the food that feeds them, the fiber that clothes them, the materials that house them and the countless other ways agriculture is part of their lives.

Mechanical Movers



Simple Machines

Farmers haven't always had the modern equipment they use today. Historically, farmers used horses and mules to pull **implements** such as discs and plows to till the fields and feed the nation. Today, farmers use **complex** machines, such as tractors, instead of animals. But no matter how complex they are, every machine is made of one or more of the six types of **simple** machines—the inclined plane, wedge, screw, wheel and axle, lever, and pulley.



Inclined plane:
A ramp that makes moving a heavy weight up or down easier.



Wedge: Makes it easier to split things apart when **force** is applied.



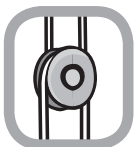
Screw: Concentrates the force applied to move something away from you.



Wheel: Allows things to roll instead of slide when force is applied.



Lever: Makes it easier to move heavy things by using a pivot point.



Pulley: Makes lifting easier by changing the direction of a pull.

Complex machines like tractors use modern technology to make production more efficient. Farmers use tractor-mounted **GPS** receivers to collect data, such as soil samples from the ground, and record the sample's exact location. Software interprets the data collected and helps a farmer determine how much fertilizer, water and weed control to apply to specific areas of the field. When combined with an auto-steer system, GPS technology can automatically guide tractors as they perform a task.

Techno-Farmer



Activity

Locate and label to following simple machines and complex technology on the tractor:

- GPS
- Auto-steer
- Lever
- Screw
- Wheel



Standards: Science- Grade 5: 6g; Grade 7: 7d

Career Highlight

Name: John McClain

Career: Agriculture mechanic

Degree: A.A. in diesel mechanics

Skills: Strong geometry skills are essential to my career. I often use the Pythagorean Theorem, a math skill I learned in middle school, to take accurate measurements and determine the angles of different mechanical parts.



Tractors: Then and Now

Agriculture engineers have designed tractors to increase the efficiency of production, which has greatly influenced how farmers plant, tend and harvest their crops. Determine the answers to the following questions, assuming a farmer works 12 hours each day.

1830: Pulling a plow with a team of horses enabled farmers to plow .08 acres per hour.

How many acres could a farmer plow in one day? _____

How long would it take to plow 349 acres? _____

2000: Modern tractors enable farmers to plow 8 acres per hour.

How many acres could a farmer plow in one day? _____

How long would it take to plow 349 acres? _____

How much longer would it take to plow a 349-acre field with a team of horses than a tractor? _____

Standards: Math- **Grade 3:** Number Sense (NS) 2.1, 2.4, 2.8; Algebra and Functions (AF) 1.4, 2.1; Measurement and Geometry 1.4; Mathematical Reasoning (MR) 1.0; **Grade 4:** NS 1.3, 2.1, 3.2; MR 1.0; **Grade 5:** NS 2.2; MR 1.0; **Grade 6:** NS 1.2; AF 2.1, 2.2, 2.3; MR 1.0; **Grade 7:** MR 1.0

Newspaper Activity

Look through the newspaper ads and find five products that use simple machines. Determine the mean, median and mode for the prices of the different products.

Standards: Math- **Grade 3:** Number Sense (NS) 3.3; **Grade 4:** NS 1.2, 2.1, 3.4; Statistics, Data Analysis and Probability (SDP) 1.2; **Grade 5:** SDP 1.1; **Grade 6:** SDP 1.1

Playing it Safe



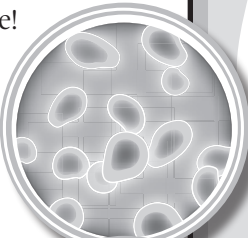
The "Good" Guys

Microbes live almost everywhere and while some are harmful, many make life easier. Without microbes to decompose material, the world would be covered with waste!

Saccharomyces cerevisiae (sack-a-roe-MY-seas sair-a-VIS-e-eye), also known as yeast, makes bread rise.

Bacillus thuringiensis (bah-SIL-lus thoo-RIN-jee-en-sis) is a natural pesticide found in the soil.

Lactobacillus acidophilus (lack-toe-bah-SIL-lus a-sid-OF-ill-us) turns milk into yogurt.



Standards: Science- Grade 3: 3c; Grade 4: 4d

Career Highlight

Name: Rodney Taylor

Career: School nutrition services director

Highest degree: B.S. in public administration

Skills: My love for reading, cultivated by excellent English teachers, has allowed me to expand my horizons in seeking greater educational opportunities. Today, my education and passion for nutritious foods helps me bring fresh, safe and healthy foods into school cafeterias.



In the Garden

Q: *It's harvest time in the garden! As I walk through the vegetable plot, I pick a cherry tomato. Should I eat it?*

A: Yes, and wash it first! Wash all fruits and vegetables thoroughly before eating to remove soil, organisms and other matter. Microorganisms, also known as microbes, are tiny organisms that can be beneficial or harmful. "Bad microbes" can make us sick.



At Home

Q: *At a family picnic I grab a ham sandwich, but set it down to play soccer.*

It's been sitting on the table for a few hours but it still looks okay. The weather has been very warm. Should I eat it?

A: No! Whether hot or cold, food temperature is very important. Hot foods should be kept hot, and cold foods should be kept cool. Most meat should be cooked to 160°F to kill **pathogens**, microbes that cause disease. Use a meat thermometer to measure the internal temperature. Place uneaten cooked meats promptly in the fridge.



At School

Q: *All my friends are already at our favorite lunch table. I went to the restroom but skipped washing my hands to save time. I pull a sandwich out of my lunch bag. Should I eat it?*

A: Wait! First, wash your hands! Use soap and hot water to remove any unseen pathogens and wash for at least 20 seconds. Washing your hands can help reduce the risk of **foodborne illness**.



Activity

Use various sources to research historical foodborne illness outbreaks, such as the life of Typhoid Mary or the death of Alexander the Great. Using your local newspaper as a guide, create a front page story about the historical incident including accurate dates, facts and sources.

Standards: Health- Grade 4: 1.4.N; Grade 5: 1.5.N; Grade 7: 1.3.N, 1.4.N; Grade 8: 1.3.N, 1.4.N
ELA- Grade 3: Writing 1.3; Written and Oral English Language Conventions (WOLC) 1.0; Grade 4: Writing 1.5, 1.6, 1.7, 1.8; WOLC 1.0; Grade 5: Reading 2.1, 2.2; Writing 1.3, 1.4; Grade 6: Reading 2.4; Writing 1.4; Grade 7: Reading 2.1, 2.2; Writing 1.4, 1.5, 1.6; Grade 8: Reading 2.4; Writing 1.4



Activity

Use the equations below to convert degrees Celsius to degrees Fahrenheit and vice versa.

$$C^{\circ} = \frac{5}{9} F - 32$$

$$F^{\circ} = \frac{9}{5} C + 32$$

Your barbequed pork chops come off the grill with an internal temperature of 60°C. For safe consumption, experts recommend cooking until the internal temperature reaches 160°F. Should you eat it?

Your refrigerator is set at 32°F. Food safety guidelines recommend the internal temperature be no higher than 4.5°C. Is your refrigerator cold enough?

Standards: Health- Grade 4: 1.4.N; Grade 5: 1.5.N; Grade 7: 1.3.N, 1.4.N; Grade 8: 1.3.N, 1.4.N
Math- Grade 6: Algebra and Functions (AF) 1.0; Grade 7: AF 1.0; Measurement and Geometry 1.1



Activity

Use the facts on this page to write a food safety rhyming song or rap. It should be at least 20 seconds long. Share the lyrics to your "hand washing" song with the entire class.

Standards: Health- Grade 4: 1.4.N; Grade 5: 1.5.N; Grade 7: 1.3.N, 1.4.N; Grade 8: 1.3.N, 1.4.N
ELA- Grade 3: Listening 1.9; Grade 4: Writing 1.1, Listening 1.9, Speaking 2.4; Grade 5: Writing 1.1; Grade 6: Listening 1.7; Grade 7: Listening 1.6; Grade 8: Speaking 2.5

It's a Small World

Today it's easier than ever to transport ourselves, and goods, thousands of miles. Through trade and efficient transportation, individuals around the world can enjoy California's 400 different agricultural commodities. By investigating the way we transport goods, it's easy to see it really is a small world after all!

Activity

Use the statistics about U.S. exports and imports to create an appropriate graph. Label the x- and y-axis.

Standards: Mathematics- **Grade 4:** Statistics, Data Analysis and Probability (SDP) 1.1; **Grade 5:** SDP 1.2; **Grade 7:** SDP 1.1

TOP CA EXPORTS	TOP CA IMPORTS*
Almonds \$1,879,181,000	Coffee \$123,646,000
Dairy \$963,057,000	Bananas and Plantains \$103,607,000
Wine \$815,635,000	Other Fresh Fruit \$79,459,000
Table Grapes \$553,480,000	Raw Beet and Cane Sugar \$35,510,000
Cotton \$505,258,000	Processed Fruits and Vegetables \$26,450,000

*Based on CA proportion (13%) of all U.S. imports

Tracking Trade

California's top commodity **export** is almonds. California produces 75% of the world's almond supply and more than 99% of the United State's almond supply. The top export **market** for California almonds is Spain, which receives a total of 159 million pounds annually. Other top markets for almonds include Germany, China, India and the United Arab Emirates.

Californian's top **import** product is bananas. The countries we import the largest quantity of bananas from include Costa Rica, Ecuador, Guatemala and Honduras.

Activity

Draw lines connecting California to the top almond importing countries, using arrows to illustrate the direction of transportation. Next, use a different color to draw lines connecting California to the top banana exporting countries, using arrows to illustrate the direction of transportation.

Standards: History/Social Science- **Grade 3:** 3.1; **Grade 4:** 4.1



Railroads



Completed in 1869, the first transcontinental railroad revolutionized the transport of goods and passengers across the nation. In 1877 the refrigerated van, a railway goods wagon with cooling equipment, further advanced agricultural trade. The refrigerated van circulated air through ice and then the entire wagon to keep the perishable contents from going bad. The cooled wagons made it possible to transport meat and produce throughout the U.S.

Activity

Investigate the history of the first transcontinental railroad and the significance of American immigrants in its construction. Use primary source databases, such as the Library of Congress, to help with your research. Write a fact-based fictional narrative from the viewpoint of an immigrant laborer.

Standards: ELA- **Grade 3:** Reading 2.1; Writing 1.0, 2.1, 2.2; **Grade 4:** Reading 2.2; Writing 1.0, 2.1, 2.3; **Grade 5:** Reading 2.1, 2.2; Writing 1.1, 2.1; **Grade 6:** Reading 2.1, 2.4; Writing 1.2, 2.1; **Grade 7:** Reading 2.2; Writing 2.1; **Grade 8:** Writing 2.1 History- **Grade 4:** 4.4.1; **Grade 8:** 8.6.2



Ships, trains, trucks and airplanes are all used to transport agricultural goods. Within the borders of the U.S., approximately 41% of agricultural goods are transported by truck, 40% by rail and 19% by barge. Represent these numbers in percent, decimal and fraction form.

Standards: Math- **Grade 4:** SDP 1.0; **Grade 5:** Number Sense (NS) 1.2; SDP 4.1; **Grade 6:** NS 1.2; SDP 2.0

	Percent	Decimal	Fraction
Sea			
Rail			
Road			

Career Highlight

Name: Rafael Ambriz Ruiz
Career: Truck driver
Degree: High school diploma, commercial driver's license

Skills: As a kid, I always liked big equipment. When studying to get my Class A license I had to use the math and reading skills I learned growing up. A good truck driver must be able to think logically and know the rules of the road.



Technically Terrific

What is Biotechnology?

Biotechnology is a big word! We can break it down by looking at its Greek roots.

bio – life **tech** – art or skill **nology** – to study

Biotechnology: The art of using living organisms to provide useful products, processes and services to humanity.

Activity

What are other words that have the prefix **-bio** or suffix **-logy**? List the words and definitions below.

Bio- _____

Definition: _____

_____ -logy

Definition: _____

Standards: ELA- Grade 3: Reading 1.1, 1.2; Grade 4: Reading 1.2, 1.3, 1.4; Grade 5: Reading 1.2, 1.4; Grade 7: Reading 1.2

Career Highlight

Name: Kristen Bennett

Career: Plant scientist

Degree: PhD in plant biology

Skills: In middle school I belonged to 4-H and learned many leadership and teamwork skills by holding different officer positions in my club. I use these skills in my job today to lead my team in making scientific discoveries that will benefit farmers, consumers and the environment.



Let's Look At How It Works

Step 1

Scientists identify a **trait** within a living organism that they would like to change. For example, it would be useful to change yellow corn with the trait "easily eaten by insects" into yellow corn with the trait "toxic to insect pests." Useful traits are encoded by "genes of interest."

Step 2

Scientists may look for "genes of interest" anywhere in nature. All living things use **DNA** to encode genetic information, which is organized into units called **genes**. One or more genes will work together to encode a trait. For example, many bacteria have genes that allow them to produce molecules toxic to insects.

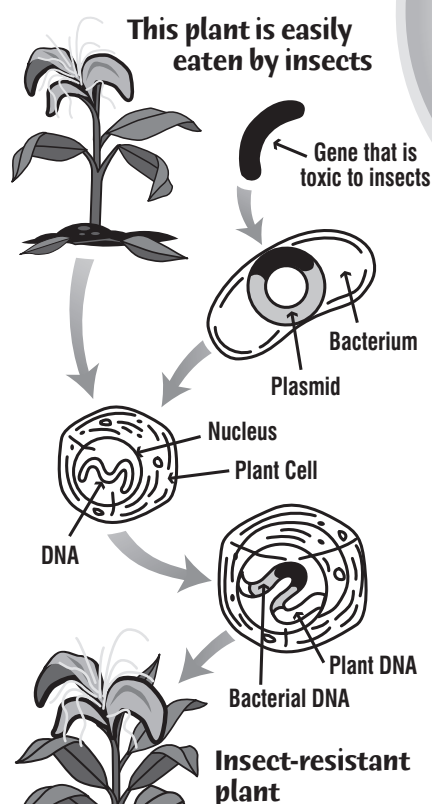
Step 3

Scientists isolate a gene of interest from a donor organism's DNA and make many copies of it—this process is called cloning. A gene may be transferred into a single-celled organism, such as a bacterial cell, on a special loop of DNA called a **plasmid vector**. The bacterial cells are encouraged to grow and divide, making many identical copies of the plasmid carrying the gene of interest.

Step 4

Finally, yellow corn plant cells take up the plasmids and the gene of interest integrates into the plant DNA. Resulting plants will have the gene of interest and will express the useful trait.

In fact, scientists have done this by adding a gene called "Bt" to the genetic information found in yellow corn!



Activity

Scientists use biotechnology to improve the quality of agriculture products for the farmer, consumer or environment. Imagine you are a scientist. Create an experiment to improve an agriculture product that affects you.

1. What animal or plant do you think could be improved to benefit society?
2. Using biotechnology, how could you improve it?
3. What other plant or animal could provide the desired trait you need for your experiment?
4. Write a hypothesis for your experiment.

Standards: Science- Grade 4: 6c; Grade 6: 7a; Grade 7: 1c, 2c, 2e

Is it New?

Biotechnology may sound new, but it has been around for thousands of years! Since 1800 B.C., early agriculturalists have used microbes for the **fermentation** process of making bread and producing cheese. What is new is the high-tech tools scientists use to modify these living organisms.

Biotech Timeline

Yesterday

Plant and animal sources of medicines discovered, cultivated and harvested.

Today

Increased pest and disease resistance.

Increased nutrients in plants, such as vitamins and minerals.

Scientists are now introducing "Golden Rice," a transgenic variety of rice that contains beta-carotene. To make Golden Rice, genes for making beta-carotene were added to conventional rice. Beta-carotene is a pigment that gives carrots and other vegetables their orange color. Beta-carotene is converted into vitamin A in the human body. Golden Rice can help prevent childhood blindness and other health problems in children that do not get enough vitamin A in their normal diet.

Tomorrow

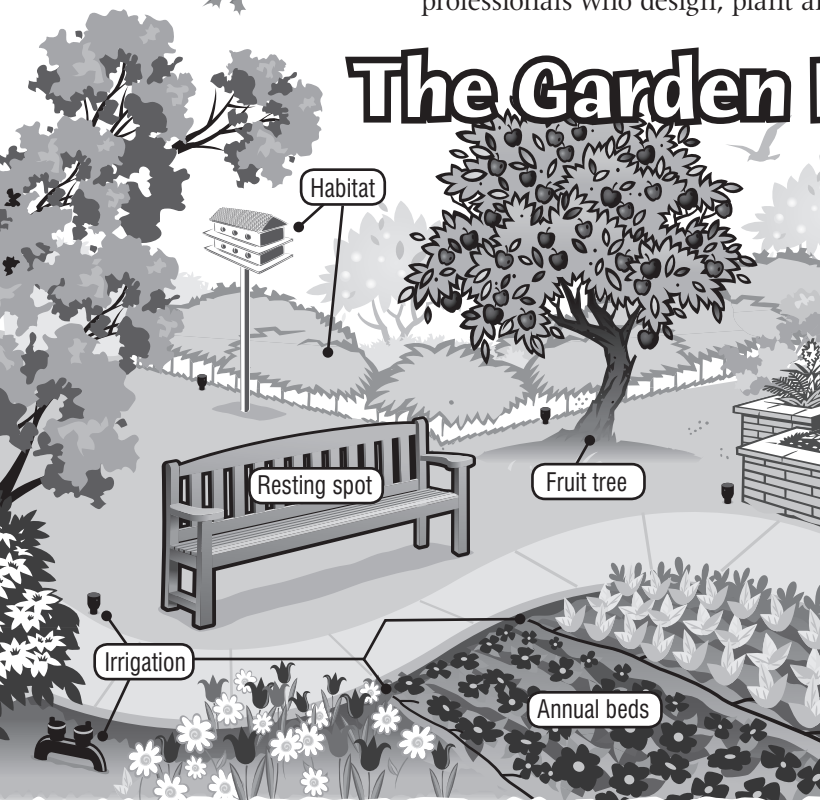
Potential for resource conservation, as more food can be grown on less land with fewer impacts on soil and water resources.

Potential to give consumers more food choices, like allergy-free peanuts.

This Land is Your Landscaping

Look around outside and observe what's in your **landscape**. Who created it? From plantings around a luxury hotel, professional sports field, shopping center and even your own backyard, chances are someone in the landscape industry put it there. Landscapers are professionals who design, plant and maintain outdoor areas.

The Garden Landscape



Landscapers are challenged to find a balance between beauty and function. Depending on the project, landscapers try to create and maintain an environment that is pleasing to the eye, but also provides a useful space to play, grow and enjoy!

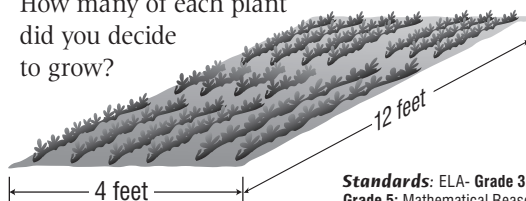
- Fruit tree: produces fruit year after year while providing shade
- Irrigation: controls water **distribution** and reduces water loss
- Habitat: provides a home for birds, small animals and beneficial insects
- Resting spot: a place to enjoy your landscape
- Annual beds: for growing vegetables and flowers

Standards: Science- Grade 3: 3b, 3c; Grade 4: 3a

In Their Boots

Spend a day in their shoes! Landscape design is more than just picking out pretty plants; it also takes a great amount of spatial reasoning and careful measuring. Design a warm or cool season vegetable bed for your dream garden.

1. Using a separate piece of graph paper, draw (to scale) a vegetable bed that measures 4 feet by 12 feet.
2. Choose your crops from the chart and plot each plant within your bed. Keep in mind spacing and scale. Create a legend. How many of each plant did you decide to grow?



Standards: ELA- Grade 3: Measurement and Geometry (MG) 1.0; Grade 4: MG 1.0; Grade 5: Mathematical Reasoning (MR) 2.3; Grade 6: MR 2.4; Grade 7: MG 1.3; MR 2.5

Who Works Here?

Arborist
Wholesale nursery owner
Irrigation technician
Landscape designer
Entomologist
Ornithologist
Horticulture therapist
Horticulture teacher
Construction worker

Research one of the landscape-related careers listed above. On a separate piece of paper, write a multi-paragraph response addressing the questions below. Include citations for your sources.

What is the role of this person in the landscape industry?

Do you think you would enjoy this job? Why or why not?

Standards: ELA- Grade 4: Reading 2.2; Writing 1.5, 1.6, 1.7; Grade 5: Reading 2.3; Writing 1.3, 2.3; Grade 6: Writing 1.4, 2.3; Grade 7: Writing 1.4, 1.5; Grade 7: Reading 2.2; Writing 1.4, 1.5, 2.3b

Career Highlight



Name: Jajuan Francis
Career: Landscape maintenance
Degree: High school diploma

Skills: My favorite subject in school was science. I especially loved botany, the study of plant life and development. I use this knowledge in my job daily as I care for the plants that surround our beautiful State Capitol building.

From Seed to Sushi



Objective:

Be the first player to get your rice from seed to sushi.

Materials:

1. Game pieces (coins, colored paper, bottle caps, etc.) – 1 per player
2. A die - 1 per group

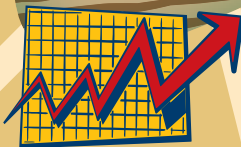
Directions:

Divide the class into groups of 3 to 5 players. Each player rolls the die—the person with the greatest number will play first. On your turn, toss the die and move your game piece the number of spaces indicated. Read the scenario on the space aloud. As the following players roll the die and continue play, you may work on the problem. On your next turn, you must correctly solve the challenge. If solved correctly, you may roll the die and move on to the next challenge. If incorrect, you must wait until your next turn for another attempt to answer the challenge correctly.

Two or more players can be on one space at the same time and work together to solve the problem. Players can check another player's answer on page 16.

Start

1. An *agriculture accountant* prepares a budget for the farm. She estimates your expenses will total \$185,300 and your income will total \$235,100. Approximately what will the net profit be?



2. An *agriculture economist* forecasts the market demand for rice. This year he determines you will have a good market for approximately 392,000 pounds of rice. If an acre produces 8,000 pounds of rice, how many acres should you plant?



3. An *insurance salesperson* sells you crop insurance, reducing your risk of financial loss in the case of a natural disaster or unstable market. **Move ahead two spaces.**

2

4. You have a GPS unit installed on your tractor by a *GPS technician*. Describe two benefits of owning GPS technology as a rice farmer. (Hint: See page 3)

5. A *tractor driver* levels the field and prepares the ground for planting. Complex machines, such as tractors, are made of simple machines. Name one of the six simple machines and explain how this machine makes work easier and faster. (Hint: See page 3)



Field Preparation



2

6. A *fertilizer salesperson* advises which nutrient to add to the soil for plant growth. Diagram a plant to illustrate how sugar, water and nutrients are transported in a plant. Label the roots, stem, leaves, flower and nodes.



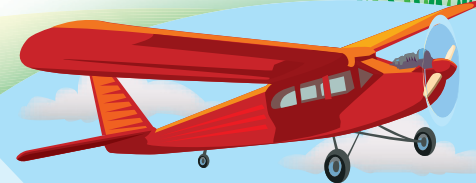
7. A *rice breeder* has created a new rice breed that is resistant to disease and pests. This rice will help reduce costs and increase rice quality. **Move ahead two spaces.**



8. A *seed salesperson* visits the farm. You buy seed which costs \$36 for a 100 lb. bag. Later that day, a seed salesperson from a different company calls offering 500 lb. bags for \$195. Did you get the best deal? What is the difference in cost per pound?



9. A *water district manager* works for the state of California monitoring the amount of water used for agricultural purposes. If you flood a 4,500 ft. x 5,000 ft. field to a depth of 5 inches, how many total cubic feet of water must be applied?



10. A *pilot* plants the rice seed into the water via airplane. Create a six-line rhyming poem about what the pilot sees on the farm from the sky.

11. Your head *irrigator* notices one of the fields is not getting enough water. Upon further investigation, she discovers a water pump is broken. It takes two hours to fix the problem. **Move back two spaces.**



Seeding

2

12. A *pest control advisor* monitors pests, disease and weeds and recommends treatments to reduce the threat of crop loss. Because of his accurate advice, you were able to control a pest outbreak early. **Move ahead one space.**

1

13. An *agricultural lender* loans you money to buy new harvesting machinery. You take out a five-year \$120,000 loan with a fixed annual interest rate of 5.5%. At this rate, how much money will it take to pay off your loan?



14. The *agriculture mechanic* is repairing your tractor so it is in top-notch shape for the harvest. While replacing a part, she realizes a screw is missing. What type of a machine is a screw? Write a complete sentence about how a screw works mechanically. (Hint: See page 3)



15. A *conductor* operates the train that transports your rice to a mill. The mill is 54 miles away. The train took 45 minutes for the trip. What was the average speed of the train?



16. The *storage manager* oversees that the rice is dried and stored properly until the rice mill is ready to process it. The storage warehouse is 48% full and contains 139,000 pounds of rice. How much rice can the storage warehouse hold at maximum capacity?



17. The *mill manager* uses leadership and teamwork to manage the individuals running the mechanical processing equipment at the rice mill. Prove you are a leader by choosing someone in your group to receive a "raise." **They get to move ahead one space.**

18. After processing, the rice is graded and examined for quality and food safety by a *USDA inspector*. The highest quality grade of rice (Grade 1) allows no more than 0.1% of rice grains to be broken. If he observes 1,125 grains of rice, how many can be broken?



19. An *industrial technologist* designs economical and effective packaging that keeps rice fresh and nutritious for a long period. Use a dictionary to investigate the term "industrial technologist." Write the definition on a separate piece of paper.



20. A *graphic designer* creates a label for your rice packaging that will make it more attractive to consumers. Create a name for your rice farm and draw a label for your rice products.



Sales and Distribution

21. You hire a *Web site developer* to create a site that will promote your product and to tell your family's story. Write a paragraph for the site about the hard work and many steps it takes to produce a bag of rice.



22. Many *teachers* work diligently to teach students where their food comes from. Agriculture in the Classroom helps by providing teacher resources about rice and other products. If 56,000 teachers download a rice resource and use it in their classrooms, how many students learn about rice? Assume 28 students per classroom.

23. To help promote your product you hire an *advertiser*. Name three common ways to promote a product to a consumer. (Hint: See page 10)



24. A *truck driver* transports the processed and packaged product to grocery stores and restaurants nationwide. She drives 55 miles per hour for 2 hours and an additional 45 miles per hour for 1 hour on a one-day delivery. How far did the truck drive in all?



This activity provides just a glimpse of the various careers related to food production and meets academic standards for grades 3-8 including English-language arts, mathematics, science, and visual and performing arts.

To Market, to Market

"To market, to market, to buy a fat pig, home again, home again, jiggy-jig."
-Mother Goose Nursery Rhyme

Logos and Labels

Study antique and modern California fruit labels. Create your own label for an agriculture product. Share your creation with the class and explain how your label creates **brand recognition**.

Standards: Visual Arts- **Grade 3:** Creative Expression 2.4; **Grade 4:** Historical and Cultural Context 3.1; **Grade 5:** Connections, Relationships, Applications 5.2 ELA- **Grade 3:** Listening and Speaking (LS) 1.7, 1.8; **Grade 4:** LS 1.7, 1.9; **Grade 5:** LS 1.4, 1.5, 1.6, 1.8; **Grade 6:** LS 1.6, 1.7; **Grade 7:** LS 1.5, 1.6 Health- **Grade 4:** 2.2.N; **Grade 5:** 2.3.N

Activity

Use the local newspaper to find ads that use adjectives to persuade consumers to buy a product. Make a list of adjectives that would encourage you to buy a product.

- _____
- _____
- _____
- _____
- _____

Standards: ELA- **Grade 3:** Written and Oral English Language Conventions (WOLC) 1.2; **Grade 7:** WOLC 1.3 Health- **Grade 4:** 2.2.N; **Grade 5:** 2.3.N

Career Highlight

Name: Matthew Salvo
Career: Graphic designer
Degree: B.A. in graphic design



Skills: In art class, I learned about perspective and composition. These skills have made me a better artist today as I design logos and create marketing materials that portray an agricultural company or organization in a simple yet powerful way.

Four P's of Marketing

Product: Items that people want or need to purchase.

Products can also be a service, such as lawn-mowing or ranch management.

People will choose items based largely on quality and appearance.

Price: The amount charged for an item.

Prices are reflective of the number of items available (supply) and the number of items people want (demand).

If demand goes ↑ or supply goes ↓ = price ↑

If demand goes ↓ or supply goes ↑ = price ↓

Place: The location and availability of an item for sale.

Places to purchase may include:

- Grocery stores
- Specialty stores
- Farmers market
- Online
- Catalogs

Standards: Health- **Grade 4:** 2.2.N; **Grade 5:** 2.3.N

Promotion: Communicating the value and features of an item for sale.

Advertising

Print: flyers, billboards, newspaper ads
Electronic: radio or television commercials, online

Word-of-mouth

Brand recognition

Colors and images
Slogans
Name

What is a Marketing Plan?

A marketing plan is a written document outlining how a company will interest potential customers and buyers, persuading them to purchase the items for sale.

"Alex's A+ Peaches" Marketing Plan by Alex

Identify the product: *Peaches*

Identify the market: *My teachers and friends at school.*

Create a catchy slogan or appealing logo: *A+ Peaches give you brain power... every hour!*

Research competitors' products and prices: *Henderson Peaches - \$1.50/lb.*

Set a competitive price: *\$1.00/lb.*

Advertise and promote the product: *Put signs up in the cafeteria.*

Sell and distribute the product: *Bring peaches to sell at lunch on Friday.*

Activity

Design a marketing plan (individually or in a small group) for a product of your choice, using Alex's A+ Peaches as a model. Design a logo or record a radio jingle. Present your plan to the class.

Standards: ELA- **Grade 3:** Written and Oral English Language Conventions (WOLC) 1.1; Listening and Speaking (LS) 1.5, 1.6; **Grade 4:** Writing 1.1; WOLC 1.1; **Grade 6:** WOLC 1.1 Health- **Grade 4:** 2.2.N; **Grade 5:** 2.3.N

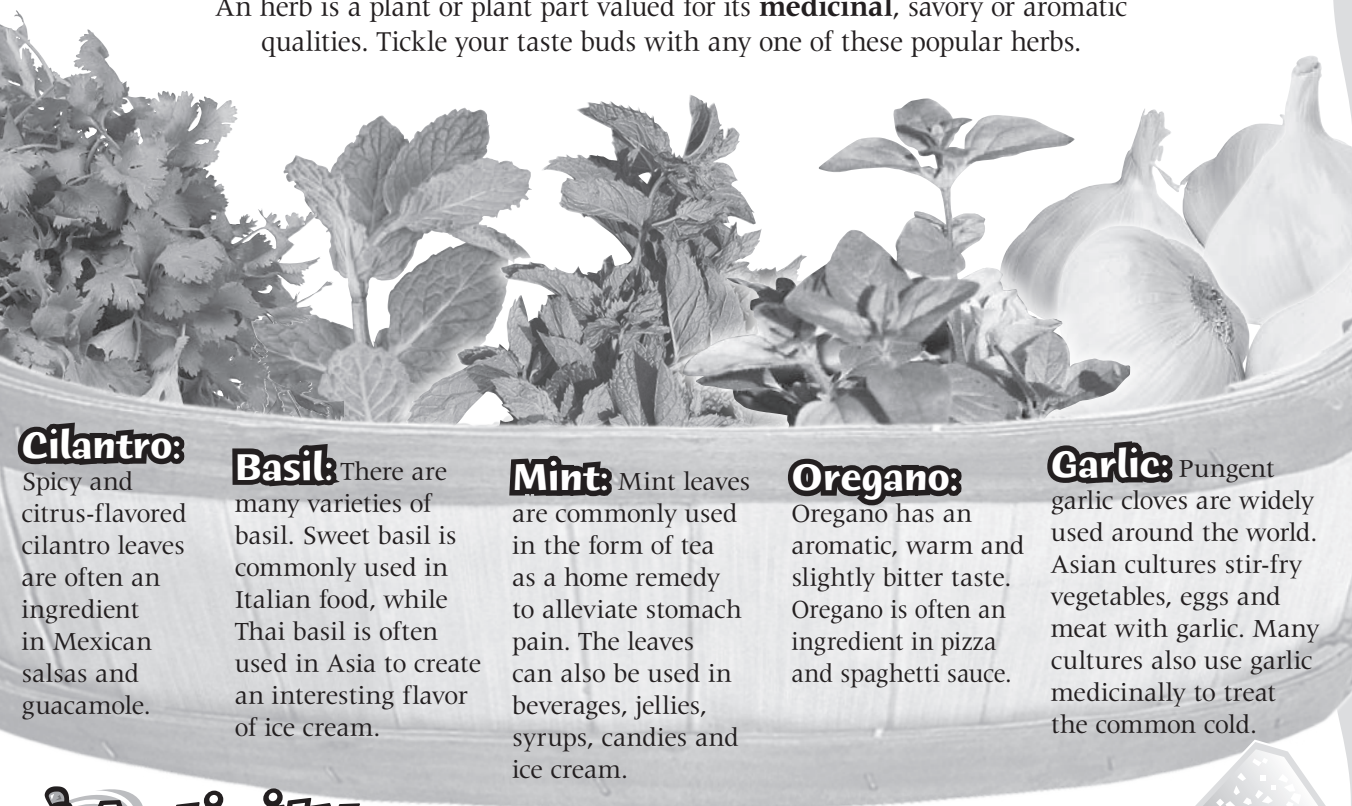


California Grown

California Grown is a marketing campaign created to promote California produced agricultural products. It encourages Californians to be proud of our homegrown products and to buy locally. The campaign works with hundreds of retail locations throughout the state to promote California grown food, clothing and shelter. The familiar logo informs customers which products are grown in the Golden State.

Tickle Your Taste Buds

An herb is a plant or plant part valued for its **medicinal**, savory or aromatic qualities. Tickle your taste buds with any one of these popular herbs.



Cilantro:

Spicy and citrus-flavored cilantro leaves are often an ingredient in Mexican salsas and guacamole.

Basil:

There are many varieties of basil. Sweet basil is commonly used in Italian food, while Thai basil is often used in Asia to create an interesting flavor of ice cream.

Mint:

Mint leaves are commonly used in the form of tea as a home remedy to alleviate stomach pain. The leaves can also be used in beverages, jellies, syrups, candies and ice cream.

Oregano:

Oregano has an aromatic, warm and slightly bitter taste. Oregano is often an ingredient in pizza and spaghetti sauce.

Garlic:

Pungent garlic cloves are widely used around the world. Asian cultures stir-fry vegetables, eggs and meat with garlic. Many cultures also use garlic medicinally to treat the common cold.

Snacks with Spice

Herbs are an excellent way to add flavor to a nutritious snack. Try this snack idea that is easy to make in the classroom, school garden, or at home!



Finger Salad

INGREDIENTS

- 1 lettuce leaf
- ¼ cup shredded seasonal vegetables
- 2 tsp. herb of your choice
- 1 tsp. salad dressing
- (makes 1 serving)

Wash your hands and rinse fresh fruits and vegetables. Place shredded seasonal vegetables, such as carrots, kohlrabi or cucumbers, on top of a lettuce leaf. Sprinkle your favorite herb on top. Roll up the leaf and dip into a healthy salad dressing. Bon Appétit!

Activity

Rewrite the recipe above to make enough servings for your entire class! (Hint: 1 tsp. is equivalent to 1/48 cup)

- ___ lettuce leaves
- ___ cups shredded vegetables
- ___ cups herbs
- ___ cups salad dressing

Standards: Math- Grade 3: Number Sense (NS) 3.2, Grade 5: Number Sense (NS) 2.2, 2.3, 2.4, 2.5; Grade 6: NS 1.0, 2.1, 2.4

Activity

Which herbs would you use to flavor these foods? Use the information above to add pizzazz to your plate!

- Salsa: _____
- Ice cream: _____
- Tea: _____
- Stir-fry: _____
- Pizza: _____
- Pasta: _____

Standards: ELA- Grade 3: Reading 2.3, 2.6; Grade 4: Reading 2.2

Not so Salty

Salt is sodium chloride (NaCl). Sodium is an element that is needed for good health, but most people get more than they need. The American Heart Association recommends decreasing salt intake to reduce the risk of high blood pressure and heart disease. Using fresh or dried herbs to flavor food is a smart way to cook.

Standards: Health- Grade 3: 7.1.G; 1.3.P; Grade 7/8: 1.1.N, 1.2.N, 1.5.N, 1.8.N, 1.10.N



Imagine this...

Which herb is superb? A young bulb of garlic is teased for his pungent smell and dull appearance. After competing in the Great Veggie Championship, he discovers that although beauty and abilities don't always

show on the outside, you can still be a winner in whatever you do. This award-winning story, "The Great Veggie Championship" by fifth-grader Audrey Poole, can be viewed at www.cfaitc.org/imaginethis/garlic. Check it out!



Career Highlight



Name: Billy Ngu

Career: Chef and restaurant owner

Degree: A.A. in culinary arts

Skills: As a restaurant owner and sushi chef, I use math skills to break down recipes and determine the appropriate cost for each menu item. The math and science knowledge I acquired in elementary school helps me develop new recipes and measure precisely—ensuring a delicious meal every time.

California's True Environmentalists—Farmers

An environmentalist is a person who advocates protecting the air, water, animals, plants and other natural resources from pollution or its effects. Family farmers and ranchers have a stake in the future of our natural resources, and work diligently to maintain and improve our natural resources in order to **sustain** themselves and their community.

Water

Imagine you are given only one glass of water for an entire day. How would you use it? Would you brush your teeth, wash your hands or water the garden? Farmers are faced with this challenge every day, on a much larger scale. Should they use their limited amount of water to irrigate almonds, provide water for cattle or water the plants in the greenhouse? Agriculturists are working hard to conserve water resources.

- Moisture content meters measure the amount of water in the soil, helping farmers determine necessary irrigation **frequency** and quantity.
- Drip irrigation distributes water slowly to the base of each plant, allowing farmers to monitor and carefully control the amount of water applied.
- Farmers build holding ponds that allow them to collect water and use it again on the farm.

Career Highlight

Name: Martha Beninger

Career: Forester

Degree: B.S. in forestry and natural resources

Skills: In middle school math class, I learned how to take accurate measurements and determine the dimensions of geometric figures. Today, I use these skills to measure trees, develop timber harvest plans (environmental documents) and design computer-based maps that aid in the healthy management of our forests.



Forests

California's forests provide more than just forest products. They provide beauty, sources of recreation, and are home to many Californians and wildlife species. Forests protect against erosion, purify the air through photosynthesis and recycle water. Lumber, furniture, and paper are easily identified wood products. Other items are less obvious such as rayon (a fiber) and lignin (a thickener in baby food).

Sustainable logging practices decrease fire dangers, allow healthy trees to grow stronger while removing competitors, and control diseases and pests.

Did You Know?

California foresters plant seven new trees for each tree harvested.

Did You Know?

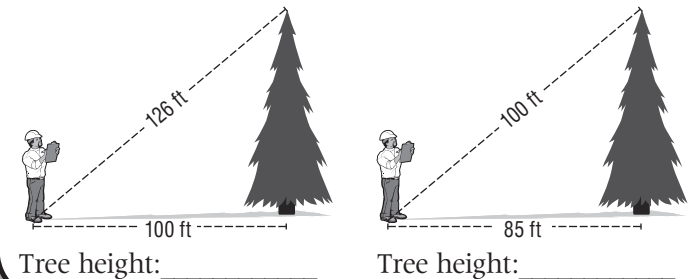
Farmers and ranchers produced a net increase of 263,000 acres of wetlands from 1997 to 2002 – a net gain of 44,000 acres per year.

Activity

Foresters use tree height for many things. Tree height can give a clue as to how old a tree is and reflects the soil

health of the site. Tree height also helps foresters calculate the amount of lumber per tree. To measure the height, and determine the angles and distances relative to the tree, a forester will use a tool called a clinometer.

Use the Pythagorean Theorem to determine tree height. Round to the nearest foot. $A^2 + B^2 = C^2$



Standards: Math- Grade 7: Measurement and Geometry 3.3; Grade 8: Geometry 15.0

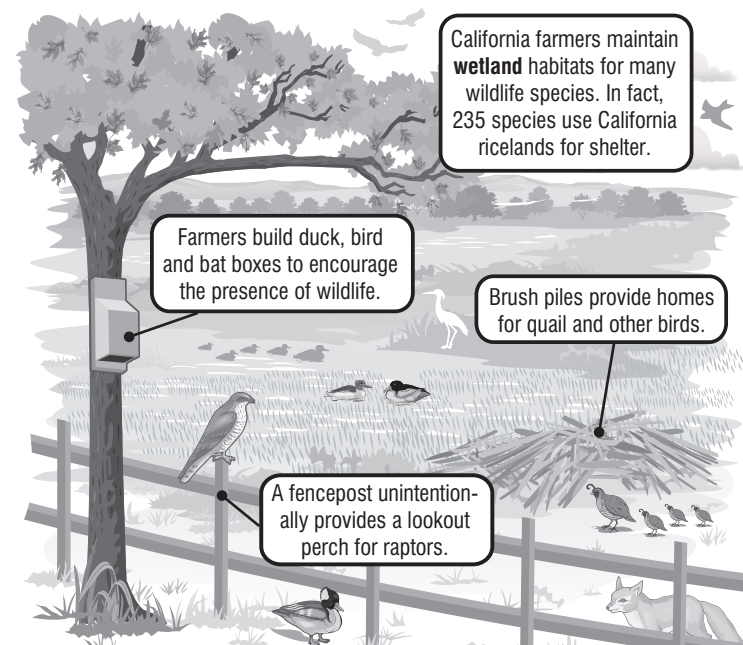
Tech Check

Are you doing your part to conserve water resources? Visit ga.water.usgs.gov/edu/sq3.html to find how much water your family consumes and learn about ways to reduce your water use. Write a short essay describing three ways you will conserve water in your home and present it to the class.

Standards: ELA- Grade 3: LS 2.0, 2.3; Grade 4: LS 2.0; Grade 5: Writing 2.0, 2.3; Listening and Speaking 2.0, 2.2; Grade 6: Writing 2.0, 2.3; LS 2.2; Grade 7: LS 2.3; Grade 8: Writing 2.0, 2.3; LS 2.3

Wildlife

Wildlife is an important part of the environment. California agricultural lands serve as restaurants, rest stops and even incubators for a significant number of wildlife species. Family farmers and ranchers work to conserve habitat for wildlife.



Unique Jobs *Calling all hooves, paws and claws!*

Livestock Hall of Fame

These functional animals provide a variety of services and goods for humans.

Bison: A unique source of meat and dairy. Farmers typically raise bison on small-scale farms. The bison's thick coat can be sheared and processed into yarn.

Alpaca: Alpacas can be used for pet therapy, interacting with hospitalized individuals in order to improve the patient's health. Alpacas are also endowed with a thick, soft coat, often clipped from the animal and spun into yarn.

Ostrich: Functional birds that produce eggs and meat. Ranchers also raise ostriches to protect sheep and goats from predators such as coyotes, dogs or mountain lions. Ostrich hides can be used for clothing.



Sheep: Not only are sheep a source of meat and dairy, but they also produce warm wool that can be used for clothing. Ranchers use sheep to graze rangelands, which helps control unwanted vegetation.

Donkey: With the ability to carry 20-30% of their body weight, donkeys are commonly used for to transport goods and people. If sharing a pen with sheep, most donkeys will bond with the sheep and protect them from predators.

Goat: Goats produce milk that can be processed into cheese or butter. Goat cheese is called chèvre. Cashmere, one of the most expensive natural fibers commercially produced, is made of goat hair.

Workin' Dogs



Canines have an important role in the agriculture industry. They are used to herd livestock, and guard sheep and goats. Dogs also have a crucial job in protecting California's borders from **invasive pests**. With their highly perceptive noses, trained "sniffer dogs" search packages and luggage arriving from other states or countries for agricultural products that may seem harmless but could be host to dangerous pests, plants and diseases.

Activity

At California's Border Protection Stations, vehicles are inspected for commodities infested with invasive pests. California established its first agricultural inspection stations in the early 1920s. Today there are 16 of these facilities located on the major highways entering the state. Research the location of these facilities. Find and label them on a map.

Standards: History-Social Science- **Grade 3:** 3.1; **Grade 4:** 4.1
ELA- **Grade 3:** Writing 1.3; **Grade 4:** Writing 1.7; **Grade 6:** Writing 1.4

Animal Profile: Scooter

My name is Scooter and I am an Australian shepherd-Queensland heeler mix. I work along side my rancher, Leroy Gable, to herd cattle. He's my best friend.



Photo: Tracy Sellers/California Farm Bureau Federation

Home, Home on the Range

Goats are natural browsers, preferring to eat leaves, twigs, vines and shrubs. They will stand on their hind legs to reach vegetation. Sheep are grazers, preferring to eat tender grass and clover. Their dietary preference is forbs (broad leaves and weeds) and they like to graze close to the soil surface. A combined flock of sheep and goats provides an effective range management plan. Goats and sheep can help control weeds, prevent wildfires and increase plant diversity on the range.

Career Highlight

Name: Jennifer Berger
Career: Canine handler and agriculture and standards inspector
Degree: B.S. in agriculture or biology
Skills: My job requires me to protect California agriculture with the help of my detection canine, Tassie. Being involved in 4-H when I was younger helped me develop confidence and leadership skills, and taught me about animal care and behavior.



Activity

Help Wanted

Read the job listings below and determine which animal(s) would be best for the job.

"Rancher looking for an animal that isn't afraid of protecting the herd and can carry their own weight."

"Small farm in search of an animal to keep us in socks and scarves."

"Hospital wanting a friendly animal that can comfort sick patients."

"Small dairy looking for an animal with an expensive cashmere coat."

"Wanted: an animal that can serve as a lawn mower we can milk."

"Family farm searching for large eggs and an animal that's not afraid of coyotes."

Standards: ELA- **Grade 3:** Reading 2.0, **Grade 4:** Reading 2.0; **Grade 5:** Reading 2.0

Activity

Find a positive story about livestock in the local news!

Create a brief summary of the article including details about who, what, where, when, why and how.

Standards: ELA- **Grade 3:** Reading 2.0, **Grade 4:** Reading 2.0; **Grade 5:** Reading 2.0

The Clever Consumer

When shopping at a grocery store, consumers have the freedom to choose the food they eat. Although food companies use bright colors and creative packaging to “sell” their product, we can choose between different brands, prices and nutritional value. Consumers can be smart shoppers by considering nutritional value and price.

Sample label for Macaroni & Cheese

Nutrition Facts

Serving Size 1 cup (228g)
Servings Per Container 2

Amount Per Serving

Calories 250 **Calories from Fat** 110

% Daily Value*

Total Fat 12g **18%**

Saturated Fat 3g **15%**

Trans Fat 3g

Cholesterol 30mg **10%**

Sodium 470mg **20%**

Total Carbohydrate 31g **10%**

Dietary Fiber 0g **0%**

Sugars 5g **0%**

Protein 5g

Vitamin A **4%**

Vitamin C **2%**

Calcium **20%**

Iron **4%**

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Serving Size

Nutrition labels help consumers make quick, informed choices that contribute to a healthy diet. All product nutrition labels identify a serving size: a standardized amount such as cups or pieces. Many packages hold more than one serving. If you don't watch what you eat, you can eat or drink more than you realize, consuming multiple servings in one meal or snack.

Limit These Nutrients

These nutrients are generally eaten in adequate amounts, or even too much. Eating too much fat, saturated fat, trans fat, cholesterol or sodium may increase health risks, such as heart disease, cancer or high blood pressure.

Standards: Health- Grade 4: 1.2.N; 3.2.N; Grade 5: 1.2.N, 1.9.N; 3.2.N; Grade 7: 1.1.N, 1.5.N; Grade 8: 1.1.N, 1.5.N

Get Enough of These Nutrients

Most Americans don't get enough dietary fiber, vitamin A, vitamin C, calcium and iron in their diets. Eating enough of these nutrients can improve your health and reduce the risk of some diseases and conditions.

Standards: Health- Grade 4: 1.2.N; 3.2.N; Grade 5: 1.2.N, 1.9.N; 3.2.N; Grade 7: 1.1.N, 1.5.N, 1.7.N; Grade 8: 1.1.N, 1.5.N

Saving Cents

Comparing prices isn't the only way to save money when you shop. Also consider these tips:

- Check weekly food ads for deals
- Use coupons
- Know what you already have
- Use a shopping list

Sources: www.fda.gov, U.S. Food and Drug Administration; www.mypyramid.gov, USDA MyPyramid

Career Highlight

Name: Craig Yamane

Career: Produce manager

Degree: High school diploma

Skills: In middle school math class, I learned how to take accurate measurements. I use this skill daily at work to plan accordingly and maximize space for displays of fresh fruits and vegetables. I also use multiplication and division on the spot to keep our produce department stocked for our customers.



Activity

In 1990, the Nutrition Labeling and Education Act was passed by the U.S.

legislature, requiring all packaged food to bear nutrition labels. The **U.S. Food and Drug Administration (FDA)** also standardized terms such as “low-fat” and “light.” Use a dictionary or online resources to determine the FDA's definitions for the health claims below.

Light: _____

High fiber: _____

Fat-free: _____

Standards: ELA- Grade 3: Reading 1.0; Grade 4: Reading 1.0; Grade 5: Reading 1.0; Grade 6: Reading 1.0 Health- Grade 4: 3.1.N; Grade 5: 3.2.N; Grade 7: 3.1.N; Grade 8: 3.1.N

Deal or No Deal?

Which is the best deal?

It takes critical thinking to make sure you get the best deals when shopping. The lowest price per item doesn't necessarily mean the best deal. Compare price and the number of ounces in the container.



12 ounce can of frozen juice concentrate makes 36 drinkable ounces = \$1.25

64 ounce carton of juice = \$3.25

8 ounce juice box = \$.80



Standards: Math- Grade 3: Number Sense (NS) 2.0, 3.3; Algebra and Functions (AF) 2.1; Mathematical Reasoning (MR) 1.0; Grade 4: MR 1.0; Grade 5: NS 2.1; MR 1.0

Activity

Use the grocery ads in your local newspaper to plan

a healthy meal. Determine the price of the meal using the sale prices. If you had the choice to purchase the items at the sale price advertised or use a 10% off coupon on the entire meal, which would provide the best deal?

Standards: Math- Grade 6: NS 1.4; Grade 7: NS 1.6, 1.7 Health- Grade 5: 5.1.N

Growing Strong Glossary

Grow your vocabulary one word at a time!



Resources:

Ag For Life
www.agforlife.com

Agricultural Marketing Resource Center
www.agmrc.org

American Heart Association
www.americanheart.org

American Nursery and Landscape Association
www.thelandlovers.org

California Dept. of Food and Agriculture
www.cdffa.ca.gov

California Grown
www.californiagrown.org

Center for Produce Safety
cps.ucdavis.edu

Center of Science and Industry
www.cosi.org

Centers for Disease Control and Prevention
www.cdc.gov

FFA Career Explorer
www.ffa.org

The Council for Biotechnology Information
www.whypiotech.com

U.S. Food and Drug Administration
www.fda.gov

USDA Foreign Agriculture Service
www.fas.usda.gov

USDA Forest Service
www.fs.fed.us

USDA Living Science
www.agriculture.purdue.edu

USDA MyPyramid
www.mypyramid.gov

To request a free
What's Growin' On?
Teacher's Supplement that will
enhance the use of this newspaper,
visit www.cfaitc.org/wgo
or call (800) 700-2482.

Force: Energy, strength or active power.

Frequency: The number of occurrences within a given time period.

Gene: A segment of chromosome. Some genes direct the syntheses of proteins, while others have regulatory functions.

GPS: Acronym for global positioning system. An electronic system using a network of satellites to indicate the position of a person or machine.

Implement: A tool or piece of equipment.

Import: The process of buying commodities from a foreign country.

Invasive pest: A damaging animal, insect, plant or plant disease that is not native to California.

Landscape: To decorate an environment with plants; an expanse of scenery that can be seen in a single view.

Market: The customer base for an agricultural product or service.

Medicinal: Used to prevent or cure illnesses and diseases.

Pathogens: A biological agent that causes disease or illness to its host. Also known as a germ.

Plasmid vector: A DNA molecule used as a vehicle to transfer foreign genetic material into another cell.

Simple: Easy, not complicated. There are six simple machines.

Sustain: To farm in a way that will satisfy food and fiber needs, enhance environmental quality, make efficient use of resources, uphold the economic viability of farm operations and enhance quality of life.

Trait: A genetically determined characteristic or condition.

U.S. Food and Drug Administration: An agency within the United States Department of Health and Human Services responsible for protecting and promoting the nation's public health.

Wetland: An area often covered with shallow water or containing soil saturated with moisture.

Word-of-mouth: Advertising generated by satisfied or interested customers who tell others about the product.



Choose five words from the glossary and write the words on the numbered lines. Find each word in the dictionary and write the guide words for that page in the area provided.

Glossary Words

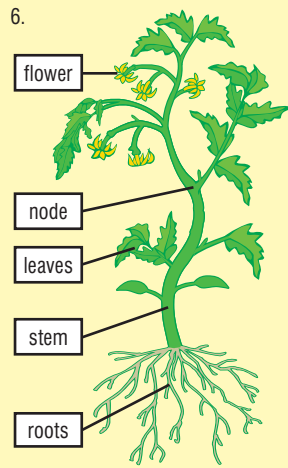
Guide Words

1. _____
2. _____
3. _____
4. _____
5. _____

Standards: ELA- Grade 3: Reading 2.7; Writing 1.3; Grade 4: Reading 2.2

Answers to pages 8 and 9

- $$\begin{array}{r} \$235,100 \\ -\$185,300 \\ \hline \$49,800 \end{array}$$
- $$\frac{392,000}{8,000} = 49 \text{ acres}$$
- Tractors can be steered automatically and it helps the farmer collect data for fertilizer and weed control decisions.
- Inclined plane, a ramp that makes moving a heavy weight up or down easier. Wedge, makes it easier to split things apart when force is applied. Screw, concentrates the force applied to move something away from you. Wheel, allows things to roll instead of slide when force is applied. Lever, makes it easier to move heavy things by using a pivot point. Pulley, makes lifting easier by changing the direction of a pull.



- $$\frac{\$36}{100 \text{ lbs.}} = \$0.36/\text{lb.}$$

$$\frac{\$195}{500 \text{ lbs.}} = \$0.39/\text{lb.}$$

$$\$0.39 - \$0.36 = \$0.03$$

 The first seeds salesperson offered the best deal.
- $$\begin{array}{r} 4500 \\ \times 12 \\ \hline 54,000 \end{array}$$

$$\begin{array}{r} 5000 \\ \times 12 \\ \hline 60,000 \end{array}$$

$$W \times L \times D = \text{volume}$$

$$54,000 \times 60,000 \times 5 = 16,200,000 \text{ in}^3$$

$$\frac{16,200,000 \text{ in}^3}{12} = 1,350,000 \text{ ft.}^3$$
- Interest = Principle \times rate \times time

$$\begin{array}{r} \$120,000 \\ \times .055 \\ \hline \$6,600/\text{yr.} \end{array}$$

$$\begin{array}{r} \$6,600 \\ \times 5 \text{ yrs.} \\ \hline \$33,000 \end{array}$$

$$\$33,000 + \$120,000 = \$153,000$$
- A screw is a simple machine. It concentrates the force applied to move something away from you.
- $$\frac{45 \text{ min.}}{60 \text{ min.}} = \frac{3}{4} = .75$$

$$\frac{54 \text{ miles}}{.75 \text{ hours}} = 72 \text{ mph}$$

- $$\frac{.48}{139,000 \text{ lbs.}} = \frac{1.00}{x}$$

$$\frac{.48x}{.48} = \frac{139,000 \text{ lbs.}}{.48}$$

$$x = 289,583.33 \text{ lbs.}$$
- $$\frac{1125}{.001} = 1,125 = \text{broken grains of rice}$$
- $$\begin{array}{r} 56,000 \\ \times 28 \\ \hline 1,568,000 \end{array}$$

 1,568,000 students
- Print (flyers, billboards, newspaper ads), electronic (radio, television, online) and word-of-mouth.
- $$\begin{array}{r} 55 \text{ mph} \times 2 \text{ hours} = 110 \text{ miles} \\ 45 \text{ mph} \times 1 \text{ hour} = 45 \text{ miles} \\ \hline 110 \text{ miles} \\ + 45 \text{ miles} \\ \hline 155 \text{ miles} \end{array}$$

Acknowledgements

California Foundation for Agriculture in the Classroom (CFAITC) is a 501(c)(3) not-for-profit organization dedicated to increasing the awareness of and appreciation for the safe, fresh and abundant agricultural products we are fortunate to enjoy in California. The Foundation provides free and low cost standards-based resources, training opportunities and K-12 classroom materials that enhance regular classroom instruction.

Contact CFAITC or visit www.cfaitc.org for:

- Resources and lesson plans
- What's Growin' On?* Teacher's Supplement
- Story-writing contest
- Upcoming conferences
- Newsletters
- Kids' Corner (kids.cfaitc.org)

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 California Foundation for
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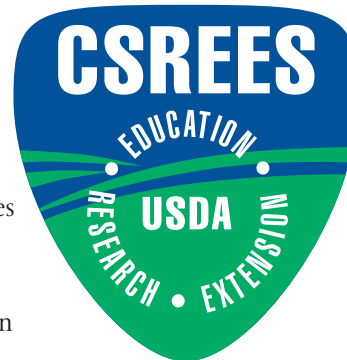
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Rabobank


Farm Credit
 You invest in the land.
 We invest in you.
 American AgCredit
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 Fresno Madera Farm Credit
 Northern California Farm Credit

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Be Californian Buy California Grown™



California Beet Growers
 Association

