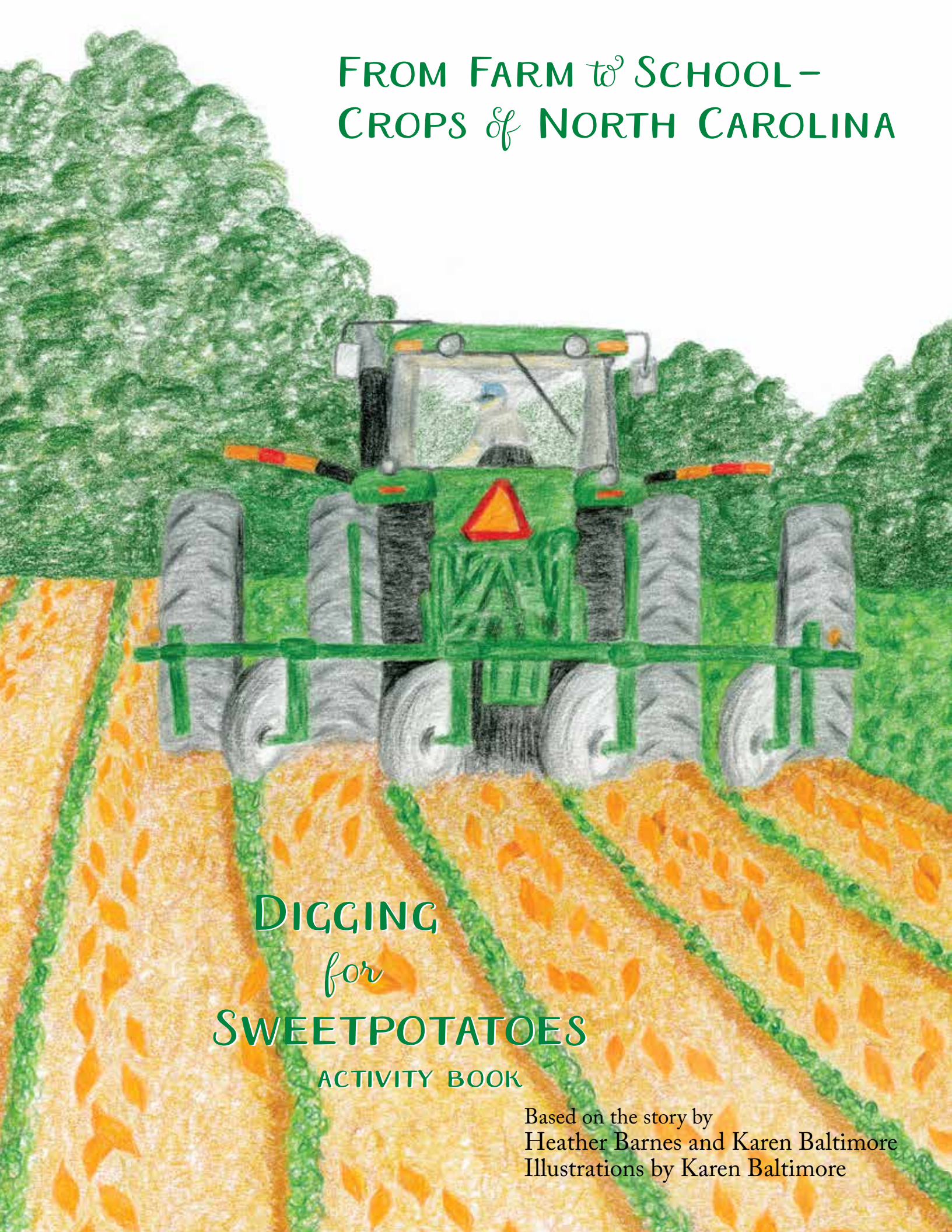


From Farm to School–
Crops of North Carolina

Digging for Sweetpotatoes

Activity Book

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

Table of Contents

2 Standards

3 Letter to Educators

4 North Carolina Sweetpotatoes at a Glance

5 Parts of a Sweetpotato Plant

6 Sweetpotato Crossword

7 Sweetpotato Spelling Sheet

8 Counting Sweetpotatoes

9 Introduction to Root Vegetables

10 Sweetpotato Color by Number

11 Sweetpotato Maze

12 – 13 Storybook Worksheet

14 More Fun with Sweetpotatoes

15 Glossary

16 Answer Key

Standards

***From Farm to School – Crops of North Carolina, Digging for Sweetpotatoes* Storybook and Activity Book**
North Carolina Common Core and Essential Standards Quick Reference

The *From Farm to School – Crops of North Carolina, Digging for Sweetpotatoes* 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.

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.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, 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.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 can be the basis for lessons in math, language arts, science, social studies, art and other school subjects.

This activity guide is designed to be used with *From Farm to School: Crops of North Carolina – Digging for Sweetpotatoes* storybook. Both are available at no cost from NCDA&CS through our website, www.ncfarmtoschool.com.

Our state produces more sweetpotatoes than any other and many are served in your schools. The North Carolina Department of Agriculture and Consumer Services (NCDA&CS) has been providing fresh fruits and vegetables grown in our state, including sweetpotatoes, to schools across the state since 1997 through the NC Farm to School program.

For more information on sweetpotatoes visit the following:

North Carolina Farm to School program, NCDA&CS
www.ncfarmtoschool.com

North Carolina Sweetpotato Commission
www.ncsweetpotatoes.com

Ag in the Classroom, North Carolina Farm Bureau – Curricula, Workshops, Resources and Grants
www.ncagintheclassroom.com

NC Department of Public Instruction, School Nutrition Services
Childnutrition.ncpublicschools.gov/information-resources/nutrition-education

North Carolina 4-H Grow For It Program – Curricula, Programs, Resources
www.growforit.org

Design and illustration by Karen Baltimore
For more of her work, please visit
www.karenbaltimore.com

North Carolina Sweetpotatoes at a Glance

When Columbus docked his ships off the coast of the New World in 1492 he discovered Native Americans growing a number of crops, including sweetpotatoes. Over the years, the vegetable became a staple in southern diets and is now consumed all over the world.

North Carolina farmers have been leaders in the sweetpotato industry and now grow more than half of the United States crop every year. In 2014, farmers planted 73,000 acres of sweetpotatoes in our state. One acre of land is 43,500 ft^2.

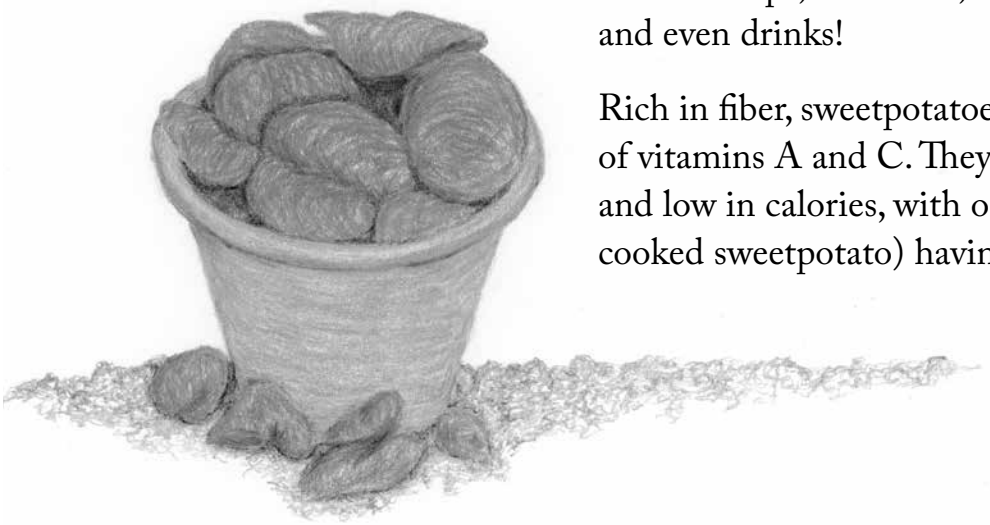
Sweetpotatoes grown in our state are sold fresh and for processing into products like baby food, crackers and even dog food. Our farmers sell them across the United States and to other countries including Canada, England and Germany.

Sweetpotatoes are often called yams, but they are actually two very different crops. When orange sweetpotatoes were first introduced in the United States, growers needed a way to separate them from white flesh varieties. They decided to call the orange flesh sweetpotatoes "yams," an English version of the African word "nyami." Most of the "yams" bought in the United States are actually orange flesh sweetpotatoes.

A true yam is a starchy, edible root grown in Africa and the Caribbean and imported to the United States. This white fleshed vegetable can grow to seven feet in length.

February is North Carolina Sweetpotato month and recognizes our state vegetable. In 1993, students in Celia Batchelor's fourth grade classroom in Wilson County started a letter writing campaign with a goal of having the sweetpotato named our state vegetable. It took two years and a lot of letters before the North Carolina General Assembly gave sweetpotatoes the honor.

Many people only think about eating sweetpotatoes at Thanksgiving and Christmas but North Carolina sweetpotatoes are a versatile vegetable available all year long. It can be used in soups, casseroles, main dishes, desserts and even drinks!

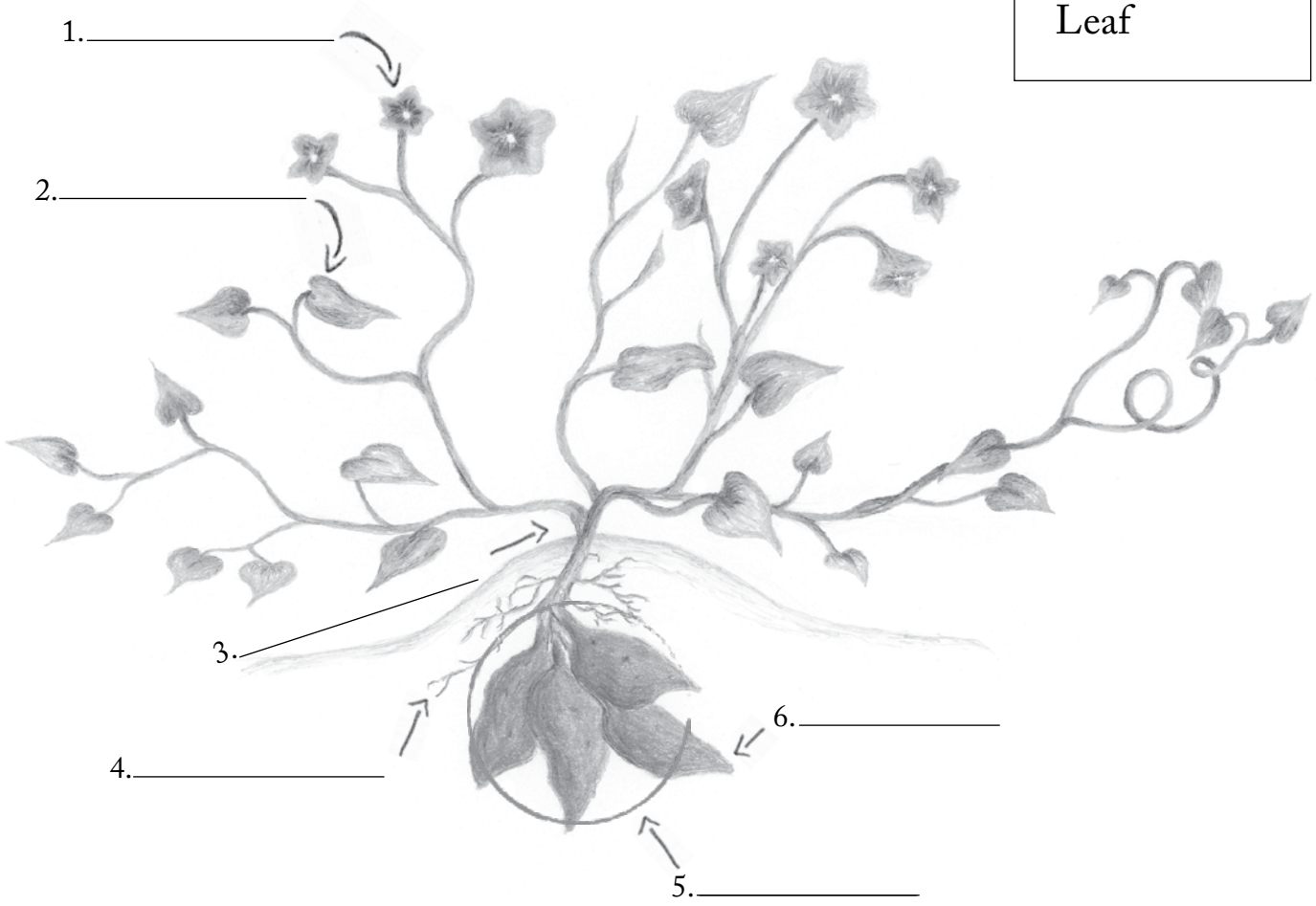


Rich in fiber, sweetpotatoes are a good source of vitamins A and C. They are high in antioxidants and low in calories, with one serving (one medium cooked sweetpotato) having just 103 calories.

Parts of a Sweetpotato Plant

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

Flower
Stem
Fibrous roots
Storage root
Hill
Leaf



Bonus question: How many sweetpotatoes are in the hill? _____

Sweetpotato Crossword

Across

1. Group of sweetpotatoes attached to the vine underground
2. Process causing starch in the sweetpotato to change to sugar
3. Instead of seeds, sweetpotatoes are grown from _____.
4. Part of the sweetpotato plant that we eat

Down

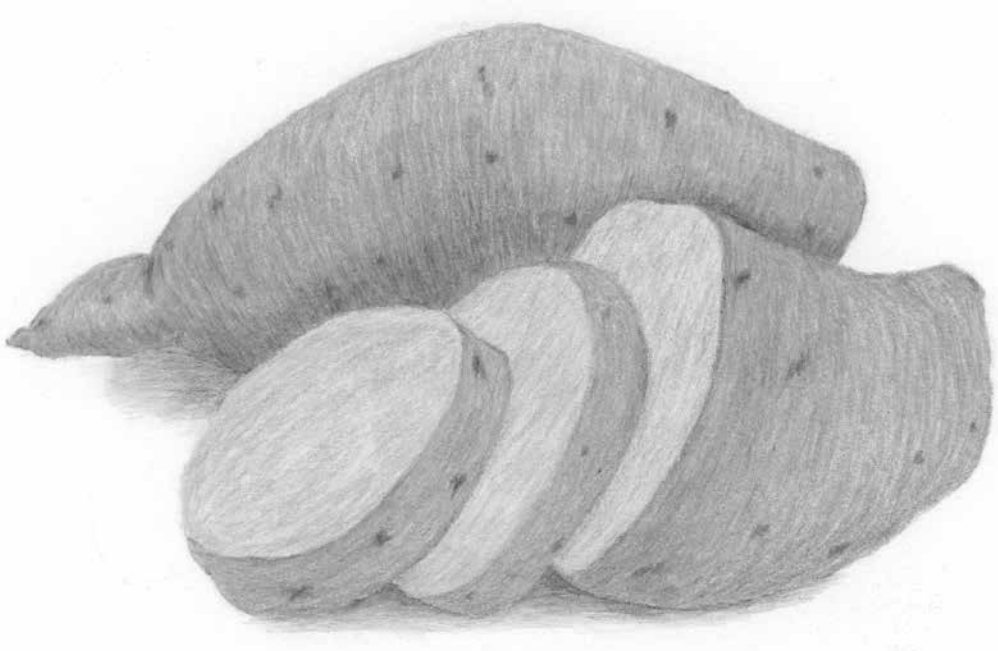
1. Month sweetpotato harvest begins
2. A _____ board is a tool used to train workers in the field on how to grade the size of sweetpotatoes.
3. The most serious pest of sweetpotatoes
4. Machine workers ride on to plant sprouts in the field

Sweetpotato Spelling Sheet

How many words can you make out of the letters from the words "Sweetpotato?" Fill in the blanks with as many words as you can make. An example is shown below.

SWEETPOTATO

at		



Counting Sweetpotatoes

Color the drawing and answer the questions below.

1. How many sweetpotato vines are there? _____

2. How many hills are there? _____

3. How many sweetpotatoes can you find? _____

Bonus: Circle the hill of each vine.

Introduction to Root Vegetables

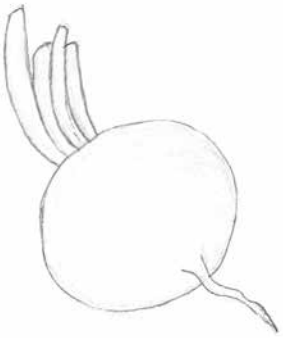
Sweetpotatoes are a root vegetable, meaning they are an edible root that grows underground. They aren't the only vegetable that grows underground. There are lots more! Do you recognize any of the root vegetables shown below? Have you eaten any of them? Color the vegetables and circle any that you have eaten.

Carrot

Garlic

Beet

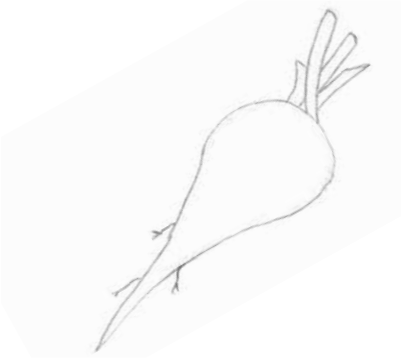
Yellow Onion



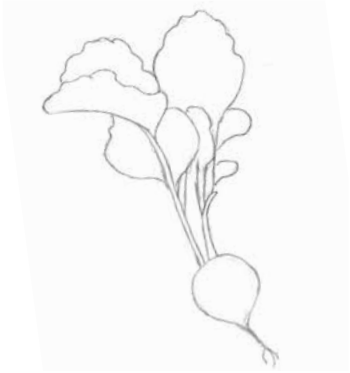
Turnip

Shallot

Ginger



Parsnip



Radish

Bonus question: Count the root vegetables above. How many are there? _____

Sweetpotato Color by Number

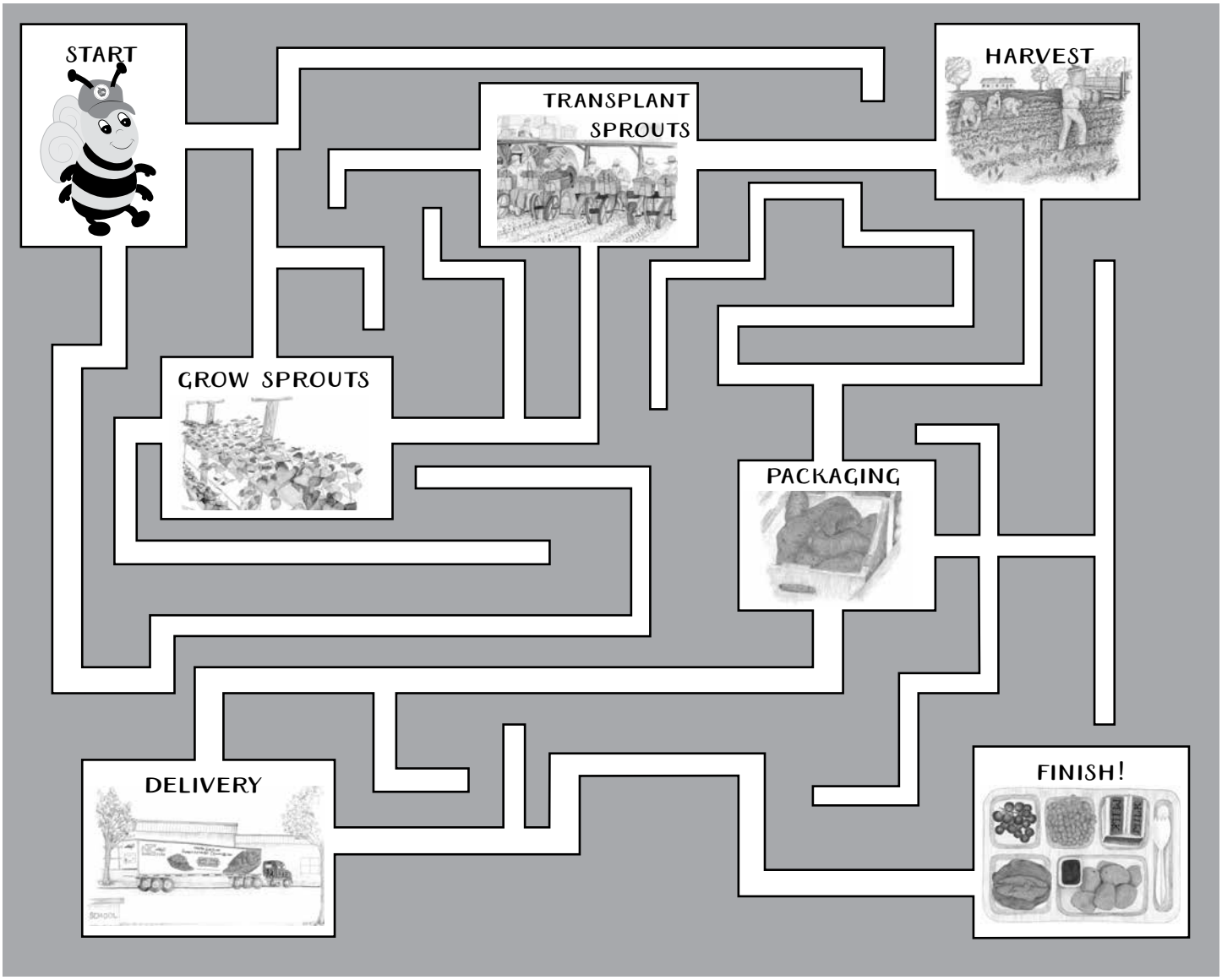
Farmer Bee loves sweetpotato sticks for a healthy snack! Do you? Use the key below to color Farmer Bee.

Key

1. Yellow
2. Black
3. Green
4. Red
5. Orange

Sweetpotato Maze

Help Farmer Bee visit each step in order to follow the sweetpotato from farm to school.



Have you eaten sweetpotatoes at your school?

Storybook Worksheet

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

1. In what month is peak harvest for sweetpotatoes?
   a. June
   b. March
   c. October
   d. August

2. Where are the majority of sweetpotatoes grown?
   a. Mountains
   b. Coastal Plain
   c. Raleigh
   d. Piedmont

3. The cluster of sweetpotatoes that grows from a vine is known as the _____ .
   a. Hill
   b. Clump
   c. Root
   d. Flower

4. Instead of using sweetpotato seeds to grow sweetpotatoes, farmers plant _____ that have been grown in a field or greenhouse.
   a. Roots
   b. Sprouts
   c. Flowers
   d. Stems

5. Sprouts are grown in a field by bedding whole _____ .
   a. White potatoes
   b. Flowers
   c. Stems
   d. Seed sweetpotatoes

6. Farmers lay _____ over the rows to hold in water and heat and also protect the plants from frost.
   a. Burlap
   b. Dirt
   c. Plastic
   d. Blankets

7. As the plants grow, the farmer will tear larger holes in the plastic so more _____ can reach the vine.
   a. Oxygen
   b. Water
   c. Sunshine
   d. Fertilizer

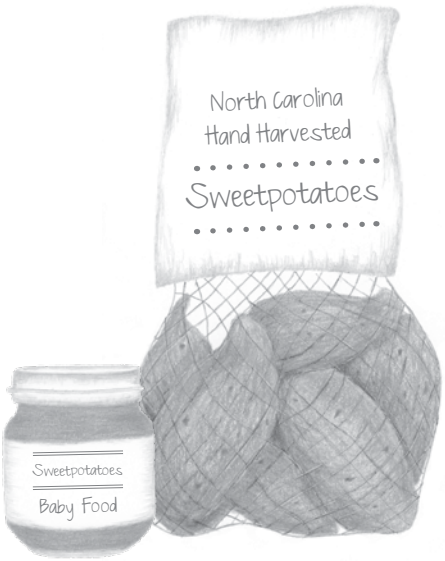
8. Workers ride on a machine called a _____ to transplant the sprouts in the field.
   a. Bedder
   b. Setter
   c. Tiller
   d. Cultivator

9. After planting, rows are _____ to help control weeds.
   a. Seeded
   b. Watered
   c. Covered
   d. Plowed

10. Honeybees help farmers by visiting each sweetpotato vine, carrying _____ from flower to flower.
   a. Sugar
   b. Pollen
   c. Nectar
   d. Seeds

11. Farmers put green traps in the sweetpotato fields to trap the sweetpotato _____, the most serious pest of sweetpotatoes.
   a. Mosquito
   b. Aphid
   c. Hornet
   d. Weevil

12. Sweetpotatoes are stored in large boxes for curing. Most boxes hold __ bushels.
   a. 40
   b. 125
   c. 350
   d. 15



13. Cured sweetpotatoes can be stored for up to _____.
   a. Six weeks
   b. Five months
   c. One year
   d. Seven years

14. Sweetpotatoes are washed _____ curing.
   a. Before
   b. After

15. A _____ is a training tool used in the field to grade the sweetpotatoes to the right size.
   a. Scale
   b. Ruler
   c. Sorting board
   d. Measuring tape

More Fun with Sweetpotatoes

By any other name...

Did you know sweetpotatoes were grown in Peru as early as 750 BC? That's a long time ago! Sweetpotatoes are eaten in many countries around the world. Here is a list of names that other countries have for sweetpotatoes:

China: fan shu
Fiji: kumala
India: shakar-kandi
Indonesia: ubi-jalar
Japan: Satsuma imo
Malaysia: keledek
Philippines: kamote
Sri Lanka: bath-ala
Thailand: man-thet

Grow your own sweetpotato vine

Sweetpotato vines can make cool house plants. Ask an adult to help you grow your very own sweetpotato vine.

What you will need:
1 sweetpotato
4 toothpicks or skewers
1 glass jar
Water

Choose a firm sweetpotato. Using four toothpicks, suspend the vegetable on the rim of a glass jar. Make sure the bottom half (the pointed end) is under water. Place in a sunny spot, change or add water as needed. In a few days, roots will form below the water. Three weeks later, leaves and stems will sprout from the top. Continue to grow the plant in water. After a month or two, you can pot the sweetpotato in a houseplant potting mix. Keep the soil moist and feed once a month with a fertilizer.

Want to learn more about North Carolina?

The sweetpotato is the state vegetable of North Carolina, but there are lots more symbols to learn about. To find out more, go to www.secretary.state.nc.us/kidspg/symbols.htm.

Use your senses...

Get a raw and a cooked (cooled) sweetpotato and investigate them with your senses.

- Touch the outside of the sweetpotato. Is it rough or smooth? Hard or soft?
- Ask an adult to help you cut the sweetpotato into pieces. What color is the inside of the sweetpotato? How does it feel?
- Now take a bite. What is the texture of the sweetpotato? What does it taste like? Do you like the raw or the cooked better?

Make a smoothie!

Ingredients:
1 medium baked sweetpotato, cooled and peeled
1 medium navel orange, peeled
1 medium apple, cored
1 banana, peeled
1 tablespoon maple syrup

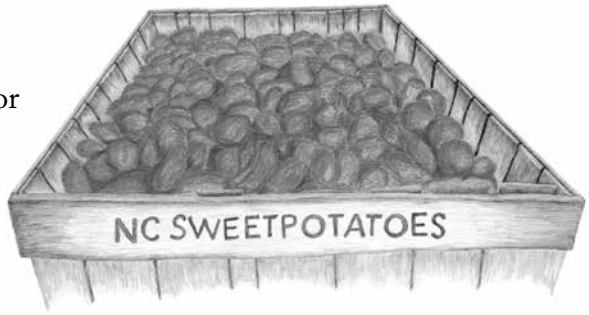
Optional:
1/2 teaspoon grated fresh ginger
1/4 teaspoon ground cinnamon

Instructions
Mix all ingredients in a blender until smooth. If desired, add a little water. Makes 2 smoothies

Glossary

Agriculture – the science, art or practice of cultivating the soil, producing crops and raising livestock. Also includes the preparation and marketing of the resulting products.

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



Curing – process that causes some starches in the sweetpotato to convert to sugar, making the crop taste sweeter. This improves flavor and storage life of sweetpotatoes. Curing is achieved by keeping sweetpotatoes in a warm, humid room for 4-7 days.

Farm – land used for growing crops or raising animals

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

Frost – thin layer of ice that forms on surfaces when temperatures are cold

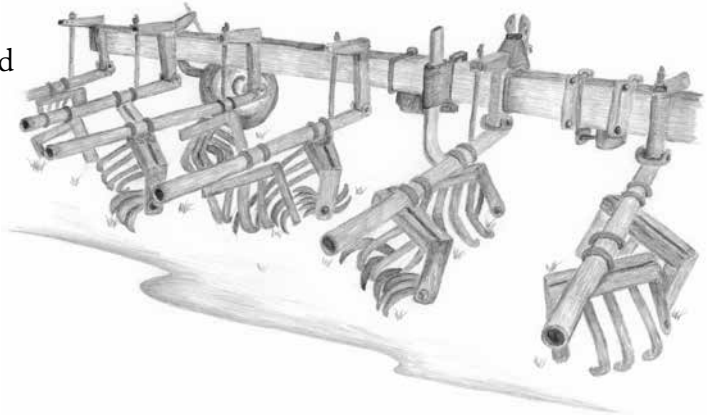
Greenhouse - a structure with glass or plastic walls and roof used for growing plants

Harvest – to gather a crop when it has reached maturity

Raised Bed – soil that is mounded above soil level for the purpose of planting

Root – a part of the plant that grows underground, absorbing water and nutrients

Root Vegetable – an edible root that grows under the ground



Seed Potato – a potato grown for its buds which are used to start new plants

Setter – machine used to transplant sweetpotato sprouts

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

Sprout – new growth

Storage Root – enlarged root that stores large amounts of starch and carbohydrates

Sweetpotato Weevil – most serious pest of sweetpotatoes, this insect feeds on leaves, stems and the sweetpotato itself

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

Transplant – to move a plant from one place to another

Answer Key

Page 5

1. Flower
2. Leaf
3. Stem
4. Fibrous roots
5. Hill
6. Storage root

Bonus: 4

Page 6

Across

1. Hill
2. Curing
3. Sprouts
4. Root

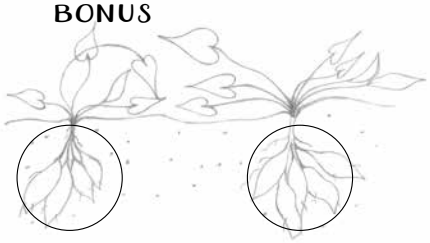
Down

1. August
2. Sorting
3. Weevil
4. Setter

Page 8

1. 2
2. 2
3. 9

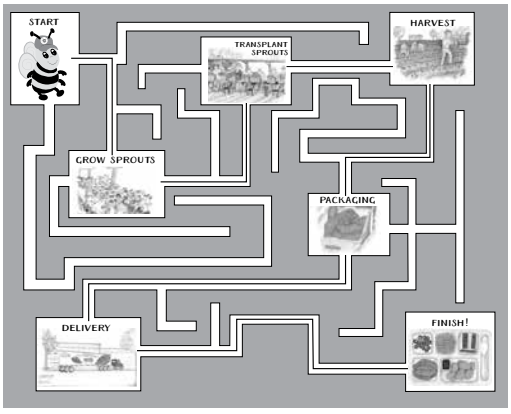
Bonus



Page 9

There are a total of 9 root vegetables.

Page 11



Page 12 – 13

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

This publication was supported by the U.S. Department of Agriculture's (USDA) Agricultural Marketing Service through USDA Specialty Crop Block Crop Grants 12-25-B-1688 and 17-182-2001 (Sweetpotatoes in the Classroom). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the USDA.

Printed by:
North Carolina Department of Agriculture and Consumer Services
Steve Troxler, Commissioner

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