

# FROM FARM to SCHOOL – CROPS of NORTH CAROLINA



*A VISIT*  
to the  
**STRAWBERRY**  
**PATCH**  
ACTIVITY BOOK

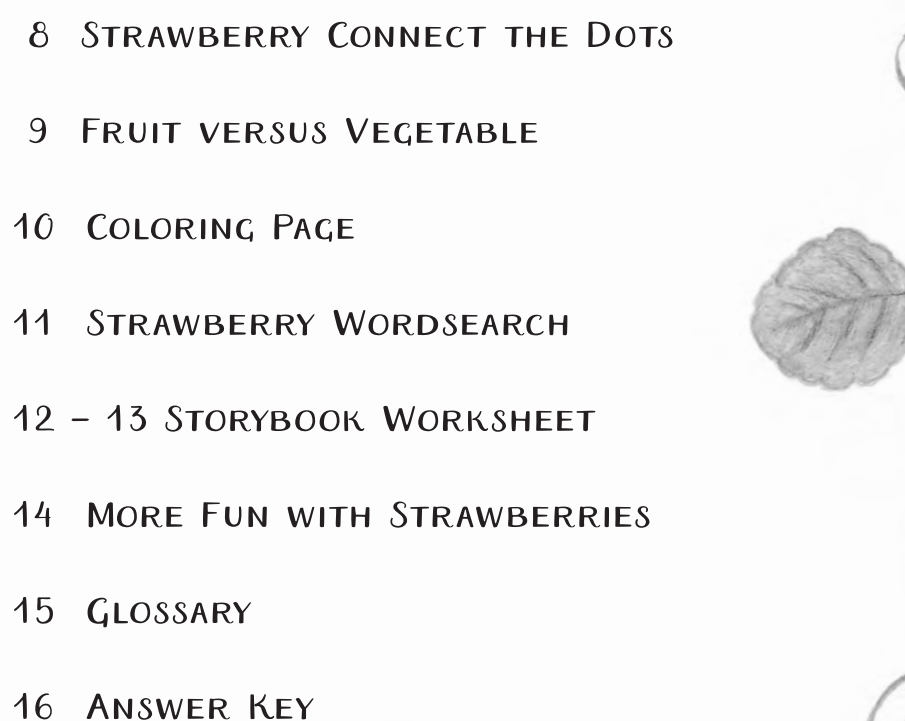


Based on the story by  
Heather Barnes and Karen Baltimore  
Illustrations by Karen Baltimore





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## STANDARDS

### *From Farm to School – Crops of North Carolina: A Visit to the Strawberry Patch* Storybook and Activity Book North Carolina Common Core and Essential Standards Quick Reference

The *From Farm to School – Crops of North Carolina: A Visit to the Strawberry Patch* Storybook and Activity Book allow you to teach objectives of the Healthful Living Essential Standards while integrating the concepts of healthy eating into the Common Core Standards. The Quick Reference summarizes the standards addressed in the storybook and activity book. Additional standards and objectives may be applicable in utilizing and expanding upon these resources. Effective nutrition education can motivate and enable students to eat healthy and be active. Fit, healthy students are ready to learn. Teachers can make a difference by encouraging students to eat healthy every day, incorporating nutrition education into lesson plans to reinforce healthy choices for students, and teaching and role modeling healthy eating. For a description of each standard listed below, please visit [www.ncfarmtoschool.com](http://www.ncfarmtoschool.com).

Grade	English Language Arts	Math	Science	Social Studies	Healthful Living
K	RI.K.1, RI.K.4, RI.K.7 RF.K.1, RF.K.1.A, RF.K.1.B, RF.K.1.C, RF.K.1.D, RF.K.3, RF.K.4 L.K.4, L.K.5.A	K.CC.3, K.CC.4, K.CC.5, K.CC.6 K.MD.1, K.MD.2 K.G.1, K.G.2, K.G.4	K.P.1.1 K.P.2.1	K.H.1.2	K.NPA.1.1, K.NPA.1.2, K.NPA.2
1	RI.1.1, RI.1.4, RI.1.5, RI.1.6, RI.1.7, RI.1.10 RF.1.1.1, RF.1.3, RF.1.4 L.1.4, L.1.5.A	1.MD.4	1.L.1, 1.L.1.1 1.L.2.1	1.G.1.2 1.E.1.1, 1.E.1.2	1.NPA.1.1, 1.NPA.2.1
2	RI.2.3, RI.2.4, RI.2.5, RI.2.7, RI.2.10 RF.2.3, RF.2.4 L.2.3, L.2.4	2.MD.3 2.MD.6	2.L.2.2	2.H.1.1 2.G.2.1 2.E.1.1, 2.E.1.2	2.NPA.1.2, 2.NPA.2
3	RI.3.1, RI.3.4, RI.3.7, RI.3.10 RF.3.3, RF.3.4 L.3.3, L.3.4	3.MD.5	3.L.2.1, 3.L.2.3	3.G.1.1, 3.G.1.4 3.E.2.2	3.NPA.2, 3.NPA.2.1
4	RI.4.3, RI.4.4, RI.4.10 RF.4.3, RF.4.4 L.4.3, L.4.4		4.L.2.2	4.G.1.3	4.NPA.2, 4.NPA.3
5	RI.5.3, RI.5.4, RI.5.10 RF.5.3, RF.5.4 L.5.3, L.5.4		5.L.2, 5.L.2.2	5.G.1.3	5.NPA.1.1, 5.NPA.2

English LA	RI = Reading: Informational Text, RF = Reading: Foundational Skills, L = Language
Math	CC = Counting and Cardinality, G = Geometry, MD = Measurement and Data
Science	P = Physical Science, L = Life Science
Social Studies	H = History, G = Geography and Environmental Literacy, E = Economic and Financial Literacy
Healthful Living	NPA = Nutrition and Physical Activity



## LETTER TO EDUCATORS

Dear Teachers,

Agriculture is North Carolina's number one industry and the NC General Assembly selected the strawberry as the official State Red Berry. The NC Department of Agriculture and Consumer Services (NCAD&CS) has been providing fresh, NC produce to schools across the state since 1997 through the NC Farm to School Program. Strawberries are one of the most popular crops offered to school nutrition through the program.

Agriculture can be the basis for lessons in math, language arts, science, social studies, art and other school subjects. Strawberries are planted in the fall and peak harvest occurs in April and May; meaning lessons can be taught throughout the year.

This activity guide is designed to be used with *From Farm to School – Crops of North Carolina: A Visit to the Strawberry Patch*, also available from NCDA&CS. Printed copies are available on a first-come, first-serve basis and can also be downloaded from our website, [www.ncfarmtoschool.com](http://www.ncfarmtoschool.com).

For more information on strawberries visit the following:

NC Department of Agriculture and Consumer Services

[www.ncagr.gov/markets/kidstuff/](http://www.ncagr.gov/markets/kidstuff/)

NC Farm to School Program

[www.ncfarmtoschool.com](http://www.ncfarmtoschool.com)

NC Strawberry Association

[www.ncstrawberry.com](http://www.ncstrawberry.com) - See the "Educators" and "Kids" section

NC Cooperative Extension/4-H, Grow For It

[www.growforit.org](http://www.growforit.org) – See the "Curriculum" Section

NC Farm Bureau, Ag in the Classroom – Curricula, Workshops, Resources and Grants

[www.ncagintheclassroom.com](http://www.ncagintheclassroom.com)

NC Department of Public Instruction, School Nutrition Services

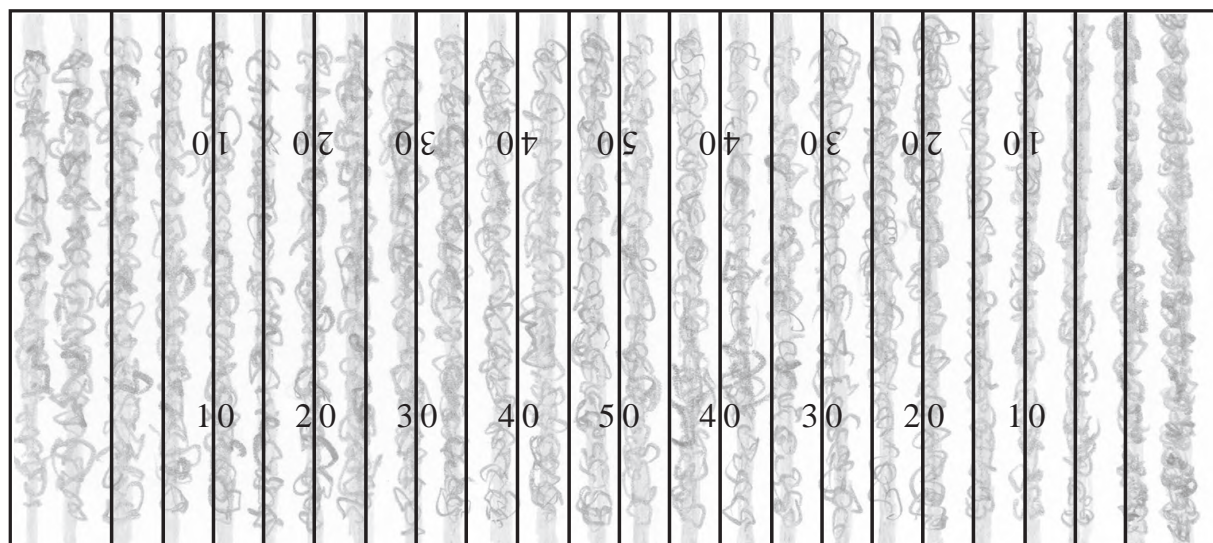
[childnutrition.ncpublicschools.gov/information-resources/nutrition-education](http://childnutrition.ncpublicschools.gov/information-resources/nutrition-education)



Design and illustration by Karen Baltimore  
For more of her work, please visit  
[www.karenbaltimore.com](http://www.karenbaltimore.com)

## NORTH CAROLINA STRAWBERRIES AT A GLANCE

Farmers in NC planted 1600 acres of strawberries in 2012. One acre is of land is 43,560 ft<sup>2</sup>. Compare this to a football field which, including end zones, measures 57,600 ft<sup>2</sup>.



Almost all the strawberries grown in North Carolina are sold for the fresh market. You can buy these berries at roadside stands, farmers markets and grocery stores. NC fields produced 20.3 million pounds of strawberries in 2012 worth \$29.4 million.

May is Strawberry Month in NC. Farmers in the east start picking strawberries in mid-late April, while berries in the western part of the state begin ripening in early May. Some farmers also produce strawberries during other times of the year using high tunnels or greenhouses.

Chandler is the most widely planted strawberry variety in NC. Farmers also grow Camarosa, Sweet Charlie and other varieties.

Strawberries are a nutritious fruit. They are high in Vitamin C, which helps the body heal, prevent infection and maintain healthy bones, gums and teeth. The fruit is also a significant source of fiber.

One serving (1 cup or 6-9 berries) has only 50 calories and no fat, cholesterol or sodium.

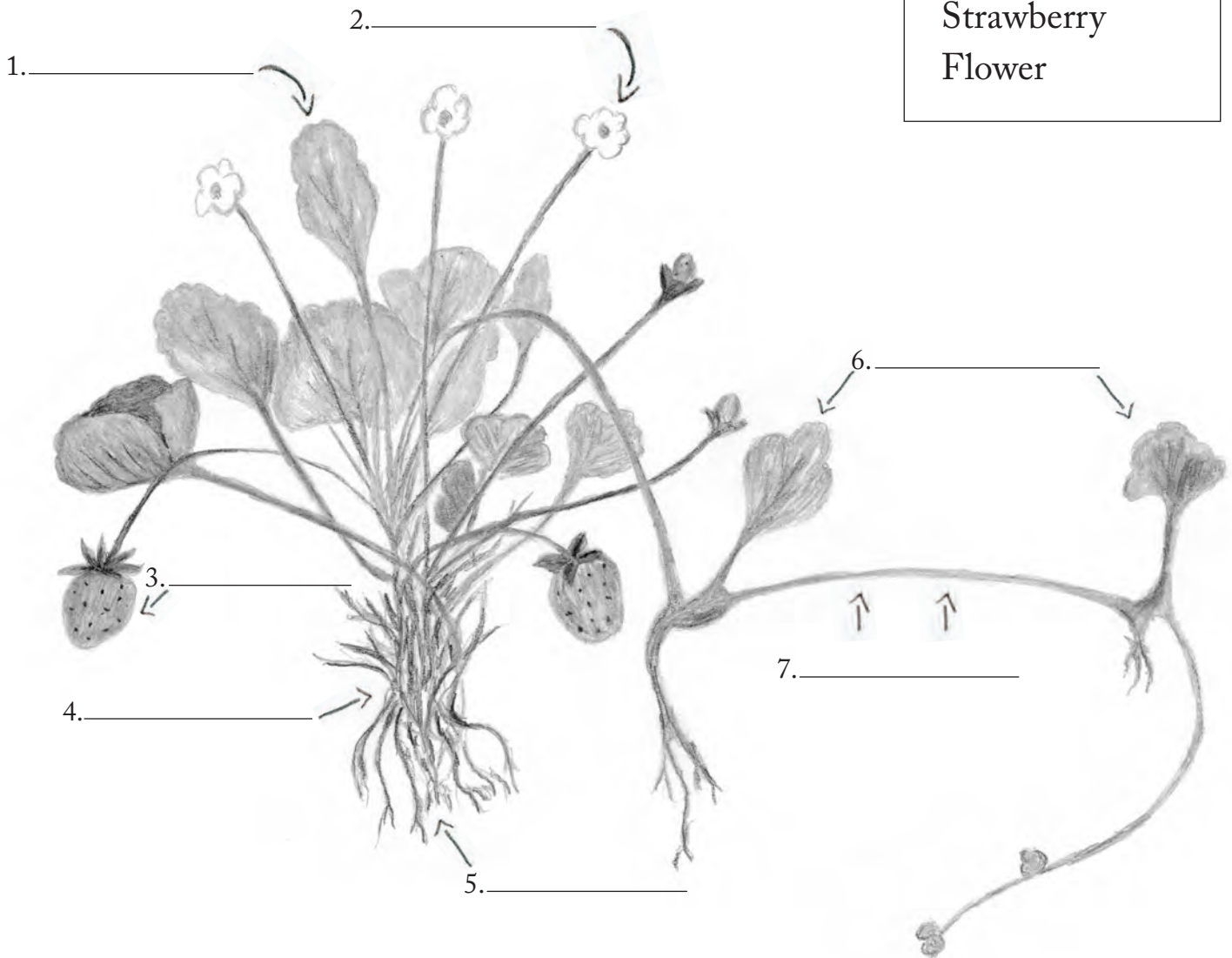
Strawberries can be frozen without losing any of their nutritional value.



## PARTS OF A STRAWBERRY PLANT

Use the words in the box to label the parts of a strawberry plant.

Crown  
Runner  
Roots  
Leaf  
Daughter plants  
Strawberry  
Flower

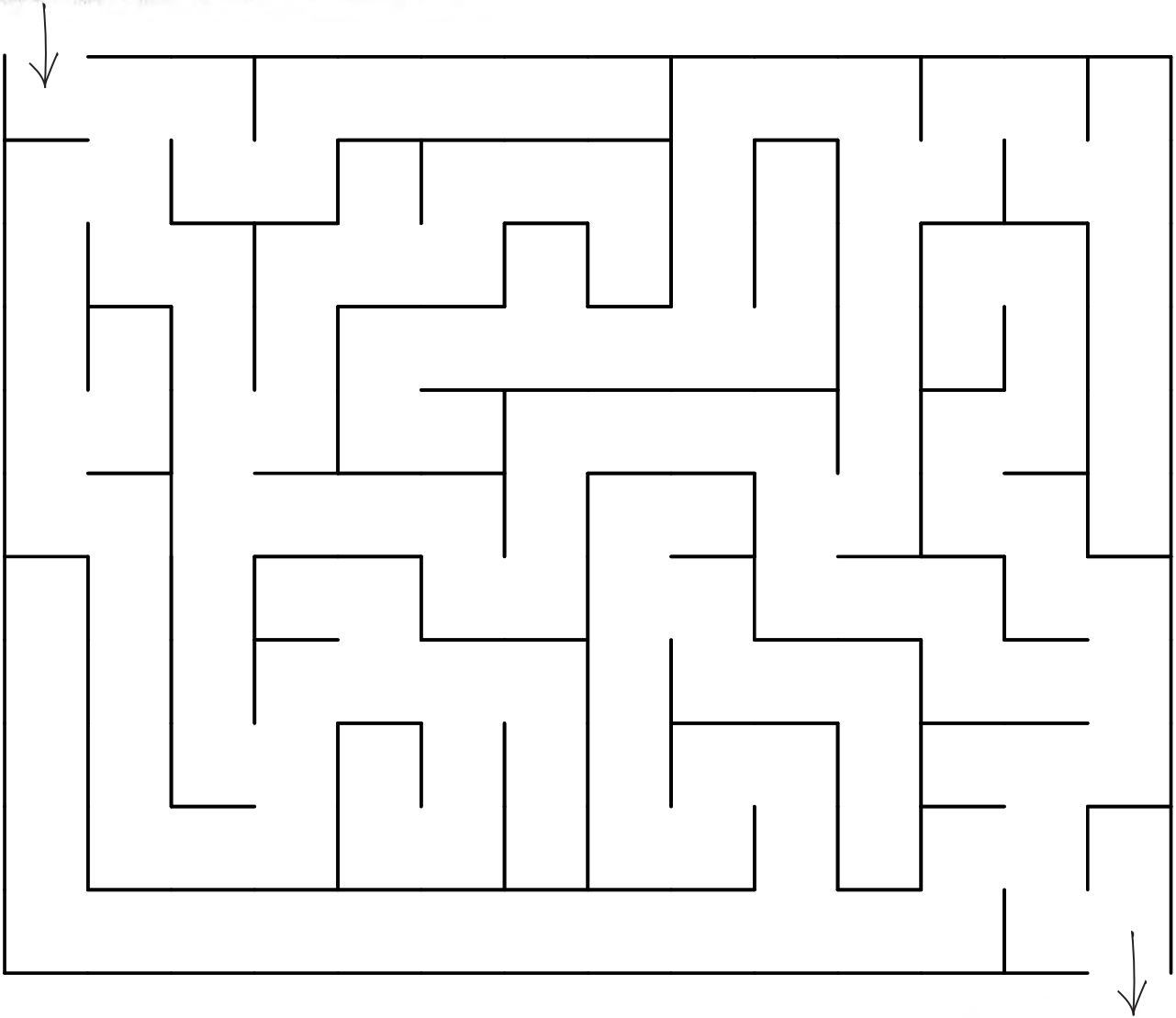


Bonus question: Draw an arrow pointing to the seeds on the strawberry.



## STRAWBERRY MAZE

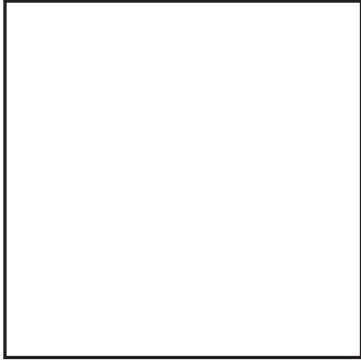
Help the NCDA&CS truck get to school to deliver the strawberries.



## STRAWBERRY MATCHING

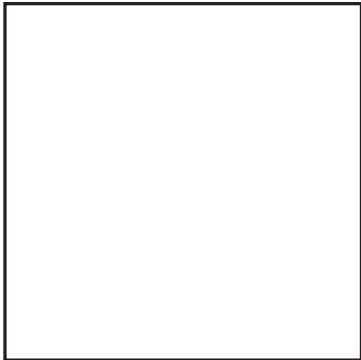
Strawberries grow in phases. Cut out the pictures below and match them with the phase that describes them. Then, number the pictures so that the phases are in the correct order.

— .



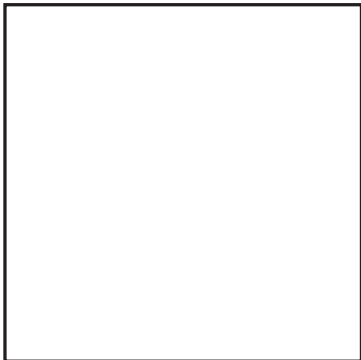
Next, a green berry starts to grow out of the flower's center.

— .

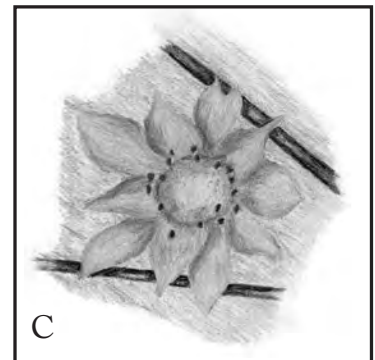
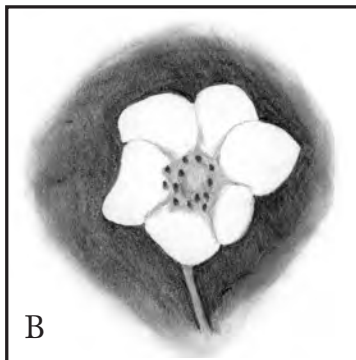
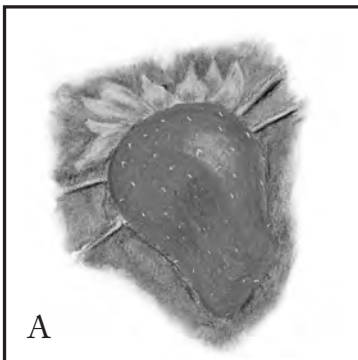


Strawberries begin as a flower.

— .



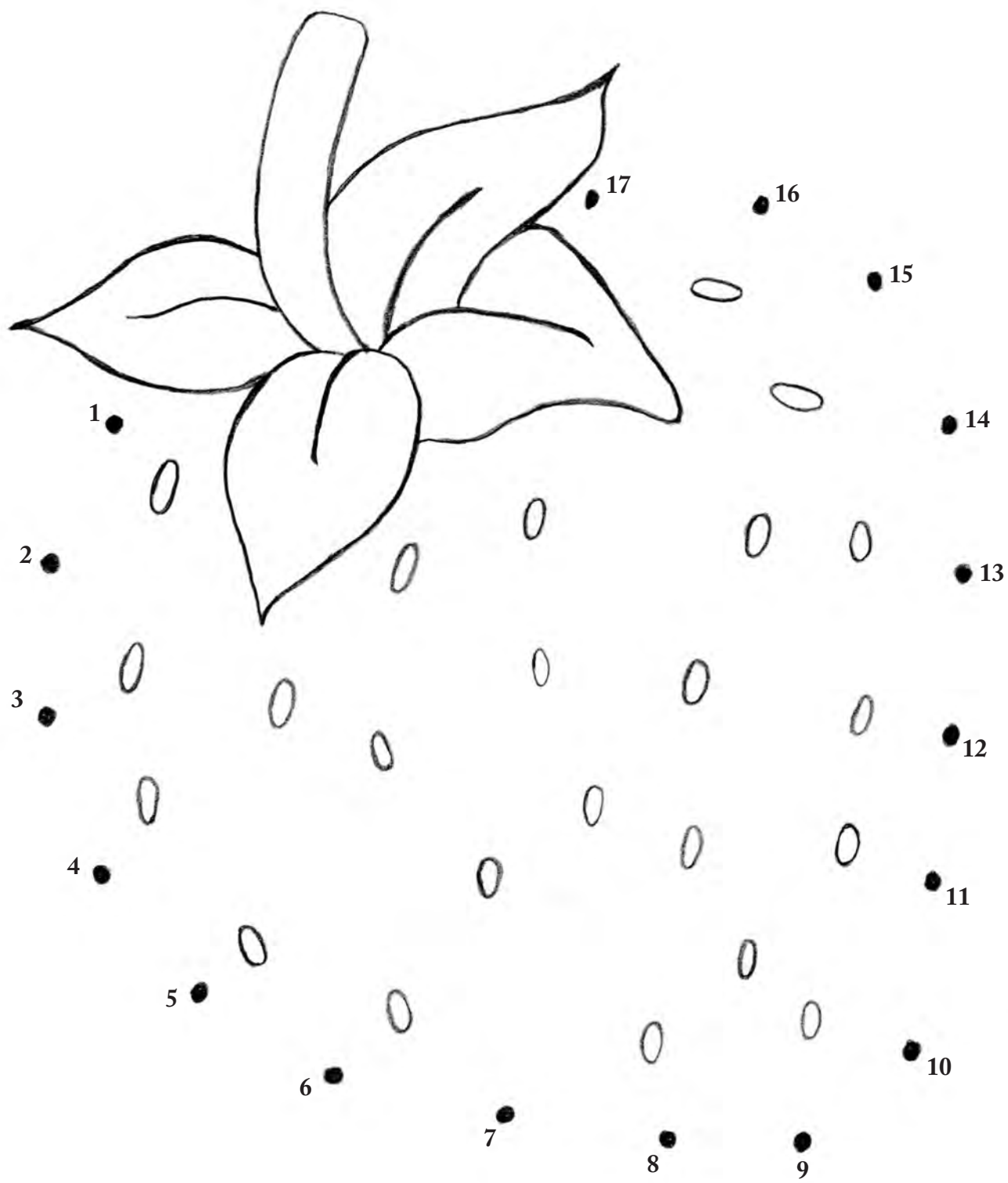
The berry ripens until it is big, red, and juicy.





## STRAWBERRY CONNECT THE DOTS

Connect the dots and color the picture. How many seeds does this strawberry have? \_\_\_\_\_



## FRUIT VERSUS VEGETABLE

It's important to eat a variety of colorful fruits and vegetables every day. Strawberries are a fruit. Draw a circle ○ around the fruits and a square □ around the vegetables. Count the number of fruits and vegetables and write the total in the lines at the bottom of the page.



Apple



Corn



Sweet potato



Blueberries



Watermelon



Cabbage



Squash



Broccoli

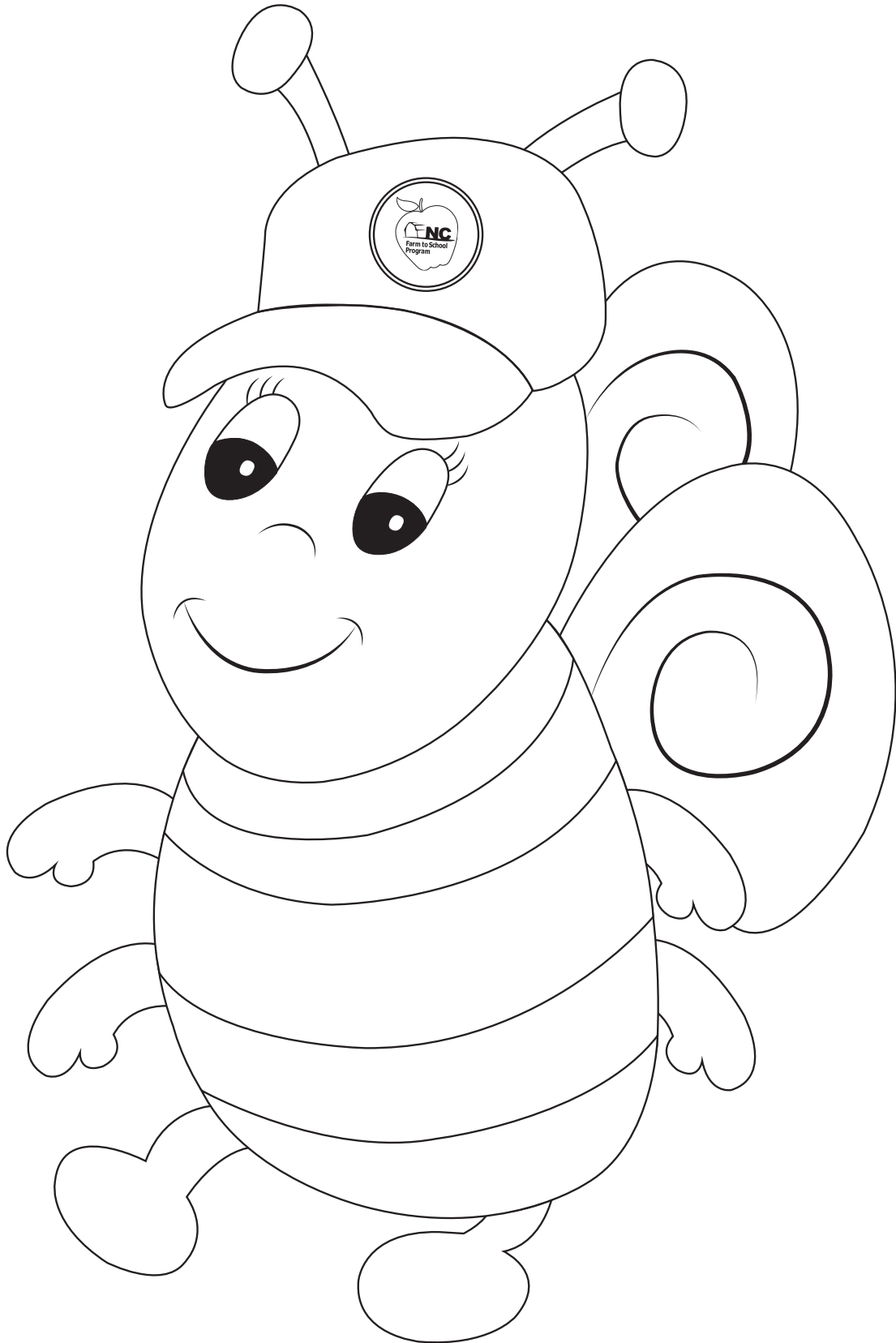


Zucchini

\_\_\_\_\_ Number of fruits      \_\_\_\_\_ Number of vegetables

## COLORING PAGE

Farmer Bee is a worker honey bee. Most honey bees who live in the colony are female worker bees. Their job is to visit flowers to gather nectar, which will be used to make honey. As they visit flowers, worker bees carry pollen from flower to flower, pollinating them. Strawberries will grow from these flowers. Color Farmer Bee so she can go help on the farm.





# STRAWBERRY WORDSEARCH

Find the words hidden below. Words are placed horizontally, vertically and diagonally.

R	N	J	R	I	C	N	A	P	K	Y	S	A
A	O	F	T	R	R	A	F	A	E	R	W	Z
P	F	O	S	R	O	G	R	O	W	A	E	U
H	L	N	T	I	W	P	L	A	N	T	E	N
O	O	V	R	G	N	A	S	E	G	O	T	A
N	W	L	N	A	P	L	H	A	S	T	E	M
E	E	I	W	T	F	A	R	M	T	O	A	R
Y	R	S	B	E	D	D	E	R	I	R	I	A
B	T	A	E	Z	F	R	E	S	H	E	A	L
E	R	C	C	E	A	A	S	E	E	D	S	P
E	U	A	R	R	H	A	R	V	E	S	T	A
A	C	A	Y	J	E	V	S	P	R	I	N	G
F	K	R	P	R	U	N	N	E	R	A	S	E

SEEDS  
HONEY BEE  
RED  
HARVEST  
FARM

ROOT  
GROW  
RUNNER  
CROWN  
SWEET

STEM  
SOIL  
BEDDER  
IRRIGATE  
PLANT

ACRE  
FRESH  
SPRING  
FLOWER  
TRUCK



## STORYBOOK WORKSHEET

Circle the best answer to the following questions based on the story.

1. Where are strawberries grown?
  - a. School cafeteria
  - b. Grocery Store
  - c. Farm
  - d. Roadside stand
2. When do farmers start getting the soil ready for planting?
  - a. Spring
  - b. Summer
  - c. Fall
  - d. Winter
3. Farmers use a disk to form the soil into \_\_\_\_\_ beds.
  - a. flat
  - b. round
  - c. large
  - d. raised
4. What color is the plastic farmers use for strawberries?
  - a. Black
  - b. Red
  - c. White
  - d. Clear
5. Workers plant \_\_\_\_\_ plants per acre.
  - a. 10,000
  - b. 15,000
  - c. 20,000
  - d. 25,000
6. Strawberry blossoms, or flowers, start blooming in what month?
  - a. February
  - b. April
  - c. June
  - d. August
7. What part of the strawberry plant grows underground?
  - a. Leaves
  - b. Runner
  - c. Crown
  - d. Roots

8. Below what temperature will the flowers begin to freeze?
  - a. 40°F
  - b. 36°F
  - c. 32°F
  - d. 15°F
9. What insect visits the flowers on strawberry plants?
  - a. Ladybug
  - b. Honeybee
  - c. Mosquito
  - d. Aphid
10. How long does it take for strawberries to ripen?
  - a. 1 day
  - b. 1 week
  - c. 2 weeks
  - d. 1 month
11. What is the first color a strawberry will be?
  - a. White
  - b. Green
  - c. Yellow
  - d. Red
12. Will strawberries ripen after they are picked?
  - a. Yes
  - b. No
13. What month is Strawberry Month?
  - a. April
  - b. May
  - c. June
  - d. July
14. Where can you find North Carolina strawberries?
  - a. Your school cafeteria
  - b. Grocery stores
  - c. Roadside stands
  - d. All of the above
15. Strawberries are full of vitamin \_\_\_\_\_.
  - a. A
  - b. B
  - c. C
  - d. D





## MORE FUN WITH STRAWBERRIES

### Easy Strawberry Smoothie

- 1 cup vanilla yogurt
- 1/2 cup fresh strawberries,  
washed and stems removed
- 1/2 banana, peeled
- 1/4 cup apple juice

Toss all the ingredients into a blender and blend until smooth.

Note: If you don't have a blender, mash up the fruit, put all the ingredients in a container with a tight-fitting lid, place the lid on and shake.



### Easy snack ideas

- Strawberries are fun to dip! One way is to dip a strawberry first in yogurt and then granola. Or you could dip a strawberry in melted dark chocolate.
- Make a strawberry stack! Spread strawberry-flavored cream cheese on a graham cracker and then top with sliced strawberries.
- For a quick and easy breakfast or afternoon snack, mix strawberries in yogurt for a tasty parfait.
- Spread a piece of whole grain toast with peanut butter and top with fresh sliced strawberries. Yummy!
- Find more recipes from the NC Strawberry Association at [www.ncstrawberry.com/recipes](http://www.ncstrawberry.com/recipes)

### Strawberry activities

- Visit a local farm in April or May and pick your own NC strawberries. See if you can name the parts of a strawberry plant. And don't forget – only pick the ripe, red berries! Write a story about your visit to the strawberry farm and how you used the strawberries you picked. Find a farm near you at [www.ncfarmfresh.com](http://www.ncfarmfresh.com).
- With the help of an adult, slice open a strawberry and look at the inside. What color is the inside of a strawberry? How does it smell? How does it taste? What shape do you see? Do you see the heart? Strawberries are a heart healthy treat.
- Plant strawberries in your garden at home. Remember, they need to be planted in the fall. Keep a journal throughout the growing season to record your observations including how the plants change, when the flowers bloom and how many strawberries you harvest.
- Create a strawberry craft. Cut a strawberry shape out of construction paper and color it red. Add a stem cut from construction paper or made from green tissue paper. You can add “seeds” several different ways:
  1. Tap your finger on an ink pad and press your finger to the strawberry, making a fingerprint seed.
  2. Use a hole puncher to cut out black dots; glue these dots to the strawberry.
  3. Glue black buttons to your strawberry.
- For more fun strawberry activities, visit [www.ncstrawberry.com/](http://www.ncstrawberry.com/) and click on “Kids.”

## GLOSSARY

**Agriculture** – the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products

**Bareroot plant** – vegetative foliage with roots that are not covered in soil

**Bedder** – piece of equipment used to form soil into raised beds

**Cultivate** – to loosen or break up the soil

**Daughter plant** – new plants that grow from runners

**Disc** – one of the concave circular steel tools with sharpened edge that make up the working part of a disc harrow or plow; an implement employing such tools

**Farm** – any establishment that normally produces and sells agricultural products

**Farmer** – a person who cultivates land or crops or raises animals, such as livestock or fish

**Harvest** – to gather a crop

**Irrigation** – the watering of land by artificial means to foster plant growth

**Plasticulture** – the practice of using plastic mulch to cover plant rows for weed control, to help warm the soil and to hold moisture; using mainly in fruit and vegetable production

**Plug** – a runner that has been rooted in a peat-based medium and has an intact rootball

**Raised bed** – soil that is mounded above the soil level

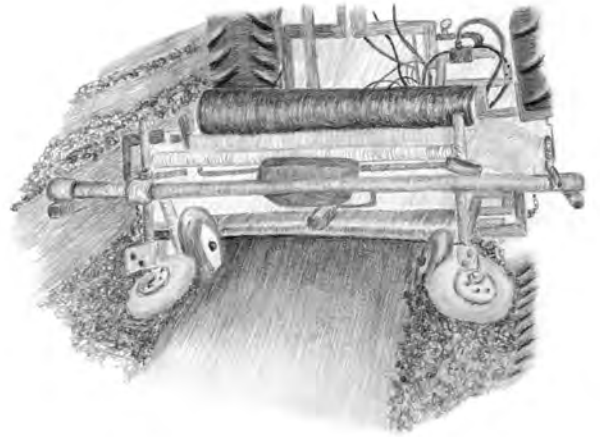
**Root** – plant part that grows under the ground, absorbing water and nutrients

**Row covers** – any material used as a protective covering to shield plants, usually vegetables, primarily from the undesirable effects of cold and wind, and also from insect damage

**Runner** – stems that have growing points the strawberry plants use to reproduce

**Soil** – the upper layer of earth that may be dug or plowed and in which plants grow

**Tractor** – piece of equipment that has many jobs on the farm, including pulling other equipment like a plow or bedder



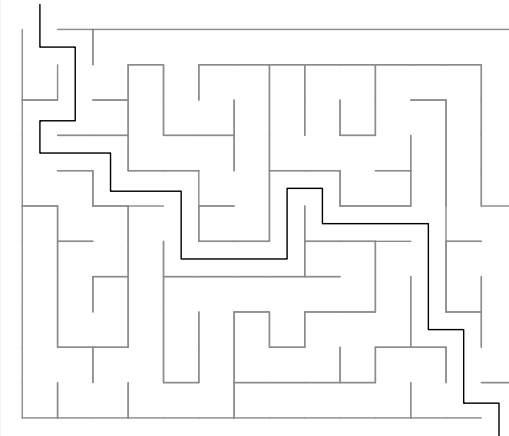
ANSWER KEY

Page 5

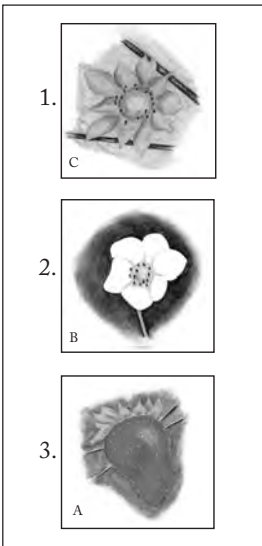
1. Leaf
2. Flower
3. Strawberry
4. Crown
5. Roots
6. Daughter plants
7. Runner

Bonus: The seeds are the dots on the outside of the strawberry.

Page 6



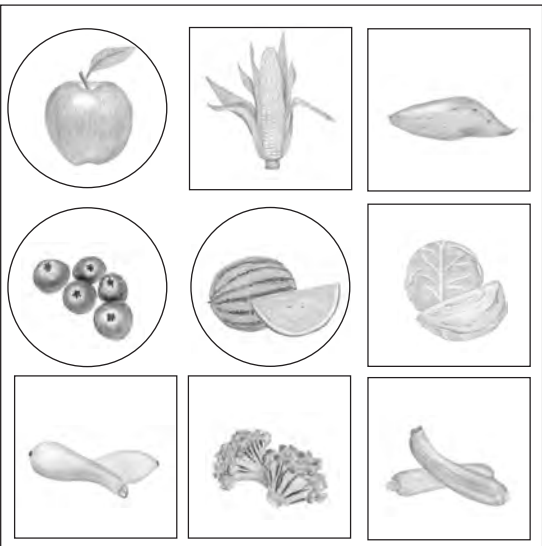
Page 7



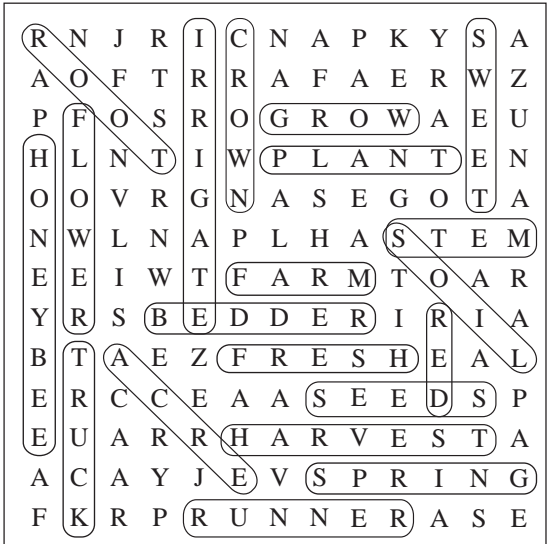
Page 8

There are 23 seeds on the strawberry.

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- |      |       |       |
|------|-------|-------|
| 1. c | 6. a  | 11. b |
| 2. b | 7. d  | 12. b |
| 3. d | 8. c  | 13. b |
| 4. a | 9. b  | 14. d |
| 5. b | 10. d | 15. c |





The North Carolina Farm to School program has been supplying school cafeterias with fresh, NC grown produce since 1997. The program is coordinated by the North Carolina Department of Agriculture and Consumer Services. For more information, please visit [ncfarmtoschool.com](http://ncfarmtoschool.com).

The project supported by  
the North Carolina Farm to School Cooperative, Inc.



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[www.ncfarmtoschool.com](http://www.ncfarmtoschool.com)