



# What's Growing On In Virginia?

Spring 2003

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### About the Newsletter

What's Growing On In Virginia is a semiannual publication for Virginia elementary school teachers, published by the Foundation for Agriculture in the Classroom

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## Agriculture in your classroom:

It's real, it's relevant, and we've got teaching materials ready—for you!

**F**rom the apple that fell on Sir Isaac Newton's head, to tobacco cultivation in the Jamestown settlement, to *Green Eggs and Ham*, farming and farm products have a natural and user-friendly connection to education.

That connection is even more important today, when only 2 percent of the U.S. population lives and works on farms, producing food and fiber for the other

98 percent and for many people in other countries.

"Not too many generations ago, just about everyone knew someone who farmed. Today, some people can't remember the last time they drove past a farm," notes Karen Davis, executive director of the Virginia Foundation for Agriculture in the Classroom.

At the same time, agriculture is as important as ever. It is a \$36 billion

industry in Virginia, and it touches all of us. It is as personal as the food on our plates.

For that reason, Davis says, AITC is committed to helping teachers impart to young people an understanding of what happens on farms and why they are relevant.

### What is AITC?

Agriculture in the Classroom is a national

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## School Garden Project continues to grow

**N**early 1,100 elementary school teachers across Virginia have signed up to participate in this year's School Garden Project.

Now in its fifth year, the project is sponsored by the Virginia Foundation for Agriculture in the Classroom and Southern States Cooperative Inc.

The program is open to teachers of kindergarten through fifth grade, in both public and private schools. Participants receive free SOL-aligned lesson outlines from AITC and vegetable seeds and vegetable seed handbooks courtesy of Southern States.

This year's lesson plans were developed using recommendations from last

year's participants, to make them as useful as possible.

In 2002, 1,004 teachers participated in the School Garden Project. Their pupils planted seeds in egg and milk cartons, tilled plots, recycled tires, raised beds, inflatable pools and flower pots. The plantings were incorporated into sci-

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2004 registration begins July 1.

[www.agintheclass.org](http://www.agintheclass.org)

The Virginia Foundation for Agriculture in the Classroom

## AITC workshops yield bushels of teaching materials

**D**uring the 2001-2002 school year, 769 teachers attended free workshops sponsored by the Virginia Foundation for Agriculture in the Classroom.

AITC workshops include presentations by farmers, farm commodity experts and other agriculture industry representatives, as well as hands-on activities that can be applied in the classroom.

Participants also receive a variety of free resource materials that can be combined with an existing curriculum.

Those materials have been prepared by the American Farm Bureau Federation, the Southeast United Dairy Industry Association, Virginia-Carolina Peanut Promotions, the National Honey Board and other organizations and have been correlated to the Virginia Standards of Learning.

For information on scheduling an AITC teacher's workshop in your area, contact Wendy Strong, AITC program coordinator, at 804-290-1143 or [wendy.strong@vafb.com](mailto:wendy.strong@vafb.com).

## Henrico Ag Institutes set for mid- and late summer

**H**enrico County educators will have the opportunity to participate in two Ag Institutes organized by the Virginia Foundation for Agriculture in the Classroom this summer.

The institutes will be held June 16-19 and July 28-31.

A field trip in every sense of the word, the Ag Institute was created by AITC at the request of Henrico County Public Schools about six years ago. Participants take

part in activities that teach how and where food is produced in Virginia and visit working farms for a close-up look. Farm operators are on hand to answer questions and provide insights into their businesses.

Workshop participants also receive Standards of Learning-aligned materials that can be used to incorporate agriculture into their science, math, English and social studies lessons.

## Who makes it happen?

**W**endy Strong has been program coordinator for the Virginia Foundation for Agriculture in the Classroom since 2000. She holds a degree in elementary education from Lynchburg College and taught for 13 years in both public and private schools, working with first-, third- and fourth-graders.

"I love my job, because I learn something new every

day," Strong says. "While I was a classroom teacher, I didn't appreciate or understand why agriculture mattered, especially to younger students. But I've learned agriculture is the base from which our lives extend. Agriculture permeates our lives, each day that we eat and put on clothes. My job is to share, display and discuss agriculture in all its many facets."

## Agriculture in your classroom

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program that promotes understanding of agriculture through education. Visit the National AITC website at [www.agclassroom.org](http://www.agclassroom.org) for information about other AITC state programs.

Virginia AITC provides seminars and materials to teachers so they can incorporate agricultural topics into their kindergarten through fifth-grade lesson plans.

**All services are provided at no cost, so the resources are accessible to all school systems, both public and private.**

The Virginia Foundation for AITC is a nonprofit organization that receives financial and administrative support from Virginia Farm Bureau Federation. The foundation organizes workshops for interested teachers and partners with Southern States Cooperative Inc. to offer the extremely successful School Garden Project each year.

Want to find out more? Visit us online at [www.agintheclasse.org](http://www.agintheclasse.org) today—then bookmark our site, and visit us often!



# What's Growing On In Virginia?

## Lesson Plan

# Photosynthesis Game

### Skills:

To help students understand the process of photosynthesis

### Virginia Standards of Learning

Science – K.6, K.9, 1.4, 1.8, 2.8, 3.7 and 4.5

### Teacher Information

Photosynthesis is the process by which green plants (containing chlorophyll and other photosynthesis pigments) convert carbon dioxide, water and certain nutrients to carbohydrates in the presence of sunlight. This is the energy driving process on earth and enables life to exist. Photosynthesis produces the food we eat and the air we breathe and recycles much of the mineral content in the soils.

A single tree will pull tons of carbon dioxide from the air and give off tons of oxygen and water vapor, as well provide a valuable, renewable, natural resource. Therefore, forests are a giant carbon dioxide reserve and are important to carbon/oxygen cycles on earth. In addition, large forests have an important effect on local weather patterns and climate because of the amount of water they consume and water vapor they transpire.

### Materials

Ten student volunteers

### Procedure

1. Ask students to describe the photosynthesis process.
2. Ask students to name the green pigment in plants that is important in photosynthesis (chlorophyll).
3. Explain that chlorophyll actually captures the energy in sunlight to drive the photosynthesis process.
4. Select one student to crouch on the floor. The student represents a green plant that is going to grow. It will grow by standing up. Have the rest of the students chant "chlorophyll," and allow the "plant" to grow.
5. On the first try, stop the "plant" from growing. Gently push the student back down onto the floor and ask the group, "What do plants need to grow?" The answers are sunlight, water, soil (minerals), carbon dioxide, and oxygen. Select volunteers to portray each of these in the following order, and follow the instructions below. Rehearse the actions once or twice with each participant.
  - a. Sunlight – ask one person to come up and stand beside the plant. They hold up their arms above their head forming a circle to represent the sun and say, "shine, shine, shine," as they walk around the "plant." The plant cannot grow with sunlight only.  
Ask, "What else do plants need to grow?"
  - b. Water – Ask another volunteer to stand beside the plant. They hold their hands over the plant and wiggle their fingers while saying, "sprinkle, sprinkle, sprinkle." Both sunlight and water walk around the "plant" doing the motion and chanting their parts. Stop the action before the "plant" begins to grow, because a plant needs something else in order to grow.  
Ask, "What else do plants need to grow?"

# Photosynthesis

c. Soil (Minerals) – Ask another volunteer to stand beside the “plant.” Ask the group, “How do plants get nutrients out of the soil?” This person pretends to shovel soil towards the “plant” while saying, “soil, soil, soil.” Have the three components begin their trip around the seed. Again, stop the action before the “plant” begins to grow.

Ask, “What else do plants need to grow?”

d. Carbon Dioxide – Ask for three volunteers. Ask the group what the symbol for carbon dioxide is ( $\text{CO}_2$ ). Assign one volunteer to be the C, one to be the O and one to be the 2. Have these three link arms, and as they walk around the “plant” have them chant their own part of “ $\text{CO}_2$ ,  $\text{CO}_2$ ,  $\text{CO}_2$ .” Also have the trio bob up and down as they say their part. Stop the action before the “plant” begins to grow.

Ask, “What else do plants need to grow?”

e. Oxygen – Ask for two volunteers to stand beside the “plant.” Ask the group to name the symbol for oxygen ( $\text{O}_2$ ). Have the two students hook arms and skip around the other actors while saying, “I’m free! I’m free! I’m free!” Remember oxygen is given off into the air. Allow the plant to grow to full height because all its needs are being met.

6. Have all the volunteers sit down, and ask someone not involved in the game to explain what photosynthesis is and what plants need to grow.

## Extension Ideas

Investigate diverse plant environments. (Science 3.6)

Investigate and understand soil components. (Science 3.7)

Discuss the water cycle and the effect of drought on plants. (Science 3.9)

Connect lesson with natural resources. (Science 1.8, 4.8)

Connect lesson with life cycles. (Science 2.4, 3.8, 4.4)

## School Garden Project

*continued from front page*

ence, math, language arts and social studies lessons and used to reinforce messages about teamwork and cooperation.

Here's what participating teachers had to say about the experience:

"The kids look forward to it every year."

"Many of my students never get out of the city and would never have had this great experience."

"Some seeds needed to be replanted because of some little fingers anxiously digging in the soil to see if their seed had begun to grow. Thanks a million."

"Everyone (students, teachers and parents) enjoy the program's songs, poems and interactive activities. I've even used them for our parent-child activity days!"

"A wonderful way to introduce key SOL concepts. The suggested extension ideas were right on target."

"This is a great project. Our society used to be based on agriculture. Students' families no longer grow their own food. This gives them an opportunity to see the value of growing their own, not purchasing it."

## National AITC Conference will be held in June

**T**he Agriculture in the Classroom National

Conference will be held June 24-28 in Nashville.

The event is open to educators of all grade levels, school administrators, curriculum developers, career guidance counselors, teacher aides, substitute teachers, Extension educators and agriculture industry representatives. It will feature a variety of workshops, including some with hands-on activities, a make-

and-take fair and a special ag-theme teacher store.

Last year's national AITC conference drew 300 educators from across the United States, among them Shirley Mullins, who taught kindergarten at Meadowview Elementary School in Washington County.

"Within two weeks of returning home, I had shared ideas and information with three teachers, a principal and our local 4-H leader," she recalled. "I had never been to a conference where

exhibitors were so willing to share materials. Not only did I get all kinds of information, but also contacts for information that I can use in the future."

Full conference registration, which includes 10 meals, events and all workshops, is \$299 before April 15 and \$345 afterward. Additional tours are available for \$45 to \$55.

A detailed agenda, information on accommodations and an online registration form are available at [www.agclassroom.org](http://www.agclassroom.org).

## Virginia farms featured on children's video; sales benefit AITC

**V**irginia farms, farm equipment and farm animals

appear in a new developmental videotape for children between 3 and 24 months of age.

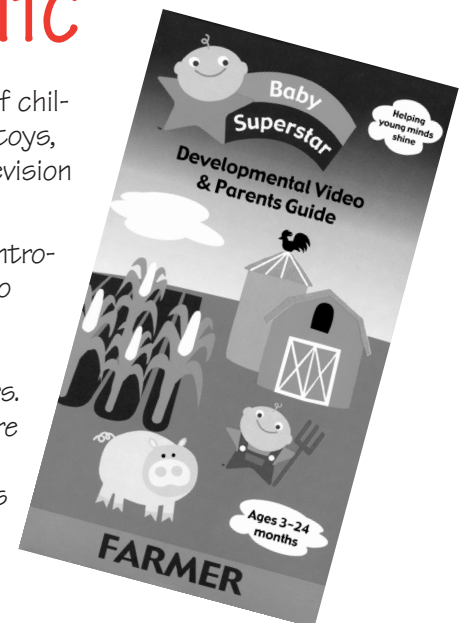
*Baby Superstar Farmer*<sup>™</sup> is part of the Baby Superstar<sup>™</sup> video series developed by parents and child learning specialists. Baby Superstar creators approached Virginia Farm Bureau in a search for video footage from farms.

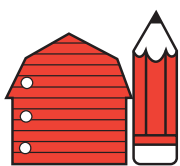
*Baby Superstar Farmer* won a 2002 Parents' Choice Award from the Parents' Choice Foundation, the nation's oldest not-

for-profit evaluator of children's books, videos, toys, audios, software, television and magazines.

The 30-minute video introduces young viewers to cows, pigs, horses and sheep, as well as to equipment like tractors. Farm images shown are those commonly mimicked by children's toys and are intended to enhance cognitive development. *Baby Superstar Farmer* also has a soundtrack of fully orchestrated classical music. Retail price for the video is \$9.95. For each copy of *Baby Superstar Farmer*

purchased by phone at 888-713-2229, \$3 will be donated to the Virginia Foundation for Agriculture in the Classroom.





## What's Growing On In Virginia?


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### What's growing on in YOUR area?

Share your AITC stories, comments and suggestions with us for possible publication in the next newsletter!

For information, contact Wendy Strong at 804-290-1143 or [wendy.strong@vafb.com](mailto:wendy.strong@vafb.com).

 **PRINTED WITH SOY INK** What's Growing On In Virginia is printed with soy ink in support of soybean growers.

## What are Virginia's powerhouse farm products?

**A**t least some Virginians are familiar with the commonwealth's top agricultural commodities. The Virginia Agricultural Statistics Service tracks annual cash receipts for each.

Commodity	2001 Cash Receipts (\$ million)
1. Broiler chickens	519
2. Beef cattle	350
3. Milk	317
4. Turkeys	207
5. Greenhouse/nursery	182
6. Tobacco	124
7. Soybeans	80
8. Corn for grain	71
9. Eggs	61
10. Peanuts	59

## Cookbook features Virginia farmers, farms and fabulous food

*The Best of Virginia Farms Cookbook & Tour Book*, due out in April, serves up a thoroughly appetizing helping of recipes from acclaimed chefs, historic sites, bed-and-breakfast establishments—and working farms.

The book also includes interviews, tours, essays, photographs and lots of agriculture history about America's oldest farm state, Virginia.

*The Best of Virginia Farms* is supported by the Virginia Farm Bureau Federation Women's Committee, and proceeds from the sale of copies purchased by phone will benefit the Virginia Foundation for Agriculture in the Classroom. Retail price is \$24.95.

To order your copy, call 800-553-8970.