African and African American History

Agriculture Curriculum

Title of Unit: Contributions of African Americans to Agriculture

Period of History: 1800’s to present

Grade Level: 7, 8

Subject Focus: Fundamentals of Agriculture, Food, and Natural Resource Systems

Theme of Unit: Innovations and contributions by African Americans that had an impact on agriculture and the American diet.

Goal: Students will understand the impact of African Americans to the agricultural industry.

Infusion Point: Through inventions and discoveries many African Americans made significant contributions to agriculture that saved labor, provided new products and improved production practices.

CTE State Standards and Benchmarks:
1.04 Interpret how changes in production practices, population, and land use have influenced the agriculture economy.
1.05 Demonstrate how development of new technology has affected agriculture production.
7.06 Explain the use of Best Management Practices in crop production.
7.10 Analyze knowledge of harvesting techniques and equipment.
10.05 Demonstrate effective communication skills through delivery of a speech or conducting a demonstration.
10.06 Use a computer to assist in the completion of an agricultural project.
12.06 Describe the historical evolution of agriculture.

Objectives:
1. Students will use biographies, the internet, and other print/media to research the discoveries, methods and inventions that African Americans contributed to the advancement of agriculture.
2. Students will explore the contributions of African Americans and how they changed agriculture.
3. Students will investigate the contributions of African Americans to the American diet.
4. Students will relate what they have learned through an oral presentation, written report, or craft/project.

Cultural Concept/Information

George Washington Carver

African-American educator and agricultural researcher George Washington Carver (c. 1864-1943) grew up in Missouri with the white family that originally kept his mother as a slave. After earning his master’s degree in agriculture from Iowa State College in 1896, he headed the agricultural department at Booker T. Washington’s all-black Tuskegee Institute for nearly 20 years. Carver’s research and innovative educational programs were aimed at inducing farmers to replace expensive commodities, and he developed a variety of uses for crops such as cow peas, sweet potatoes and peanuts. Carver had abandoned both teaching and agricultural plot work by the late 1920s, though he continued to advise farmers and students.

Carver was one of the best-known African-Americans of his era. Growing mainly from his research on peanuts, his rise to fame created myths and obscured much of the true nature of his work. His humble origins were part of his appeal to publicists who made him a national folk hero. He was born in the Missouri town of Diamond. His mother and older brother were the only slaves of Moses and Susan Carver, successful, small-scale farmers. His mother disappeared, presumed kidnapped by slave raiders, while George was an infant. He became both free and orphaned at about the same time.

The childless Carvers raised him and his brother as their own children. Being a sickly child, George was not required to do hard labor but helped around the house. Very early his intellect and knowledge of nature awed those around him, but he was not allowed to attend the neighborhood school because of his color. Thus at a young age he began a series of moves through the Midwest, seeking more education. He supported himself cooking, doing laundry, and homesteading before finally enrolling at Simpson College in Indianola, Iowa, in 1890.

At Simpson Carver majored in art, but a teacher convinced him to transfer to Iowa State College
to study agriculture. By the time he completed a master’s degree in agriculture in 1896, Carver had impressed the faculty as an extremely talented student in horticulture and mycology as well as a gifted teacher of freshman biology. Had he been white, he probably would have stayed at Iowa and concentrated on research in one of those fields. Instead he accepted an offer from Booker T. Washington to head the agricultural department at the all-black-staffed Tuskegee Institute in Alabama.

For nearly twenty years (1896-1915) Carver labored in the shadow of Washington. He taught classes and operated the only all-black agricultural experiment station, but he proved inept at administration, provoking frequent clashes with the principal. He was engaged, however, in some of his most significant work—seeking solutions to the burden of debt and poverty that enmeshed landless black farmers.

Carver’s research and innovative educational extension programs were aimed at inducing farmers to utilize available resources to replace expensive commodities. He published bulletins and gave demonstrations on such topics as using native clays for paints, increasing soil fertility without commercial fertilizers, and growing alternative crops along with the ubiquitous cotton. To enhance the attractiveness of such crops as cow peas, sweet potatoes, and peanuts, Carver developed a variety of uses for each. Peanuts especially appealed to him as an inexpensive source of protein that did not deplete the soil as much as cotton did.

Carver’s work with peanuts drew the attention of a national growers’ association, which invited him to testify at congressional tariff hearings in 1921. That testimony as well as several honors brought national publicity to the “Peanut Man.” A wide variety of groups adopted the professor as a symbol of their causes, including religious groups, New South boosters, segregationists, and those working to improve race relations. Some white publicists exploited Carver’s humble demeanor and apolitical posture to provide a “safe” symbol of black advancement; many, however, seem to have been genuinely captivated by his compelling personality. Carver’s fame increased and led to numerous speaking engagements, taking him away from campus frequently.

By the late 1920s Carver had abandoned both teaching and agricultural plot work. He continued to advise peanut producers and others, always refusing to accept compensation. Much of his time was devoted to lecture tours of white college campuses, sponsored by the Commission on Interracial Cooperation and the ymca. With his warm personality he cultivated close personal relationships with dozens of young whites, opening their eyes to racial injustice, and continued to serve as a mentor and father figure to black students.

Carver never made a significant contribution to scientific theory, and he developed no commercially feasible new products. His ideas of sustainable agriculture based on renewable
resources were out of step with his times, but perhaps not with the future. His early work enriched the lives of countless sharecroppers, and later in life he was a potent source of inspiration as a symbol of African-American achievement.


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Copied from http://www.history.com/topics/black-history/george-washington-carver

Visit the website above for a short video about Carver that explains how he overcame hardship and disadvantages to teach the poor about farming.

While Carver is well known for his work with peanuts there are other African-Americans that are not as well known.

**Timeline**

**Technological resources:**
http://www.biography.com/people/george-washington-carver-9240299#

http://discover.monsanto.com/posts/african-american-scientistscontributionsagriculture-food/ go to “be a part of the discussion to see q &a bubbles http://www.infoplease.com/spot/bhmscientists1.html chart outlining several black scientists, doctors, etc. both men and women with short bios


Carrots love tomatoes by Louise Riotte (companion planting)

http://www.ucaconline.org/mission.html Our contributions to history

http://www.scienceupdate.com/spotlights/african-american-scientists/

http://teachers.egfi-k12.org/spotlight-african-american-innovators/
DEFINITION OF KEY TERMS

1. Commodity – A raw material or primary agricultural product that can be bought and sold.
2. Diaspora – the dispersion of a people from their original homeland.
3. Innovative – Forward thinking, presentation of new ideas, ahead of one's time.
4. Inspiration – Mentally stimulated to do something creative.
5. Obscured – Kept from being seen, hidden.
6. Racial injustice – A situation in which the rights of a person or group are ignored because of race.
7. Sustainable – Efficient production using techniques that will not harm the environment, humans, or animals.
**Day 1**

**Title:** Where would we be without Dr. Carver?

**Grade:** 7, 8   **Time Required:** 50 minutes

**Benchmarks:**

**Key Terminology:**
Best Management Practices, patent, Tuskegee Institute, immigrant **Objectives:**

1. Students will read a biography of George Washington Carver.
2. Students view a video on George Washington Carver’s biography and take Cornell notes.
3. Students will learn how George Washington Carver overcame hardships to accomplish his goals.
4. Students will determine specific topics about G. W. Carver for further investigation.

**Prelesson:** Have students read and complete the left side of the anticipation guide.

**Lesson:** Provide copies of the biography of George Washington Carver and read together as a class. Have students mark the text, guided by the teacher as needed. When the reading is finished show the video of Carver’s biography. Students will take Cornell style notes during the video. Students will then Think-Pair-Share to come up with specific topics involving G.W. Carver that would be suitable for further investigation. Using chart paper and markers, have students share their topics and record them on the chart paper for the class to see. Students will discuss the categories and the teacher will assign groups to complete further investigation. Some suggested topics:

1. His early life
2. How he got his education
3. His life principles, values, goals
4. What he taught others about agriculture
5. What he did with peanuts
6. What he did with other crops
7. Other inventors/scientists during the same time period

Some students will be creating a presentation on GWC while others will be assigned additional African American contributors to the agricultural world. Use one the websites in the reference section below to assign other African American contributors.

**Assessment:** Cornell notes will be collected and graded.
Post Lesson:
When students are finished they will present their findings to the class. Students watching the presentations will take notes.

ESOL Strategies:
1. Provide a language and literature rich environment.
2. Teach vocabulary contextually.
3. Read aloud to students.
4. Provide for peer/classroom interaction.
5. Post vocabulary on a word wall.

ESE Strategies:
1. Provide examples of desired work.
2. Have students repeat directions orally.
3. Use alternative.supplemental materials.
4. Emphasize major points.
5. Use small group/individual instruction.

References:
http://shs.umsystem.edu/historicmissourians/name/c/carver/index.html This site has short bios and other references for several African Americans. It is limited to those from Missouri and includes musicians, activists and writers as well.

http://discover.monsanto.com/posts/african-american-scientists-contributionsagriculture-food/

Short bios of 6 African-American scientists made contributions to the agricultural system. Use as interest approach for further study. If you click on the Conversations tab there is an interactive page that has questions/answers.

http://blackinventor.com/

This site has the most extensive list of African-American inventors.
Day 2 & 3

Title: Who invented that?

Grade: 7, 8  Time Required: 110 minutes  Benchmarks:

Key Terminology:
Peanut oil, soybeans, sweet potatoes, education, illiterate, innovation

Objectives:

1. Students will work in pairs and use a web quest to do further research on George Washington Carver or other assigned person.
2. Students will create a two-three minute presentation using power point, web based presentation, or role play to present to the class.

Prelesson: Review the topics from the previous lesson and group students in pairs. Assign a topic or person to each pair. Additional people of interest include Annie Fisher, Henry Kirklin, Tom Bass, George Crumm, Henry Blair and Booker T. Washington. Provide a rubric for the presentations and provide clarification on what is expected. The following is a link to a rubric for presentations that is well made however one that is tailored to the particular class may be more appropriate. http://www.readwritethink.org/files/resources/printouts/30700_rubric.pdf

Lesson:

Provide a list of expectations to help keep students focused on the assignment. This may vary according to the specific topics. A sample is included in the supplemental materials in a file titled AA_Presentation Guidelines.

Provide students with computers to start the web quest. (The teacher will design the web quest prior to today’s lesson.) Circulate to assist as needed.

Post Lesson:

When students are finished they will present their findings to the class. Students watching the presentations will take notes.

Assessment:

Students will evaluate their peers with the provided rubric. Students will demonstrate understanding by completing the right side of the anticipation guide.

ESOL Strategies:

1. Provide a language and literature rich environment.
2. Focus on academic language and vocabulary.
3. Use visuals such as pictures, overhead projector, videos, magazines or internet.
4. Provide for peer/classroom interaction.
5. Engage students in questioning techniques.

**ESE Strategies:**

1. Allow extra time to complete assignments.
2. Have students repeat directions orally.
3. Use alternative/supplemental materials.
4. Emphasize major points.
5. Use small group/individual instruction.

**References:**


Refer to the reference list at the beginning for additional websites.

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**Day 4**
Title: Food for the soul.

Grade: 7, 8  Time Required: 50 Minutes

Benchmarks:

Key Terminology:
cuisine, diet, soul food, originate, culturally diverse, culinary, ethnic

Objectives:

1. Students will identify culturally and ethnically diverse foods in the American diet.
2. Students will research the origin of specific foods.
3. Students will determine foods that can be produced in the class garden.

Prelesson:

Students will work in groups to brainstorm and categorize the foods that contributed to the American diet by different cultures or ethnic groups.

Lesson:

The focus for this lesson will be on foods that were contributed by African Americans. Provide students with computers and websites (see reference section) to research foods that were brought to America on the slave ships. Some foods originated in Africa and other foods came by a different route. Ask the students to find who, what, when, where and how of foods ending up in America. Students will be given chart paper and markers to illustrate their findings. Charts will be displayed in class.

Post Lesson:

When students are finished they will do a gallery walk with each group using a different color marker. Students will make constructive comments on each paper. Assessment:

Students will demonstrate their understanding of the origin of specific foods through their display which will contain words and pictures.

ESOL Strategies:

1. Introduce new vocabulary with clear definitions and repeat those new words frequently throughout the lesson.
2. Plan for culturally oriented activities.
3. Make comparisons using similar ideas.
4. Provide for peer/classroom interaction.
5. Post vocabulary on a word wall.
6. Ask open-ended questions.

**ESE Strategies:**

1. Group similar items.
2. Have students repeat directions orally.
3. Use alternative-supplemental materials.
4. Emphasize major points.
5. Use small group/individual instruction.

**Resources:**

http://answersafrica.com/foods-in-africa.html Good pictures, includes spices
http://www.diet.com/g/africanamerican-diet
http://oldwayspt.org/programs/african-heritage-health/diet-pyramid
http://www.sallybernstein.com/food/cuisines/african_american.htm

This site has a great article on foods that came to America on slave ships and includes some comments on why we need to share this information.

**Day 5**

**Title:** May the best menu win!

**Grade:** 7, 8  **Time Required:** 50 minutes  **Benchmarks:**
Key Terminology:
menu, diet, nutrition, carbohydrates, protein, fats, portion

Objectives:
1. Students will compare and contrast food items from a list.
2. Students will participate in a survey on food popularity.
3. Students will create a healthy menu.

Prelesson:
Prepare a quiz/survey on Kahoot.it about the previous lesson. Include questions about whether they like, dislike or have never eaten certain foods. This will help connect to their own lives. Provide students with information about African Americans involved in the culinary industry. If a student created a presentation on Annie Fisher refer back to that presentation, or provide information on her biography.

Lesson:
After reading or reviewing information on Annie Fisher (or others) have students use a computer or smart phone to participate in the Kahoot quiz/survey. Based on the answers have students determine foods that most of the class likes. Provide nutritional information for the foods from the Kahoot quiz/survey. Divide students into groups, give them chart paper and have them create a healthy menu for a meal using the foods that were the most popular (and maybe some that were not as popular but more nutritional). They should include portion size and nutritional information. Each group will share their menu and make a persuasive argument about why theirs is the best. Each person in the group should say something, even if they read it from a note card.

Materials Needed:
Computers or smart phones, food pictures (optional), chart paper, markers, nutrition charts, Kahoot quiz/survey

Assessment:
Students will demonstrate their understanding of a healthy menu on their display and by their persuasive argument.

ESOL Strategies:
1. Use authentic materials
2. Present new information to students in small sequential steps, allowing the student to concentrate on one thing at a time
3. Label or categorize objects
4. Use a multi-sensory approach to learning
5. Ask open-ended questions
6. Engage students in questioning techniques
7. Keep learning logs

**ESE Strategies:**
1. Provide opportunities to orally complete assignments
2. Use hands-on activities
3. Group similar items
4. Preface directions with cues
5. Use assignment notebook

**References:**
http://shs.umsystem.edu/historicmissourians/name/f/fisher/index.html This site has a short bio on Annie Fisher.

http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm063367.htm
Downloadable nutrition facts charts on fruits and vegetables

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**Day 6, 7, 8 and onward**

**Title:** Plan it and Plant it!

**Grade:** 7, 8  **Time Required:** 150 minutes **Benchmarks:**

**Key Terminology:**
Soil, spacing, seed depth, transplant, preparation **Objectives:**
1. Students will determine the growing season for selected vegetables.
2. Students will design a vegetable garden appropriate for the season and location.
3. Students will plant, maintain and harvest vegetables.

**Prelesson:**

Review the previous lesson and have students list the vegetables that were used in the menus. Provide students with a Florida Vegetable Gardening Guide (see reference section). Review with students how to find the necessary information for your area such as planting times and spacing.

**Lesson:**

Brainstorm as a class to determine elements of a good garden design. List on chart paper or whiteboard. As a class choose the elements that are most important. Using the guide, students will determine vegetables to plant in the class garden based on the survey and the menus and the information in the guide. In pairs, groups or individually students will design a garden of a pre-determined size. Students will share their plan on the overhead projector. The class may vote on the best design based on the criteria listed on the board.

**Extension:**

The students will volunteer to bring in food items that are not grown in the garden but from the menu from the previous lesson for a feast at the end of the unit. Food from the garden will be harvested and prepared either at home or school to be included in the feast. Be sure to check for food allergies.

**Assessment:**

Students will demonstrate their understanding of garden planning by sharing their design. Students will demonstrate their knowledge of vegetable gardening by properly maintaining their garden.

**ESOL Strategies:**

1. Use authentic materials.
2. Present new information to students in small sequential steps, allowing the student to concentrate on one thing at a time
3. Label or categorize objects
4. Use a multi-sensory approach to learning
5. Ask open-ended questions
6. Engage students in questioning techniques
ESE Strategies:
1. Provide opportunities to orally complete assignments
2. Use hands-on activities
3. Group similar items
4. Preface directions with cues

References:
http://edis.ifas.ufl.edu/pdffiles/VH/VH02100.pdf
Florida Vegetable Gardening Guide