

Cream of the Crop

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Outstanding teacher named

Fresno's Lance Omeje captures 2006 honor

Lance Omeje, a natural-born teacher, took a roundabout route to class. What he gathered along the way helped him become the top-notch teacher he is today.

Lance immigrated to the U.S. in the 1970s, attended Cal Poly, San Luis Obispo, and graduated in 1979 with a BS in crop science. This propelled him into a career as an agronomist specializing in entomology and irrigation.

While on this path, Lance returned to school for a credential. In 1996, he traded in his open fields for a classroom and his workboots for chalk. He took root



Students respond positively to Lance Omeje's teaching style, which is rooted in the garden.

at Turner Elementary School in Fresno, where he transplanted his love for agriculture into the school's garden. The rest is crop production history of the student kind!

Lance took an underutilized Environmental Center and turned it into an active, award-

winning school and community garden. The half acre has matured into a dynamic, year-round site where students can observe, explore and use real-life situations to solve problems and apply skills. It is equipped with large garden plots, a pond,

See Lance Omeje..., p. 4

Research shows that gardening with children can improve their academic success...



Team effort results in new garden resource

California School Garden Network (CSGN), a collaboration of educational and agricultural groups whose purpose is to support ag literacy through youth gardening, has developed an educational resource to enhance garden-based learning. Research shows that gardening with children can improve their academic success, increase ecological literacy and improve dietary habits. Consequently, CSGN has been working on a guide to assist primary and upper grade educators in creating, expanding and sustaining gardens and their inherent learning experiences. The book format will be published this fall, but the supplemental Web site – www.csgn.org – is now online. "We're excited that this guide for school gardening has come together through the cooperative work of so many organizations that are dedicated to agricultural literacy," says Judy Culbertson, CFAITC executive director.

Quick ideas for springtime...

Last fall, as California farmers wrapped up another harvest season, teachers from all corners of the state gathered in Sacramento for a harvest of their own.

Their crop was a variety of ideas for teaching today's young people about agriculture's value. Their harvest was a

combination of resources, ideas and activities, like the ones on these two pages, shared throughout the three-day event. The "take" was so substantial that one attendee remarked she wished she had taken seriously the suggestion to bring along an extra suitcase with which to haul everything home!

Be sure to mark the calendar now for the 2006 California Ag in the Classroom Conference Oct. 19-21 in Burbank. Registration materials will be available in July at www.cfaitc.org. In the meantime, take advantage of these reprints from four of the activities and/or handouts that make the conference the good deal that it is!

Junior Master Gardener's Method to Collect Bugs for Observation



There are many insects to see, and many ways to catch them for observation. Nets work well for large insects, but tiny ones can go unnoticed. One way to catch small bugs is with a bug sucker, also called a *pooter* or *aspirator*. Bug suckers are easy to make, but will probably require practice time making and using before attempting in class. *A word of caution:* Do not use bug suckers for large insects such as bees and butterflies. They can't fit up the tube, and the suction may damage their wings. Also avoid "true bugs" (Order Hemiptera), such as stinkbugs as they spray odors that leave a bad taste in your mouth! Finally, ladybugs are not recommended and have been used in this presentation for graphic purposes only.

Objective: To make a simple aspirator for collecting and observing small insects

Time Needed: 30 minutes to make the aspirator
30 minutes to 1 hour to collect and observe insects

Materials:

- ___ Small plastic containers, clear if possible (film canisters are the perfect size, but are usually opaque; you also can use small plastic herb bottles, small butter dishes or plastic test tubes)
- ___ Plastic drinking straws or flexible plastic tubing, two per aspirator (tubing works better, but is a little more expensive)
- ___ Modeling clay
- ___ Netting or gauze
- ___ Tape
- ___ Awl, ice pick or drill (for adult use)



1. Clean a small (preferably clear) plastic container and remove its label. Clear containers allow observation of the insect inside without opening the container. You can create a "window" in an opaque plastic container by cutting out a section and replacing it with clear plastic, such as a piece from an overhead transparency. Be sure to seal the edges of the window with glue to keep air from entering, for you need good suction to be able to suck up a bug.

2. Tape a piece of netting or gauze over one end of one of the straws or tubing.

3. Use the awl or ice pick to make two holes in the top of the container. If possible, create the holes ahead of time.

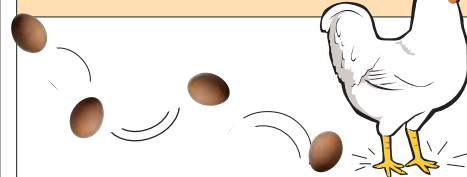
4. Insert the straw or tubing through one of the holes so that the end covered with gauze is in the container and the uncovered end is sticking out of the top. Insert the other straw or tubing through the other hole.

5. Seal both holes with a bit of modeling clay, but be careful not to pinch off the tubing.

6. Gently place the end of the straw without gauze next to a small ant or other creature, and suck on the other straw. The suction will pull the insect into the container, where you can safely hold and observe it. It takes a little practice to be able to keep the straw next to the insect while sucking on the other end. This is why tubing, that can be longer and flexible, is better. However, straws are inexpensive and easy to obtain.

This synopsis of a Junior Master Gardener activity is one in a series showing how to trap insects, make insect night lights, sweep up insects, and create insect farms. It is reprinted with permission from the JMG Gardener Handbook. Find this book, filled with scores of gardening activities and resources, at www.jmgkids.us. See Resources, page 5, for further information.

The Bouncing Egg



Spring is a fun time to experiment with eggs. They're everywhere! Eggs have unique characteristics and can be used for a variety of scientific experiments. Try this easy one, and check out www.aeb.org or www.lhsgems.org/GEMSEggs.html for incredible resources on eggs.

Time Needed: One hour to begin, subsequent observations to follow

Materials needed:

- ___ One hard-cooked egg per team
- ___ Plastic container, with lid, large enough to seal an egg inside
- ___ White vinegar, enough to cover each egg completely when sealed inside

Procedure:

1. Hard boil enough eggs to provide each team with one egg. Accidents happen; have a few extras on hand!

2. Split the class into teams. The number of students per team is flexible.

3. Without breaking the shell, carefully examine the eggs. Ask each team to record visual observations.

4. Place each egg in a plastic container. Cover completely with white vinegar and seal with the lid. Predict what will happen in one hour, one day, one week. Record predictions.

5. Observe the egg at the above-indicated times and record observations. The egg shell should have dissolved and the egg white and yolk should have become rubbery.

6. Rinse and dry the egg, then drop it. Record what happens when it is dropped. It should bounce.

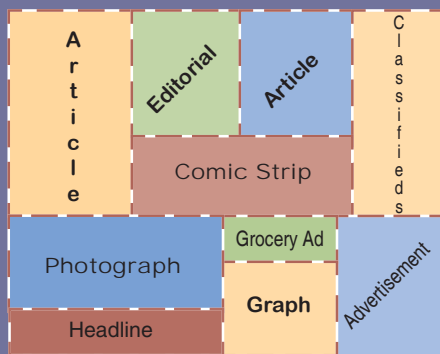
Note: After each observation, wash hands. Do not eat the eggs.

Try them out in your classroom!

California is Like a Patchwork Quilt

California is like a patchwork quilt. Some squares are green alfalfa fields. Others are golden wheat. Others yet are dots of livestock or trees. Waterways connect this unique landscape, which is applied with cities that cover more than one third of the state.

Instill an awareness of agriculture while encouraging students to read newspapers by making a newspaper quilt. For several days, ask students to read the paper and cut out articles, ads, photos – anything they find that relates to agriculture. Remember,



agriculture is the production, marketing and transporting of food, fiber, forest resources and flowers.

On a poster board, arrange the items into a patchwork and glue them in place. Emphasize that, like in quilting, everything must fit neatly together! Make a border out of construction paper. Point out that agriculture is as diverse as each quilt made.

Summarized from the *What's Growin' On? California Agriculture... More Than You Can Imagine* teachers' guide, produced by CFAITC and available at www.cfaitc.org. See "New from CFAITC" on page 5 for additional information.

Attend the Oct. 19-21, 2006

AITC Conference






Burbank, CA

Register online at www.cfaitc.org!

Registration materials available July, 2006.

Garden Seating Chart

Every teacher discovers during the school year which students can sit next to each other and which do better when separated. Believe it or not, the "seating chart" in a garden can be a lot like the one in a classroom! Some plants thrive when in close proximity to other flowers, vegetables or herbs while others can disrupt its neighbor's growing cycle completely. The chart, below, provides helpful guidelines for some common garden plants.

Plant	Can be seated by	Cannot be seated by
Bush Beans	 Potatoes, cucumbers, corn, summer savory, celery, sunflowers, strawberries	Onions
Pole Beans	 Corn, summer savory	Onions, beets, kohlrabi, sunflowers
Beets	Onions, kohlrabi	Pole beans
Cabbage Family: <i>cabbage, cauliflower, kale, kohlrabi, broccoli</i>	Aromatic plants, potatoes, celery, dill, chamomile, sage, peppermint, rosemary, beets, onions, thyme, lavender	Strawberries, tomatoes, pole beans
Carrots	Peas, leaf lettuce, chives, onions, leek, rosemary, sage, tomatoes	Dill 
Celery	Leek, tomatoes, bush beans, cucumbers, pumpkin, squash	
Corn	Potatoes, peas, beans, cucumbers, squash, pumpkins	
Cucumbers	 Beans, corn, sunflowers, peas, radishes	Potatoes, aromatic herbs
Eggplant	Beans	
Leek	Onions, celery, carrots	
Lettuce	 Radishes, carrots (the three together make a strong team), cucumbers, strawberries	
Onions/Garlic	Beets, strawberries, summer savory, chamomile, lettuce, tomatoes, beans (protects against ants)	Peas
Parsley	Tomatoes, asparagus	
Peas	Carrots, turnips, radishes, cucumbers, corn, beans, most vegetables, herbs	Onions, garlic, gladiolus, potatoes
Potatoes	Beans, corn, cabbage, horseradish (planted at corners of patch), marigolds, eggplant (lure for Colorado potato beetle)	Pumpkins, cucumbers, squash, raspberries, sunflowers, tomatoes
Pumpkins	Corn	Potatoes
Radishes	Peas, nasturtium, lettuce, cucumbers	
Soybeans	Grow with anything; help everything	
Spinach	Strawberries	
Squash	Nasturtium, corn	
Strawberries	Bush beans	
Sunflowers	Cucumbers	Potatoes
Tomatoes	Chives, onions, parsley, limas, asparagus, nasturtium, carrots, marigolds,	Kohlrabi, potatoes, fennel, cabbage
Turnips	Peas	

Adapted from an AITC Conference workshop handout based on Life Lab's "The Growing Classroom: Garden-Based Science Activity Guide." Contact Life Lab at 831/459-2001 or explore their Web site at www.lifelab.org.

Agricultural Tidbits

Did you know...



Ethanol, an alternate fuel made from corn, is now being produced in Goshen, CA, near Visalia. The plant is expected to produce 25 million gallons a year when at capacity. Agriculture isn't just about food! (CFBF's Food and Farm News, Vol. 9, No. 83, Oct. 26, 2005)

Potatoes being raised for niche markets are making a colorful splash! Touted as having more health benefits than traditional potatoes, the new varieties range in color from patriotic red, white and blue to solid blue, yellow and purple. (CFBF's Food and Farm News, Vol. 9, No. 114; Dec. 8, 2005)

Honeybees play a crucial role in almond production. Almond acreage in California has increased in recent years to the point that growers need two-thirds of the nation's bees to pollinate the trees' blossoms in early spring. (CFBF's Food and Farm News, Vol. 9, No. 83, Oct. 26, 2005)



Baby carrots are now smaller than ever, making them even more bite-sized. Especially popular in school lunches, they account for more than two-thirds of all carrots sold. (CFBF's Food and Farm News, Vol. 9, No. 81, Oct. 24, 2005)

If rabbits are getting more from the garden than are the students, try planting two rows of **onions** around its perimeter. Apparently rabbits don't cotton to the scent of onions. (Farm Bureau Farm Facts, Summer, 2004)



Lance Omeje...

Continued from page 1

greenhouse and cactus garden.

"The center helps to make learning accessible to all students regardless of their background, talents, or language proficiency," says Lance. "When students plan, plant, care for and analyze their gardens, science and learning take on meaning like never before."

Principal Everett Lovelace turns Lance's humble assessment topsy-turvy. He says Lance's passions for teaching and agriculture have touched even those "...students who had demonstrated a disinterest in education (so they are now) 'reconnected' to learning." How? Lance links topics in class to the garden, using state standards to direct the desired out-



Lance connects the garden to all kinds of subjects.

and art, oral language, and critical thinking are challenged beyond what is obvious. The outcomes make sense because students see a purpose in the process and a relevance to real life.

Another benefit that has sprouted is an after-school horticultural club. Students are so gung-ho about gardening that they participate after school *and* on weekends. They produced and sold salsa using tomatoes and peppers from the garden – all in an attempt to make the center self-supporting. A harvest bonus was an incredible and unusual amount of parental involvement.

This year, Lance accepted a position at Yokomi Elementary, a new science and technology magnet school in Fresno, where he is building a new garden program. As the recipient of the 2006 Outstanding Educator Award, Lance will play a prominent role at CFAITC's annual conference Oct. 19-21 in Burbank. Plan on attending!



No wonder the Environmental Center is so much fun!

come. Math skills become relevant through everyday activities; research and writing skills are enhanced through exploratory and journaling assignments;

Garden experiences bring meaning to state standards

From germination to harvest, crops are monitored by students for plant heights, percent germination, and plant population. Different stages of growth are noted through observation and graphs. The data is documented in journals with illustrations, measurements and graphs. In groups of four, students extrapolate data and challenge each other by creating word problems. In Lance's 4/5 class, this meets an array of state standards, including Life Science 2.0 and 3.0; Mathematical Reasoning 1.0, 2.0, and 3.0; Listening and Speaking 1.0; and Writing Applications 2.3.

Prior to planting, students choose a watering system and prepare the planting areas for it by measuring the width and length of the plots. This employs math concepts of geometric shapes, units of measurement, metric units, perimeter and area, all helping to meet Mathematics 1.0. With this data, the students figure out the number of plants needed for each plot. At a nursery, they compare prices before making a purchase, covering number sense in Mathematics 2.0.

Resources support ag literacy at all levels



The Bookshelf

■ **Big Cotton: How a Humble Fiber Created Fortunes, Wrecked Civilizations, and Put America on the Map** (10-Adult) Written with wit and humor, this book shares how a humble fiber helped shape the past 5,500 years. Includes B&W photos from early era to present. \$25.95 hardcover. ISBN 0-670-03367-7 Stephen Yafa, Viking, 2005.

■ **Pick, Pull, and Snap: Where Once a Flower Bloomed** (K-2) Fold-out pages, enticing artwork show how raspberries, corn and other foods grow, as plants make blooms, seeds and fruit. \$15.99 hardcover. ISBN 0-688-17834-0 Lola M. Schaefer, Greenwillow Books, 2003.



■ **Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder** (Adult) Journalist Louv argues that children today are more prone to ADHD, stress, anxiety and obesity because they live a "denatured" childhood. Outdoor opportunities (i.e. school gardens) inspire exploration, imagination, and contemplation. \$24.95 hardcover, ISBN 1-5651-2391-3, Richard Louv, Algonquin Books, 2005.

■ **The Meaning of Food** (9-Adult) Beautifully illustrated, thought-provoking book explores the role of food in our lives. Follows the PBS series of the same name. \$22.95 hardcover. ISBN 0-7627-3837-5 Patricia Harris, David Lyon, and Sue McLaughlin, The Globe Pequot Press, 2005.

Healthy Eating with MyPyramid Series

(PreK-2) Eight books use the new food pyramid to show how healthful food, water and activity support health. \$19.93 ea. hardcover. Mari Schuh with Gail Saunders-Smith, PhD., Capstone Press, 2006.



- | | |
|------------------------|---------------|
| Being Active | 0-7368-5368-5 |
| Drinking Water | 0-7368-5375-8 |
| The Fruit Group | 0-7368-5370-7 |
| The Grain Group | 0-7368-5371-5 |
| Healthy Snacks | 0-7368-5369-3 |
| The Meat & Beans Group | 0-7368-5372-3 |
| The Milk Group | 0-7368-5373-1 |
| The Vegetable Group | 0-7368-5374-X |

■ **AgroWorld: Science, Technology & Society** (9-12) Bimonthly online magazine features current events, resources and activities that enhance standards in science, technology, and social studies. It's news to use in class today! *Subscribe at www.agclassroom.org – click on AgroWorld E-Zine.*



■ **Harvest of the Month Packs** (K-12) To boost nutrition education, a selection of fruits and/or vegetables is delivered monthly on a year-round schedule. Students learn by sampling, then exploring the accompanying nutrition information. Curriculum includes connections to teaching standards. \$13/month. Ripple Riley Thomas, LLC, at www.ripplerileythomas.com or 800/809-8588

■ **Science in Your Shopping Cart** (7-12) Brief features share facts about various commodities and products. Colorful photos help tell how USDA's Ag Research Service contributes to the abundance, variety, convenience and healthfulness of what's found in our shopping carts. Color, 36 pages, *one copy free when ordered by e-mail. Visit www.ars.usda.gov/is/np/shopcart/shopcartintro.html to order.*



■ **Junior Master Gardener Curriculum** (3-5) The JMG program engages children in hands-on learning that promotes a love of gardening and encourages critical thinking and community service. Resources provide curriculum for the teacher/leader and activities for students. Don't miss "Wildlife Gardener" (\$35) and "Literature in the Garden" (\$35). *Prices vary. Order from www.jmgkids.us under Curricula.*

■ **Water Resources** The Water Education Foundation is offering discounts to CFAITC teachers for a limited time! Marked down to \$18: *Groundwater Education for Secondary Students* (gr. 7-10); *Project Water Science* (gr. 7-12) and *CA's Water Problems* (gr. 9-14). Also look for *Where Does Your Water Come From? The Drinking Water Source Book* and *The No-Know Board Game* for \$10 each. Find info at www.watereducation.org. To order, call 916/444-6240, ask for Sue McClurg and use the code AIC.

Web sites worth exploring

- **Agriculture & Math Fun:** www.usda.gov/nass/nasskids/nasskids.htm
- **Air Quality:** www.airnow.gov
- **Cotton:** www.cotton.org/pubs/cottoncounts/resources.cfm
- **5 a Day Power Play:** www.healthedcouncil.org/5aday.html
- **Farmers' Museum:** www.harvestofhistory.org
- **Food Reference Website:** www.foodreference.com/html/triviatips.html
- **Gardening:** www.exploratorium.com/gardening
- **National Agricultural Library -- Fun Stuff for Kids:** www.nal.usda.gov/outreach/fun_stuff.htm
- **School Garden Wizard:** www.schoolgardenwizard.org
- **Sunkist Kids:** www.sunkist.com/kids
- **What's in the Foods You Eat?:** www.ars.usda.gov/Services/docs.htm?docid=7783



■ **2006 Teacher Resource Guide Free!** Newly updated guide is packed with data on ag literacy resources. Choose from interactive CD or 216-page book. Order by returning the enclosed postcard or requesting online at www.cfaitec.org/trg.

■ **Cotton Fact Sheet** The 26th in a series of fact/activity sheets is now available and it's free! Learn about cotton, its many uses, its history, and more.

■ **What's Growin' On? California Agriculture... More Than You Can Imagine!** This year's NIE supplement highlights ag careers and products. Many activities are aligned to the Content Standards for CA Public Schools. Free class sets of 35 will go fast; request yours now!

■ **2006 Instructional Materials CD** This updated CD contains CFAITC current lesson plans (aligned to Content Standards for CA Public Schools), teacher guides and fact sheets. One free CD per person.

To order the above resources, contact CFAITC at 2300 River Plaza Drive, Sacramento, CA 95833-3293 800/700-AITC Fax: 916/561-5697 e-mail: cfaitec@cfbf.com www.cfaitec.org

School staff can learn value of ag literacy from on-site training

California teachers who recognize the value of ag literacy are enthusiastic about resources that focus on agriculture's value to all. Hundreds of these resources can easily be found in CFAITC's Teacher Resource Guide. (Order the new 2006 edition by returning the postcard inserted in this newsletter.)

The challenge toward achieving ag literacy isn't so much in finding useful resources as it is in getting educators to understand *why* they should sprinkle agricultural information throughout their curriculum in the first place.

To address this, CFAITC provides inservices – free of charge – at both school and district levels through the California Curriculum Guidelines for Ag Literacy Awareness program.

The inservices explain why it is valid to expose young people to agriculture's presence in their day-to-day lives. They also provide tools for incorporating

new, fresh ideas into existing curriculum. Free and low-cost resources, class projects, lesson plans (aligned with state content standards) and ideas that excite both students and educators follow the guidelines that boost student awareness of agriculture's value.

Guidelines exist for each grade level, K-12, in language arts, math, science, history/social science and literature. They can be viewed and downloaded from www.cfaitc.org under State Ag Literacy Guidelines.

The one-hour presentations are available free of charge through the Foundation. To schedule one, contact Nancy Gutierrez at 800/700-AITC.

Calendar

At the Tipping Point

May 10-11, 2006

Sacramento

This Great Valley Center conference looks at topics like agriculture, environment, growth and water and their impact on life in the valley. Register at www.greatvalley.org/conference or call 209/522-5103 for info.

Water Awareness Month

May, 2006

Dedicate some time to water. It's something we take for granted but can't live without!

Nat'l Youth Garden Symposium

July 27-29, 2006

St. Louis, MO

"Cultivating a Sense of Place: A Youth Gardening Adventure." Details at www.ahs.org under Youth Gardening.

Family History Day

June 14, 2006

Plan a family reunion and get them all talking! How far back do you have to go to find a family member involved in agriculture?

AITC National Conference

June 20-24, 2006

Atlantic City, NJ

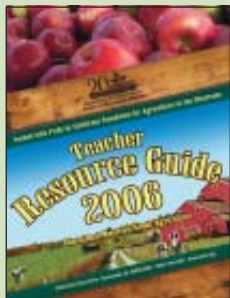
Workshops, make 'n' takes and field trips fill this conference with ag info developed for the classroom. Details at www.agclassroom.org under National Conference.

AITC California Conference

Oct 19-21, 2006

Burbank, CA

Registration information available in July at www.cfaitc.org or by calling 800/700-AITC.



Order your copy of the newly-published 2006

Teacher Resource Guide

by filling out the self-addressed, postage-paid postcard inserted in this newsletter or by contacting the

California Foundation for Agriculture in the Classroom

800/700-AITC (2482) www.cfaitc.org

Please specify book or CD format.

Cream of the Crop

Cream of the Crop is published twice a year by the California Foundation for Agriculture in the Classroom, a 501(c)(3) organization. The goal of the Foundation is to increase awareness and understanding of agriculture among California's educators and students. Material in this publication is for classroom use and may be reproduced in educational newsletters. Please send a copy of reprinted material to CFAITC. For a free subscription, contact:

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