

**Title:** *George Washington Carver* by Katherine Scrapper. Benchmark Education: NY, 2002.  
ISBN 01-58344-500-5

**Literature Annotation:** This book is a simplified biography of George Washington Carver's life and accomplishments. The larger print and plentiful pictures are helpful to younger readers. The glossary at the end is student friendly.

**Grade Level:** Grade 2

**Duration:** 30- 45 minutes

**Economic Concepts:** Production; Specialized Work; Technology

**Maryland Voluntary State Curriculum (VSC)**

**Geography Standard:** Students will use geographic concepts and processes to understand location and its relationship to human activities. (PreK-3 Standard)

3.D.1 Explain how people adapt to and modify their natural environment.

**Economics Standard:** Students will identify the economic principles and processes that are helpful to producers and consumers when making good decisions. (PreK-3 Standard)

4.A.2.a. Identify the natural, capital, and human resources used in the production of a good or service (Grade 2)

4.A.2.b Identify examples of specialized workers in the school and community, such as nurses, truck drivers, trash collectors, lawyers, and postal workers. (Grade 2)

**Reading, Standard (Comprehension of Informational Text):** Students will read, comprehend, interpret, analyze, and evaluate informational text (PreK-Standard)

2.A.2.b Use graphic aids (maps)

2.A.4.c State and support main ideas and messages

2.A.4.j Connect the text to prior knowledge or experience

2.A.5.a Identify and explain specific words or phrases that contribute to the meaning of a text (content vocabulary)

**Lesson Objective:**

Students will identify ways that the specialized work of an individual can improve the use of the land by identifying ways that George Washington Carver contributed to improvements in farming and invented new products that could be made from the crops.

**Economic Vocabulary:**

**technology**-Skills, methods, tools, machines and other things used to perform activities. Technology changes over time and affects the way we live, work, and play.

**economic resources** -the natural, human, and capital resources that are used to produce goods and services: also call factors of production.

**natural resources**- The renewable, and nonrenewable gifts of nature that can be used to produce goods and services, including but not limited to land, water, animals, minerals, tress, climate, soil, fire, seeds, grain and fruits.

**specialized work**-the narrower range of defined skills or labor used to produce a part of a product; involves the division of tasks and dependence on other workers to complete the production of the good or service.

**interdependence**-The condition in which events in one part of the community, state, nation, or world or one sector of the economy affects events in another part or sector; occurs as a result of

the loss of self-sufficiency which accompanies specialization and, hence, the need to exchange resources, goods and services with other producing and consuming units.

**Other vocabulary:**

improvements, nutrients

**Materials:**

**Teacher:**

- cotton ball
- cotton handkerchief or T-shirt
- jar of peanut butter
- can of sweet potatoes or a sweet potato
- small plastic bag of soil
- a plant that looks strong and healthy
- a plant that looks weak and sickly
- Pencil and a disposable mechanical pencil (or a pen)

**Student:**

- 1 copy of “George Washington Carver’s Improvements In Technology Help the Farmers,” Resource Sheet 1
- Optional: 1 copy of “George Washington Carver Anticipation Guide,” Resource Sheet 2
- Optional: 1 copy of “MSA Activity for George Washington Carver,” Resource Sheet 3

**Teacher Background:**

Knowledge of the life of George Washington Carver and his contributions

**Lesson Development:**

Display a cotton ball, a cotton handkerchief or T-shirt, a jar of peanut butter (unopened), a can of sweet potatoes or a sweet potato, and a small plastic bag of soil. Ask students to think about how these products might be related. Students may say that the cotton ball and cotton handkerchief were made from cotton, or that these things came from plants that grow in the soil.

**Activities:**

1. Tell students that these items were all affected by a scientist named George Washington Carver. Display a picture of Dr. Carver or have students look at the cover of the book.
2. Optional: Have students complete the Before Reading column on “George Washington Carver Anticipation Guide,” Resource Sheet 2.
3. Use a wall map of the United States to have students locate Missouri and Alabama. Have students read p. 2. Have students locate Missouri on the inset map of the United States.
4. Have students read pp. 4-5. Ask students to identify why he was called the “Plant Doctor.” Introduce the vocabulary term **specialized worker**. Tell students that George Washington Carver **specialized** in working with plants, so he was a **specialized worker**.
5. Have students read pp. 6-8. Display the vocabulary word nutrients. Explain to students that nutrients are in the soil and provide plants with things they need to grow. (Students may also refer to the Glossary on p. 16.) Ask students to recall why the cowpea and sweet potato

plants were helpful to the farmers. Ask students how the planting of cowpea and sweet potato plants helped cotton plants.

6. Display the two plants listed in materials for this lesson. Ask students which one is healthier. Then discuss what plants need to be strong and healthy. Have students pretend they are a farmer by standing and pretending to hoe, pull weeds, pick cotton, etc. Then ask students if farmers would want to harvest a lot of cotton or a little cotton for their work. Tell students that Dr. Carver realized that farmers were working harder and harder, but getting less and less cotton because the plants were not healthy.
7. Display the vocabulary word **technology**. Tell students that when people find ways to improve products or to improve ways that they produce goods or services, it is an **improvement in technology**. Show students a regular pencil and a disposable mechanical pencil (or a pen.) Ask students how technology has improved the pencil. Then ask students to think of some other products they use that have been improved by technology. Possible responses may include the pencil sharpener (regular and the electric types), drink boxes, handi-wipes, and soft soap.
8. Tell students that Dr. Carver found ways to make **improvements in the technology** used in farming. Dr. Carver studied plants and found ways to improve the quality of the soil and the crops that farmers were growing in that soil. He also helped the farmers by discovering many new uses for the helpful plants that farmers needed to grow in order to improve their soil. His products created a market for the crops that they were growing.
9. Tell students that teaching farmers how to grow plants that help the soil was an **improvement in technology** because farmers were learning to use their land in new and better ways. Have students think about some ways that improvements in technology have helped farmers today. Possible responses may include the following: farmers use tractors instead of horses, new seeds are developed to better plants that produce more products, bigger and more efficient machinery, and irrigation systems to water the fields.
10. Have students read pp. 10-11. Have students identify some other ways that George Washington Carver helped the farmers.
11. Then have students read pp. 12-13 to find out about two other ways George helped teach people use the **natural resources** around them. Ask students to name some products other than rugs that could be made from woven grass or products other than paint that could be made from the clay in the soil. (Possible answers: woven grass may also be used to make baskets, hammocks, roofs, and blankets; clay may be used to also make pottery, bricks, and adobe homes.)
12. Read pp. 14-15. Have students go back to p. 3 and find Alabama on the inset map with the United States. Tell students that Dr. Carver did most of his work in Alabama at the Tuskegee Institute.
13. Optional: Have students complete the After Reading column on “George Washington Carver Anticipation Guide,” Resource Sheet 2. Discuss what they have learned about the contributions of George Washington Carver to farming.

### **Assessment:**

- Have students create a mobile of George Washington Carver's contributions to farmers. Distribute copies of "George Washington Carver's Improvements In Technology Help the Farmers," Resource Sheet 1. Have students illustrate each caption to show different ways that George Washington Carver helped the farmers.

#### **Additional Activities and Resources**

- ◆ Have students read *A Picture Book of George Washington Carver* by David A. Adler and illustrated by Dan Brown. This book has more in depth information on his childhood and youth. It also gives more details about his work with peanuts and sweet potatoes. His many accomplishments are highlighted, including developing over 300 different peanut by-products and discovering more than one hundred useful products from sweet potatoes.
- ◆ Have students make a booklet to show improvements in technology today. Students may cut out pictures from magazines or ads for new products, or draw their own illustrations. For example, students may find the new disposable cloths for mops and the sponge mop, or a wall phone and a cell phone. Have students write a sentence to explain the improvement in technology.

George Washington Carver's Improvements  
In Technology Help the Farmers



Growing sweet potatoes was good for the soil and made it rich.



Growing peanuts got rid of the boll weevil bugs.



Candy and many other products were made from sweet potatoes.



More nutrients in the soil grew bigger and stronger cotton plants.



Feeding milk cows hay made their milk better.



Grass could be made into rugs and clay from the soil to make paint.

## George Washington Carver Anticipation Guide

**Before Reading:** Read the statement. In the Before Reading column, circle whether you think the statement is true or false.

**After Reading:** Reread the statement. Using information from the reading, in the After Reading column circle whether the statement was true or false. If it was false, rewrite the statement so that it is true.

Before Reading		After Reading
True or False	Farmers should plant cotton every year.	True or False Page_____
True or False	Some plants are good for the soil.	True or False Page_____
True or False	Planting peanuts made the bugs worse for cotton plants.	True or False Page_____
True or False	Sweet potatoes are not good for the soil.	True or False Page_____
True or False	George Washington Carver was a friend to the farmers.	True or False Page_____
True or False	Paint can be made from clay in the soil.	True or False Page_____

**MSA Activity for George Washington Carver**  
by Katherine Scraper

1. People learned how to make **soil** good again. In this sentence **soil** means-  
 the spill on clothes.                       the top part of Earth.  
 the sick plant in a pot.                       the stain on the rug.
  
2. According to George Washington Carver, which of the following plants is **not** very good for the soil?  
 black-eyed peas       cotton       peanuts       sweet potatoes
  
3. Growing peanuts helped the farmers because -  
 it helped the cows.                       it helped the soil.  
 it helped make rugs.                       it got rid of bugs.
  
4. Which of the following statements is an opinion?  
 George made more than 100 things from sweet potatoes  
 George showed farmers how to make rugs out of grass.  
 George like eating candy he made from sweet potatoes.  
 George found more than 300 ways to use peanuts.
  
5. George Washington Carver and the farmers were specialized workers. Explain how George and the farmers were interdependent.

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**MSA Activity for George Washington Carver-Answer Key**  
by Katherine Scraper

1. People learned how to make **soil** good again. In this sentence **soil** means-

- the spill on clothes.       **the top part of Earth.**  
 the sick plant in a pot.       the stain on the rug.

**VSC Reading 1.D.3.a:**  
Use context to determine the meanings of words

2. According to George Washington Carver, which of the following is the soil?

- black-eyed peas     **cotton**     peanuts     sweet potatoes

**VSC Reading 1.E.4.b**  
Identify and explain what is directly stated in the text.

3. Growing peanuts helped the farmers because -

- it helped the cows.       it helped the soil.  
 it helped make rugs.       **it got rid of bugs.**

**VSC Reading 2.A.4.c**  
State and support main ideas and messages

4. Which of the following statements is an opinion?

- George made more than 100 things from sweet potatoes  
 George showed farmers how to make rugs out of grass.  
 **George like eating candy he made from sweet potatoes.**  
 George found more than 300 ways to use peanuts.

**VSC Reading 2.A.4.h**  
Distinguish between a fact and an opinion

5. George Washington Carver and the farmers were specialized workers. Explain how George and the farmers were interdependent.

Possible responses may include:

- information on how George Washington Carver specialized in plants
- ways that he taught the farmers to grow plants that helped the soil
- how farmers learned from George about plants that were good for the soil
- how he helped farmers learn ways to help their cows give good milk
- how he taught farmers to get rid of bugs and farmers learned to grow cotton every three years
- farmers were able to grow more and produce more crops by learning from George
- showed people how to use the peanuts and sweet potatoes to make lots of other stuff

**VSC Social Studies Economics:**  
Describe the interdependence of people because of specialization

**VSC Reading 2.A.4.d:**  
Identify and explain relationships between and among ideas.