

DRAFT 1

Lesson Title: George Washington Carver, Master Gardener
Grade Level: 2
Subject Area: Social Studies (History)
Setting: Classroom, Windowsill Garden or school garden
Instructional Time: 30 - 45 min.

Grade Level Expectation (s): (Cross-curricular activity)

2.H2.03. Use an example to describe the role of the individual in creating history.

S.DS.02.04 Plan and deliver presentations using an informational organizational pattern (e.g. Descriptive, cause/effect, compare/contrast) providing supportive facts and details to make the point, reflecting the source of information, while maintaining appropriate intonation and tone of voice using a prop.

3 MNN Behavioral Outcome:

Eat fruits and vegetables, whole grains, and fat-free or low-fat milk products every day.

SNAP-Ed Core Nutrition Messages: Sometimes new foods take time. Kids don't always take to new foods right away. Offer new fruits and veggies many times. Give them a taste at first, and be patient with them.

Goal:

The class will be introduced to the "Peanut Man", George Washington Carver, and they will learn how he improved the quality of life for many of his contemporaries. The class will conduct an experiment with a sweet potato, and they will taste test it, too.

Learning Objectives:

The students will create a poster to illustrate how a historical figure (George Washington Carver) influenced the events of his time. The students will explore George Washington Carver's work through taste-testing and growing a crop he worked with (sweet potato).

Background (Registered Dietitians and Horticultural Specialists.)

Fall into a Healthier Potato

Sweet potatoes were always a part of my mother's southern holiday table that extended hospitality to our family and guests. Candied sweet potatoes were customarily made from scratch and we continue to use this recipe to carry on our family traditions. But sweet potatoes are not just a fall or winter holiday treat. They can replace white potatoes as an interesting and healthier alternative any time of year. The colorful sweet potato is a nutrition powerhouse and can be cooked in the same manner as white potatoes! Though they are traditionally served at holiday meals in November and December, they can be found in grocery stores all year around at an economical price.

There are about 400 different varieties of sweet potatoes and their flesh may be white, orange, yellow, red or purple – with textures ranging from firm, dry and mealy to soft and moist. In general, they are an excellent source of vitamin A and beta-carotene, and a good source of vitamin C, B6, manganese, potassium and fiber (4 grams per medium potato). Beta-carotene is a powerful antioxidant that has been shown to reduce risk for cardiovascular disease and various forms of cancer in the breasts, kidneys and gastrointestinal tract. Antioxidant properties have been shown to reduce blood cholesterol levels, lower blood pressure and even

improve eye health. Sweet potatoes are an excellent source of specific phytochemicals (natural plant chemicals) that are associated with healthy aging and memory enhancement.

What is the difference between a yam and a sweet potato? They can be used fairly interchangeably within recipes, but the yam does not have all the nutritious benefits of the sweet potato. Yams contain more starch and less vitamin A and vitamin C. They have a slick texture and a stronger, much less sweet taste than the garden variety sweet potato.

When selecting sweet potatoes, look for small- to medium-sized potatoes that are free of bruises, soft spots and cracks. Darker varieties contain more beta-carotene. Sweet potatoes will stay fresh for about 10 days if stored in a cool, dark, well-ventilated location. Do not put uncooked sweet potatoes in the refrigerator.

When preparing sweet potatoes, thoroughly wash the outside or remove the skin completely to get rid of contaminants that could be on it. Cook immediately after cutting, or place in a bowl of water to avoid dark discoloration that occurs when the flesh comes in contact with air and is oxidized. If left whole with skin on, poke holes in them before baking in the oven or in the microwave. The sweet potato works as an appetizer, side dish, main dish or even dessert with some brown sugar and cinnamon sprinkled on top. It can also be added to soups, muffins or bread to boost the health advantages of these foods. From http://www.fruitsandveggiesmorematters.org/?page_id=2492

http://www.fruitsandveggiesmorematters.org/?page_id=219

Health information from the North Carolina Sweet Potato Commission

<http://www.ncsweetpotatoes.com/sweet-potato-facts/nc-sweet-potatoes-natures-health-food.html>

Vocabulary

Agriculture - The raising of crops and farm animals, farming

Humanitarian - A friend to the entire world, a person devoted to promoting the welfare of others, especially the hungry, homeless, and uneducated.

Segregation - The setting apart of one racial group from another racial group.

Advanced Preparation

- **Send a parent note** requesting sweet potatoes both peeled and pre-sliced for sampling and whole to grow; along with a letter asking for volunteers to help with the project.
- Copy "Main Idea-Detail" graphic organizer.
- Peel and slice sweet potatoes for a taste test.

Supplies

- George Washington Carver by Tonya Bolden or other age-appropriate books about George Washington Carver.
- Main idea detail graphic organizers, one per child.
- Pencils
- Sweet potatoes for tasting and for growing into a vine.
- Glass jar or cleaned and clear plastic peanut butter jar
- Toaster oven
- Wooden toothpicks
- Water
- MyPyramid for Kids poster. (<http://teammnutrition.usda.gov/Resources/mypyramidminiposter.html>)

Safety Notes

Wash hands before touching food.

Be careful not to poke yourself or anyone with toothpicks.

Procedures

Step 1

Gather students together at their classroom meeting spot.

Step 2

Ask the students the names of people who have made contributions to humanity. Ask them, do you remember who has made the world a better place? What did they do? (Abraham Lincoln, Rosa Parks, Rev. Martin Luther King Jr., George Washington etc.) Briefly discuss who these heroes are and what they did to make the world a better place. Present GLCE as the focus of the lesson. Tell the children that they will learn about another person who did great things that impact us today, George Washington Carver. Explain that the class will learn about how he changed the lives of many people in his time (and how we have benefited from his contributions). Then they create a poster about how he did so to demonstrate what they have learned.

Step 3

Tell the students to look carefully at the book's cover. Ask:

- "Have you ever heard of George Washington Carver?"
- "What might he have done to change the lives of many people?"
- "What do the pictures in the corner show?" (Blossoms, a house, a peanut, and a sweet potato)
- "How are they connected to the story?"

Step 4

Read George Washington Carver, noting the quotation at the beginning of the story: "I am not a finisher, I am a blazer of trails...Others must take up the various trails of truth and carry them on!" What is he telling us? (He investigates new ideas and tries new things. He does not quit. Others must also do this, too.)

Step 5

Read George Washington Carver. Remind students to pay attention to what he said and did. Ask the students to describe the kind of person he was.

Step 6

After reading, discuss the ways that George Washington Carver affected the people of his time. Guide the students in their understanding of the story by using the main idea details graphic organizer with them. (Sample "Main Idea" graphic organizer (<http://www.edhelperclipart.com/clipart/teachers/org-mainidea3details.pdf>) This provides a means to structure the students' ideas and to plan for posters.

To complete the graphic organizer, these questions and answers are possible suggestions:

Main Idea: "George Washington Carver changed the lives of many people in his time."

Three Ideas: In the idea bubbles, give three important roles that George Washington Carver played.

Bubble A: Teacher—He wants to give his learning back to our African American (Black) people

Bubble B: Scientist—He wants to use plants to meet human needs.

Bubble C: Humanitarian—He wants to help all people.

Give two details that support each idea. Here are some examples.

In his role of teacher, GWC:

1. Taught at Tuskegee Institute, a school for blacks.
2. Created an outreach program to bring agricultural knowledge to farmers.

In his role of scientist, GWC:

1. Experimented on plants to develop better varieties.
2. Found many new uses for plants, especially peanuts and sweet potatoes.

In his role of humanitarian, GWC:

1. Shared his ideas in order to improve the lives of others (not for profit).
2. Planned the George Washington Carver Foundation.

Step 7

Taste test raw sweet potato slices for a snack, while other slices are being baked in a toaster oven. ??
Insert "Baked Sweet Potato Fries" <http://www.sweetpotato.org/content/teachers-and-kids/yamster-recipes/> ?? Ask the students which they like the best. Discuss the health benefits of sweet potatoes using MyPyramid for Kids. Discuss how George Washington Carver's contributions positively effected people's health.

Step 8

Provide students with butcher paper and art supplies (markers, crayons, paint, magazines to cut pictures from.) Have students create an informational poster on George Washington Carver. (This could be a home work assignment).

Step 9

Plant a "George Washington Carver" garden by planting a sweet potato in the windowsill or outside if a garden is available. *EDITOR NOTE: Adapted from http://www.kidsactivities.suite101.com/article.cfm/grow_a_sweet_potato_vine)

Conduct an experiment in the windowsill garden. Ask, "Can a plant be grown without a seed?" Grow a sweet potato vine. Insert "Grow a Sweet Potato Vine." <http://www.sweetpotato.org/content/teachers-and-kids/yamsters-recipes/> ??

Assessment

Observe posters or utilize a formal rubric regarding the ELA presentation GLEC. Posters should be factual and include ideas and details from the graphic organizer.

Answer Key

Student Pages

Student Page

Main Idea Detail Graphic Organizer (<http://www.edhelperclipart.com/clipart/teachers/org-mainidea3details.pdf>)

Visual Aid Drafts/Suggestions (not required)

Parent letter

Differentiated Instruction & Extensions

Strategies for Below-Level Readers (50-100 words) Optional

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Divide class into groups of two. Each child makes an oral presentation to his partner. Using the graphic organizer as notes, the student speaks about George Washington Carver's influence on his time.

For additional related activities, above-level readers can prepare a book report on a book about George Washington Carver as part of their presentation (this is a home work assignment).

Extension Ideas

- Using the graphic organizer as a guide, make a written report about George Washington Carver's influence on history.
- Have each student visit the library and obtain a biography for a contemporary of George Washington Carver. Fill in a graphic organizer as done previously, and make a report to the class on this person.

Grow a Sweet Potato Tree in the classroom!: A sweet potato can grow into an interesting looking tree. Get a sweet potato that has not been coated with wax. Put it in a dark place and wait a few weeks. Watch as sprouts grow out. You can plant it in a pot, half-buried, for a long-lasting plant. Keep it watered. (from Steve Charney & David Goldbeck's THE ABC'S OF FRUITS AND VEGETABLES AND BEYOND. Woodstock, N.Y.: Ceres Press, 2007.

1. READ THE BOOK

2. MAKE A POSTER: Things they have to include:

Name

Teacher, scientist, humanitarian

3. EAT SWEET POTATOES

4. PLANT A SWEET POTATOE TREE

THE END

Supporting Resources

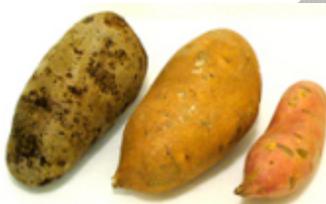
Teacher Resources:

Google: George Washington Carver

DID YOU KNOW: Sweet potatoes are related to morning glories?

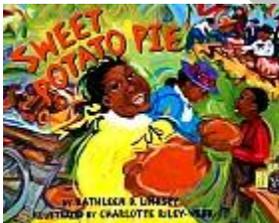
FUN FACT: EVEN ADULTS GET CONFUSED ABOUT THE DIFFERENCE BETWEEN A SWEET POTATO AND A YAM

Learn the difference between a sweet potato and a true yam By Peggy Trowbridge at About.com
<http://homecooking.about.com/od/howtocookvegetables/a/sweetpotatodiff.htm>



Sweet potatoes are relatively low in calories and have no fat. One sweet potato is rich in beta-carotene , having five times the recommended daily allowance of Vitamin A .

Fiction Story to Read Aloud:



Sweet Potato Pie by Kathleen D. Lindsey

Summary: During a drought in the early 1900s, a large loving African American family finds a delicious way to earn the money they need to save their family farm.

Review: During a drought in the early 1900s, a large loving African American family finds a delicious way to earn the money they need to save their family farm.

[Lee and Low Books, 2003. ISBN-13: 978-1-58430-061-8](#)

Available from Follett Books for \$16.95

Literature

George Washington Carver, Tonya Bolden, Abrams Books for Young Readers, 2008

George Washington Carver, Vicky Franchino, Compass Point Books, 2002

A Man For All Seasons; The Life of George Washington Carver, Stephen Krensky, HarperCollins Publishing, 2008

A Picture Book of George Washington Carver, David A. Adler, Holiday House, Inc., 1999

Websites

http://www.kidsactivities.suite101.com/article.cfm/grow_a_sweet_potato_vine

Source <http://www.answers.com/topic/george-washington-carver>

Interactive Technology Opportunities

Contact Dr. Norm Lownds at lownds@msu.edu (perhaps the Wonder Wall?)