



April/May: K-2

A South Carolina Farmer for a Day



South Carolina Farm to School Lessons

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Overview

Welcome to the South Carolina Farm to School April/May Agriculture Education Lesson. This lesson contains information & hands on activities where K-2 students will be learning about farmers, agriculture and agribusiness. Our goals with this lesson are: 1) To help students develop awareness that farmers provide a variety and abundance of foods we need to develop and maintain healthy lifestyles, and 2) to help students explore general facts of SC agriculture and agribusiness. This lesson also includes content & activities to promote the consumption of South Carolina fruits & vegetables. Specifically the focus of this lesson will be promoting SC summer squashes & strawberries, which are the Palmetto Picks of the Month for April & May, respectively. **This lesson provides a perfect opportunity for an actual farmer to visit the students.**

These lessons are designed to be delivered over a four week period, noting that introduction & activities will be supplemental to existing curriculum.

Estimated Total time: 1 hour and 15 minutes

Teacher Background¹²

Farmer for a Day: Most food from farms does not start out looking like food. Young children will not connect a strawberry plant or soybean field to strawberry smoothie or salad dressing. By becoming a farmer for a day, students will learn what a farmer does to plant, grow, and harvest a crop, and what happens to the crop between the farm and a grocery store. Students will simulate planting strawberries, hoping for rain and sun, harvesting the crop, then trucking the strawberries to the store and using them to make a strawberry smoothie. By working together using cooperation the students will learn of processing and consumers

Agriculture & Agribusiness: Clustering occupations based on the nature of the work involves studying what people do in the work and relating these observations to the competencies needed to perform the work. Agriculture is divided into six major areas:

- **Production agriculture:** Production agriculture is concerned with raising live- stock, producing livestock products (e.g., milk and eggs), and growing crops. It is often equated with farming and ranching.
- **Supplies and services:** The supplies and services area is concerned with providing the inputs needed to produce livestock, livestock products, and/or crops. Examples of supplies are feed, seed, and fertilizer. Examples of services are custom harvesting, crop consulting, and veterinary medical services.
- **Products processing and marketing:** The products processing and marketing area includes all the activities in processing the crops or livestock produced on farms and getting the products to consumers in their desired forms.
- **Forestry:** Forestry is concerned with the production of trees for various uses, such as lumber, paper, and ornamental products. It includes native forests as well as tree farms.
- **Natural resources:** The natural resources area includes the conservation and protection of water, soil, air, and other natural resources, including wildlife. Environmental science can be included in this area.
- **Agricultural mechanics and technology:** This area includes the manufacture, repair, and operation of tractors, implements, and computer-based systems.

Horticulture is divided into four major areas:

- **Landscape horticulture:** This area includes production nurseries, landscape nurseries, landscape maintenance services, plant and seed producers, retail garden centers/nurseries, and botanical gardens.
- **Floriculture:** This area includes the production, design, and marketing of flowers. Flower growers and marketers, wholesale florists, and retail florists are involved in this area.
- **Fruits, vegetables, and nuts:** This area deals primarily with food products and includes production, processing, packaging, distribution, and advertising.
- **Turfgrass:** This area deals with the use of grasses and other ground covers and includes sod production, turf establishment, and golf course and other turf area design and maintenance.

A professional occupation requires a high level of education and/or experience. Many professional occupations require college degrees at the master's or doctoral level.

- Examples in agriculture: agriculture teacher, veterinarian, agricultural engineer, plant breeder, biotechnologist
- Examples in horticulture: horticulture teacher, landscape architect, plant bio- technologist, vegetable researcher, geneticist

A managerial occupation involves managing an agricultural or horticultural enterprise. A college degree and/or considerable experience may be required. An individual who is a manager has large responsibilities for the success of the enterprise and the welfare of the employees.

- Examples in agriculture: feed mill manager, sawmill manager, fish farm manager, ranch manager
- Examples in horticulture: garden center manager, turf farm manager, flower market manager

A technical occupation is one that demands specialized training in performing processes, using equipment, and carrying out activities. Requirements are usually two years of education beyond high school and/or experience.

- Examples in agriculture: veterinary medical assistant, fish farm water-quality technician, food product inspector, farm equipment mechanic
- Examples in horticulture: floral designer, landscape designer, vegetable research technician

A skilled occupation is one that requires specialized education and training. Education beyond high school is often needed for occupational entry. On-the-job training may be particularly important.

- Examples in agriculture: farm equipment mechanic, artificial inseminator, pesticide applicator, livestock buyer
- Examples in horticulture: landscape installer, greenhouse assistant, nursery crop propagator

A semi-skilled occupation is one that requires some education and training and/or on-the-job experience. Semi-skilled occupations may be the entry level for individuals who have just completed training and need time to develop more skills before advancing to skilled occupations.

- Examples in agriculture: farm equipment set-up mechanic, mechanics assistant, warehouse employee, cattle herder
- Examples in horticulture: garden center assistant, packing shed attendant, lawn maintenance assistant

An unskilled occupation is one that requires neither specific education or training nor experience in order to perform the duties. Unskilled occupations are entry-level occupations that often involve considerable manual labor.

- Examples in agriculture: farm laborer, food plant utility person, fertilizer plant mail clerk
- Examples in horticulture: vegetable picker, warehouse worker, greenhouse worker

¹ Adapted from: Lesson: Selecting an Agriculture/Horticulture Occupation (www.MYcaert.com)

² Adapted from: Lesson 2: Farmer for a Day. National Farmers Union- "Growing Good Taste" (http://www.nfu.org/images/stories/education/Materials/2011_Curriculum/final%20grade%201-2%20lesson%20plans.pdf)

Lesson checklist



F2S Aim: Increase awareness related to farmers, agriculture and agribusiness.

F2S Objectives

Students will be able to:

- * Learn facts about farmers, agriculture and agribusiness.
- * Learn what farmers do by working on a farm.
- * Describe the resources to grow summer squashes and/or strawberries.
- * Experience planting a crooked squash seed and/or strawberry start
- * Taste a new food featuring summer squash and/or strawberries.



Materials:

- * Each One, Teach One Fact Cards (Appendix A)
- * Farmers Grow a Rainbow Lyrics (Appendix B)
- * I am a farmers stickers (Appendix C)
- * Palmetto Pick Activity Materials on page 9.
- * Gardening Activity Materials on page 9.
- * Farm for a Day Activity Materials on pages 7-8: Show drawings of strawberries on strawberry plants; show drawing of ripe strawberries in a field and in farmers' market; Old Coffee Can - water can; Flashlight - Sun; Pieces of brown construction paper - Soil; Tiny pieces of black felt - seeds. Optional: Solicit or secure a toy farm and a toy tractor.



National Health Education Standards

1.2.1	2.2.2	3.2.1	3.2.2	5.2.2
7.2.1	8.2.1	8.2.2		

SC State Standards

E2-2.2	Compare/contrast information within and across texts to draw conclusions and make inferences.
E2-2.4	Create responses to informational texts through a variety of methods (for example, drawings, written works, oral and auditory presentations, discussions, and media productions).
E2-4.1	Organize written works using prewriting techniques, discussions, graphic organizers, models, and outlines.
E2-4.4	Use grammatical conventions of written Standard American English, including <ul style="list-style-type: none"> • subject-verb agreement, • pronoun-antecedent agreement, • agreement of nouns and their modifiers, • verb formation, • pronoun case, • formation of comparative and superlative adjectives and adverbs, and • idiomatic usage.
E2-5.5	Create technical pieces (for example, proposals, instructions, and process documentation) that use clear and precise language suitable for the purpose and audience .
E2-6.4	Use vocabulary (including Standard American English) that is appropriate for the particular audience or purpose.
E2-6.5	Create written works, oral and auditory presentations, and visual presentations that are designed for a specific audience and purpose.
E2-6.6	Select appropriate graphics, in print or electronic form, to support written works, oral presentations, and visual presentations.
E2-6.7	Use a variety of print and electronic reference materials.

Lesson Essential Components

Lessons profile	Page(s)	Yes	No	Notes
Palmetto Pick of the Month	10	★		Tasting activities with strawberries or summer squash.
Health Education Standards	5	★		
SC-Cross Curricular Standards	6	★		
SC-F2S Behavioral Goals	5	★		
Cooking Activities	9-11	★		
Tasting Activities	10-11	★		
Physical Activity	8-9	★		
Food Safety	10	★		
School Food Garden	10	★		
Student to Farmer Connections (i.e. field trips, talks)	8--9	★		
Student to Chef Connections			★	
Farm to Cafeteria			★	
Provision of scientific knowledge/rationale	8-9	★		
Risk and benefits about healthy behaviors			★	
Obstacles, Barriers & Solution			★	
Family involvement and other supports		★		Family Activity Letter
Set goals and monitoring progress			★	
Other hands on activities:	8-11	★		Team Activities

Let's Learn!

Introduction: Each one, teach one!¹

Estimated Time: 15 minutes

1. *Preparation:* Make copies of “**Each One, Teach One Fact Cards**” (Appendix A) on heavy colored paper. Make enough sets so that each student will have a card and be sure that each set of cards is a different color. For example, you may have a set of red fact cards, a set of yellow and a set of blue. When students do the activity, have all students in the same color group teach their facts to one another.
2. The following directions provide a script showing how to explain the activity to students.
 - “In this activity, you will have two roles: a teacher and a learner.”
 - “You will receive a card that has one fact and a related picture printed on it. Your job is to teach that fact to everyone else in your color group. Use whatever teaching strategies you wish to use to help your classmates learn. At the same time you are teaching your fact, you will also be learning as many facts as possible from the other people in your color group. Your goal is to be a good teacher and a good learner.”
 - “There will be an evaluation at the end of the activity in which the good teachers and the good learners will be recognized.”
 - “Any questions?” [Distribute cards — one to each student. As you give each student their card, read the fact on the card for them and remind emergent readers that if they forget the fact, they can look at the picture to remind themselves.] “You may begin.” [Students may choose various methods to share facts — drawing pictures, a poem, a cheer, a finger play or simply showing their card and reading the fact to others. Students like to talk and students like to move — this activity incorporates both.]
3. Walk among the group to observe methods being used. Make sure you have an overhead projector with blank transparency and overhead marker ready during this time.

4. When it is obvious that it is time to stop, have everyone return to his or her seat.

- “Now it is time for your evaluation — this will be a group evaluation. Place the card with the fact you were teaching in a pile in the center of the table.” [The teacher should pick up the cards.] “Also, any notes you may have taken during the exercise should be turned face down.”
- “I want you to think of a fact someone else taught you — raise your hand when you have done so. I will call on you to share the fact.”

5. As students share facts they remember, be sure to write the facts on the transparency so the visual learners can see them in print. Also, as facts are shared, ask the student who taught that fact to stand and take a bow.]

6. After all facts have been shared, or until no one is able to remember another fact, have all the students who shared a fact stand and take a bow. Recognize them as good learners.

7. Review all facts and ask if any of the facts surprised the students.

8. This activity is very effective as an introduction to a farmers, agriculture and agribusiness.

Activity

Farmer for a Day!²

Estimated Time: 30 minutes

Important Note: Try to invite a farmer as a guest speaker for this activity, and then confirm his or her attendance the day before the event.

1. Begin this activity by singing “**The Farmer Grows a Rainbow**” Song (Appendix B-Song Lyrics):

- Rainbow Song Voice: http://www.agclassroom.org/rainbow/song_lyrics.htm
- Rainbow Song: http://www.agclassroom.org/rainbow/song_inst.htm
- Photos to illustrate the lyrics: <http://www.agclassroom.org/rainbow/pdf/lyrics.pdf>

2. Ask students, *What do you think “farming” means?* After several ideas have been shared, lead students to

an understanding that farming includes “raising plants and animals as a job or business.” Ask students, *Why farming is so important?* Make sure students understand that in order to stay alive, our bodies must have food and that farmers are the people primarily responsible for growing that food.

3. Ask the children, *Have you ever visited a farm?* For those who live on a farm, ask them, *Do you know what your parents do on the farm to grow crops or raise livestock?* Remind them that a farm is like a very big garden. In a garden, seeds have to be planted, weeds have to be pulled, plants have to be watered, and then vegetables and fruits have to be picked. A farm takes a lot more work than a garden, yet each requires similar jobs be performed following a schedule. With enthusiasm, tell the students they are going to be “Farmers For a Day.” Begin by placing the “**I’m A Farmer**” stickers (Appendix B) on their shirts.

4. To accomplish all the work to grow food on a farm and get it to the grocery store requires a lot of effort. By working together as a team, we will get an entire summer’s work done in just one hour. This is called **cooperation**. We will cooperate to reach our goal.

5. Tell to the students, the first chore is to plant the field. Ask them, *What does a farmer use to plant a crop (like strawberries or summer squash)?* They should point to the tractor. Encourage children to make tractor noises during this activity. *What sound does a tractor make?*

6. Now you move onto the next step. *What makes a fruit (strawberry) or vegetable (summer squash) grow?* Sun and rain. Simulate this by having one student hold a flashlight pointed at the field; have a second student sprinkle imaginary raindrops from the watering can.

7. Tell to the students that sometimes weeds can grow on the field and crowd out the crops. *Oh, no, weeds are growing in our field. How does a farmer get rid of weeds?* The next student will take his or her turn running the tractor across the field to get rid of the weeds. Farmers get rid of weeds by digging them under or spraying them.

8. Before we harvest our fruits or vegetables, we have to see them grow (Appendix C). After they are ripened, we will pick them and put them in a basket.

Take for instance the growth and distribution cycle of the strawberry:

- Plant the seeds
- Nurture the seeds with soil and sunlight
- Watch the flowers bloom on the stem
- Wait for the strawberry to grow from the flower
- Once the strawberry is red in color...
- Farmer’s pick/harvest the strawberries
- Farmers then separate the ripe, red strawberries from the ones that need more time, care and sunlight.
- Gather the ripe ones and place them into many baskets.

9. Then, the strawberries from the farm are placed on the truck to be delivered to stores. Strawberries can be sold in grocery stores, restaurants or farmers’ markets.

10. When the strawberries are in the store where will they go? The answer, of course, is home. Explain to the children that a **consumer** is the same as a **customer**: it is someone who buys food for his or her own use at home. A customer at a grocery store buys strawberries and then takes it home to make smoothies or to create other yummy nutritious snacks with strawberries.

11. **Optional:** Introduce your guest speaker (if one is available). This farmer needs to keep in mind the young age of his or her audience and keep the message simple. He or she should open by saying the children are good farmers themselves. Allow the children to ask questions.

★ Gardening Activity

Planting a Strawberry Jar OR Planting a Crookneck Squash Seed (You can either choose one of the planting activities or do both)⁵
Estimated Time: 15 minutes.

1. **Strawberry Jar- Materials Needed:** Ever-bearing strawberry starts (small plants); Small flower pot or old coffee can (8-10” in diameter, 8” deep); Water for soil in a small spray bottle; Potting Soil.

2. Strawberry Gardening Activity: Tell the children that today they will plant small strawberry plants. Explain to the students the importance of sunlight, soil and the right amount of water for their plants to grow to their full potential. Juicy foods like strawberry needs lots of water so farmers and gardeners will use sprinklers or watering cans in addition to rain to make sure plants have plenty water.

3. Planting Tips: Fill the container 2/3 full of potting soil. Remove the start of the plant from its pot and gently loosen roots. Place the start in a single container or 8 inches apart in larger containers. Cover with soil and water to moisten but not drench.

OR

1. Crookneck Squash Seed-Materials Needed:

Crookneck squash seeds packets; 5 to 6 ounces paper cups one per child; Potting Soil; Unsharpened pencil; Water for soil in a small spray bottle; Plastic spoons one per child; waterproof markers; wooden craft sticks; table covers if desired; sunny location.

2. Crookneck Squash Gardening Activity: Tell the children that today they will plant squash seeds. The seeds need soil, water, light and warmth to grow into plants. The seeds will grow first into very small plants then into larger plants. These larger plants, if planted outside in the garden, will continue to grow with sunlight and water.

3. Planting Tips: Help each child write his/her name on their cup. Help the children fill their cups about 3/4 full of potting soil. Gently tap the sides and bottom of their container with their index finger to settle but not pack the soil. Poke three holes in the soil spaced around the cup. Use the marked unsharpened pencil to make holes 1/2 inch deep. Place a seed in each hole and gently cover the seeds with soil. Light spray water over the top of the soil. If using wooden plant markers, stick one in the soil close to the inside curve of the cup. Have the children set their cups in a sunny spot. Have the children check their cups weekly to see the progress of the seeds growing into plants.

★ Palmetto Pick Activity

Summer Squash Sandwich OR Strawberry Pizza

Estimated Time: 15 mins

Ingredients: Summer Squash Sandwich Sensory Exploration

Summer squash, (1-2 inches in diameter), Mozzarella or Cheddar cheese slices, Plates, Napkins

OR

Ingredients: Strawberry Pizza Sensory Exploration

Graham cracker squares (1 for each child), Strawberry-flavored cream cheese, Strawberry slices, Plates, Napkins

Sensory Exploration Activity:

Have students wash their hands (with soap & warm water for 20 seconds) & reinforce that it is important. Show the students that you have washed the squash/strawberries before beginning. Talk about planting summer squashes/strawberries while eating during this taste tasting activity.

Summer Squash Sandwich: Give the child a plate with at least two thin slices of summer squash and one slice of cheese. Tell the children they are going to make a sandwich with summer squash. Allow them to place the cheese between the crookneck squash slices to make a sandwich and have them note the difference in shape and textures. As the children eat their summer squash sandwiches, have them describe how the squash: smells, feels in mouth and tastes

Strawberry Pizza: Give each child a paper plate with cream cheese topped graham cracker. Let child select several slices of strawberry with a spoon or fork. Show the children how to layer the strawberry slices on the cream cheese to make a pizza. As the children eat their strawberry pizzas, have them describe how the strawberry: smells, feels in mouth and tastes.

Note: You may want to have squash/strawberry samples sliced before you begin the PPM Activity. Remember, that you can use the Farm to School grant funds to purchase the materials required for this activity. Additionally, if you need assistance identifying places to purchase SC summer squash or strawberries, feel free to contact your Farm to School Agriculture regional coordinator.

Evaluation

Informal Assessment: Observe participation in lesson activities. Complete survey at end of month (survey will be sent electronically).

¹ Source: SC 1st Grade Ag in the Classroom Curriculum, 2011.

² Adapted from: Lesson 2: Farmer for a Day. National Farmers Union- "Growing Good Taste" (http://www.nfu.org/images/stories/education/Materials/2011_Curriculum/final%20grade%201-2%20lesson%20plans.pdf)

³ Source: Team Nutrition-United States Department of Agriculture.(2009). Grow it, Try it, Like it! Preschool Fun with Fruits and Vegetables. Booklets 2 & 7.

Resources



Books:

Koch P.A., Barton A.C., Contento I.R. (2008). Farm to Table & Beyond. Teachers Columbia University & the National Gardening Association, New York, NY.

Websites:

The Farmers Grow a Rainbow song, lyrics and educational lessons: <http://www.agclassroom.org/rainbow/>

Strawberries Time Activity and Coloring Booklet: http://www.ncstrawberry.org/docs/kidactivity_export.pdf

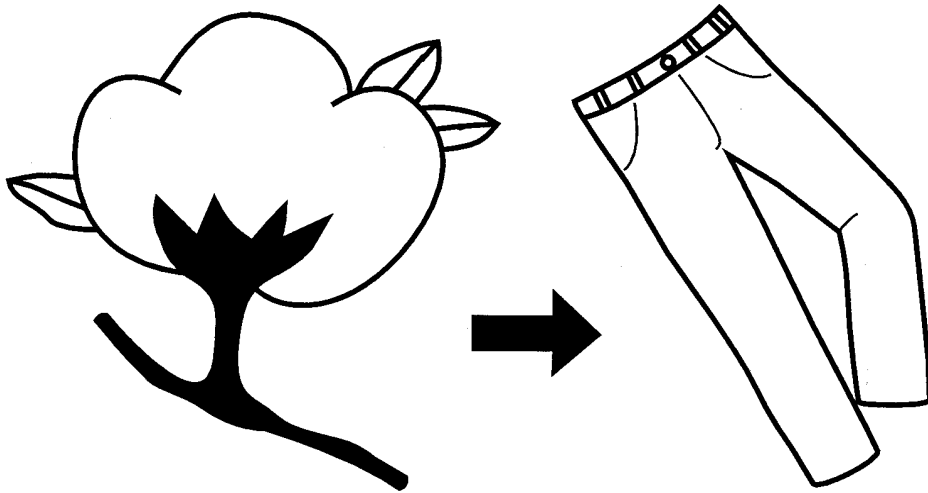
To request nutrition education materials visit the Clemson University Nutrition and Resource Center (NIRC): www.clemson.edu/nirc

Start a school salad bar-Part of First Lady Michelle Obama's Let's Move: <http://saladbars2schools.org/>

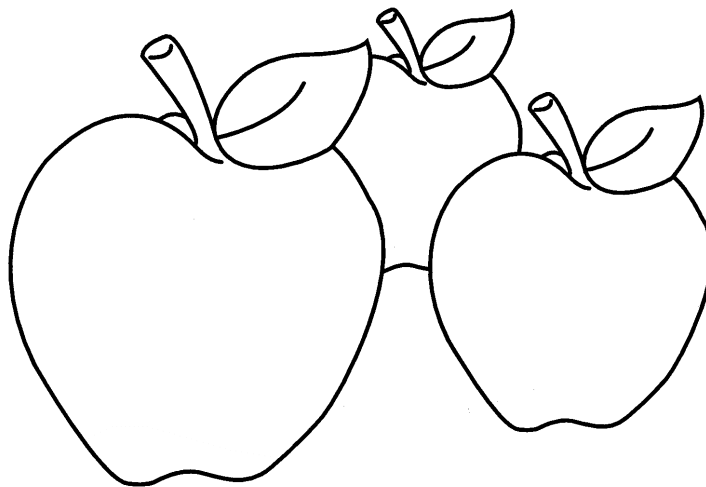
Appendix A
Each One, Teach One Fact Cards

Each One, Teach One Fact Cards

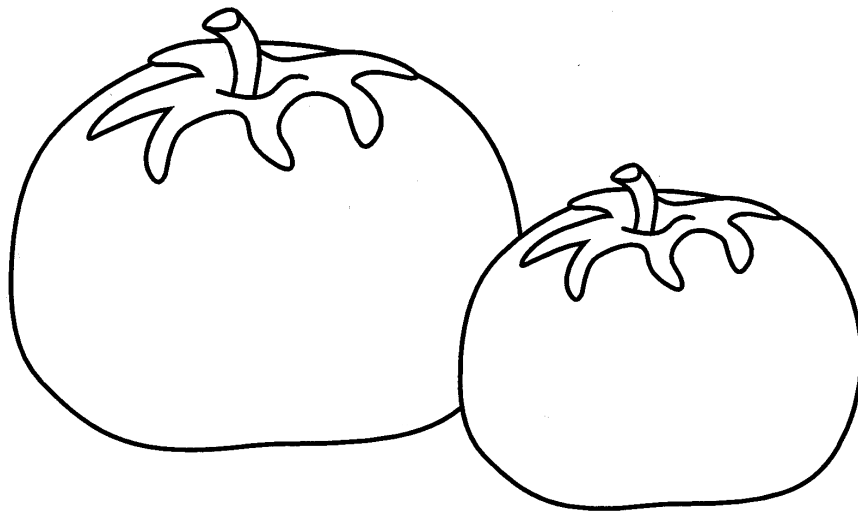
Blue jeans are made from cotton.



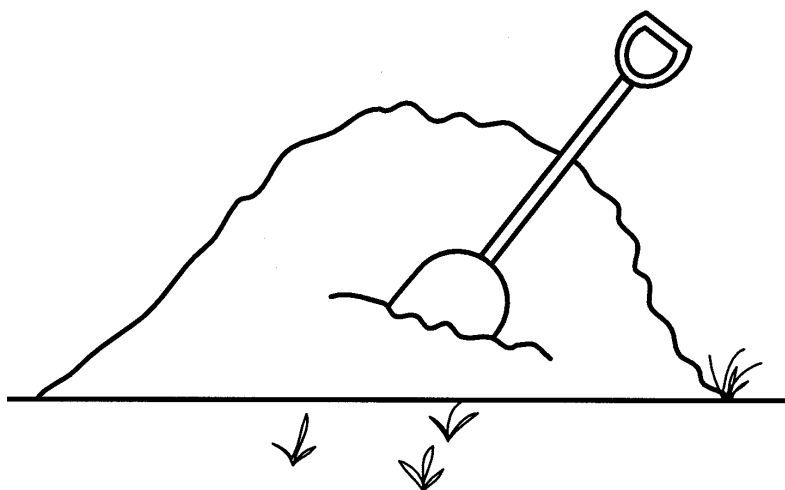
Apples are grown in South Carolina.



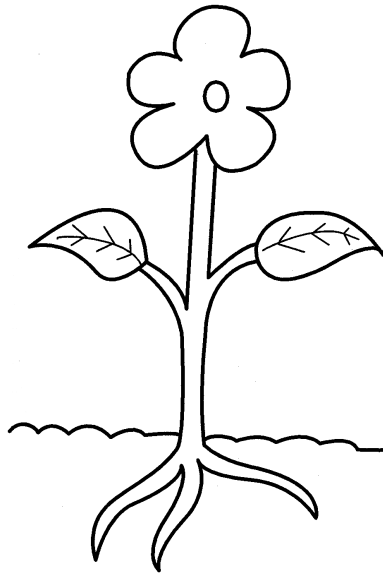
Ketchup is made from tomatoes.



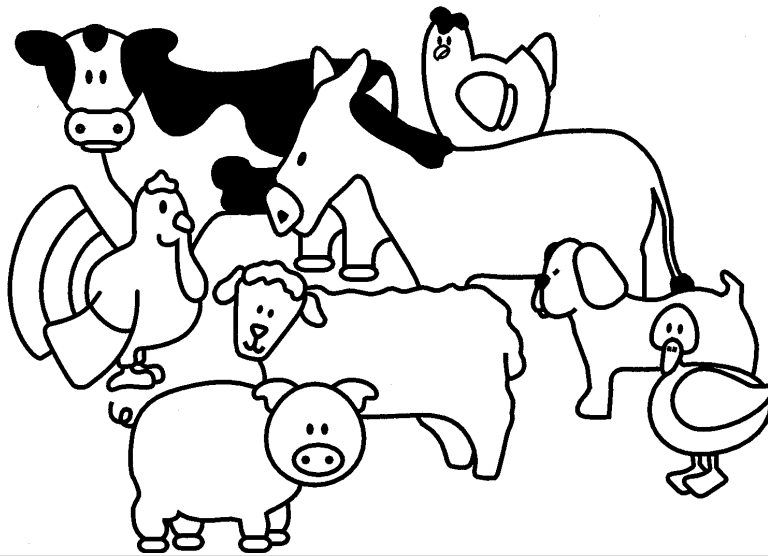
Dirt is important to farmers.



Farmers grow plants.



Farmers raise animals.



Appendix B
“The Farmer Grows a Rainbow” Song

(Sung to the tune of “Following the Leader” From Peter Pan)

The farmer grows a rainbow, a rainbow, a rainbow,

The farmer grows a rainbow

For me to eat each day!

A bright and healthy rainbow, a rainbow, a rainbow,

A bright and healthy rainbow

To fuel my work and play!

The farmer grows the grassy grains, the grassy grains, the grassy grains,

The farmer grows the grassy grains

To give me energy!

The farmer grows the vegetables, the vegetables, the vegetables,

The farmer grows the vegetables

With vitamins, you see!

The farmer grows the fresh fruits, the fresh fruits, the fresh fruits,

The farmer grows the fresh fruits

To keep away disease!

The farmer cares for dairy cows, for dairy cows, for dairy cows,

The farmer cares for dairy cows

To give me milk and cheese!

The farmer raises beef cows, and swine for pork, and poultry,

The farmer raises catfish

For protein so I'll grow.

I want to thank the farmer, the farmer, the farmer,

I want to thank the farmer

For growing my rainbow!

Appendix C
I am a Farmer "Stickers"

