

PEANUTS FOR GEORGE WASHINGTON CARVER

Grade Level: Kindergarten, Science
Written by: Brandy Brocka, Platte River Academy, Highlands Ranch, CO
Length of Unit: Seven lessons (approximately 30 minutes long each)

I. ABSTRACT

This unit integrating math, geography, science, reading, and writing skills with the Core Knowledge science content for George Washington Carver, allows students the opportunity to discuss and think about how our society has changed its attitude toward minorities and how society has been impacted by the lives of those minorities. Specific skills include comparing and contrasting, writing about how it would be difficult to be a slave, and graphing results of activities.

II. OVERVIEW

A. Concept Objectives

1. Understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. [**Colorado State Standard Science 3**]
2. Develop number sense and use numbers and number relationships in problem-solving situations and communicate the reasoning used in solving these problems. [**CSS Mathematics 1**]
3. Understand that societies are diverse and have changed over time. [**CSS History 3**]

B. Content from the *Core Knowledge Sequence*

1. George Washington Carver (page 20)
2. Know parts of a story (for example, title, beginning, end) and their functions. (page 7)
3. Understand and follow oral directions. (page 8)
4. Tell in his or her own words what happened in stories or parts of stories, and predict what will happen next in stories. (page 8)
5. Distinguish fantasy from realistic text. (page 8)
6. Listen to and understand a variety of texts, both fiction and nonfiction. (page 8)
7. Write his or her own name (first and last). (page 8)
8. Use letter-sound knowledge to write simple words and messages, consistently representing initial and final consonant sounds (for example, writing “boat” as “bot”). (page 8)
9. Literary terms (page 10)
 - a. author
 - b. illustrator
10. Some people were not free: slavery in early America (page 12)
11. Using concrete objects and pictorial representations, compare sets (page 17)
 - a. same as (equal to)
 - b. more than
 - c. less than

- d. most
- e. least
- 12. Count from 1 to 10 by twos (page 17)
- 13. Count and write the number of objects in a set. (page 17)
- 14. Interpret simple pictorial graphs. (page 17)
- 15. Weight (mass): Heavier than, lighter than (page 18)
- 16. Farming (page 19)
 - a. How some food comes from farms as crops
 - b. How farmers must take special care to protect their crops from weeds and pests

C. Skill Objectives

- 1. Compare their own lives to the lives of slaves.
- 2. Use initial and final consonants in their writing.
- 3. Write about why it would be difficult to be a slave
- 4. Draw a picture, which relates to their writing.
- 5. Compare and contrast the lives of some masters (cruel) to those of the Carvers (caring).
- 6. Compare and contrast the educational opportunities for white and black children when George Washington Carver was a child.
- 7. Actively learn the first verse of the song “George Washington Carver.”
- 8. Participate in a discussion about how our society has changed for people since George Washington Carver’s lifetime.
- 9. Students will compare and contrast how soil might look if it were growing cotton or peanuts.
- 10. Students will be able to follow oral directions.
- 11. Students will actively learn the second verse of the song “George Washington Carver.”
- 12. Students will be able to focus on the first letter of a printed word to help figure out what the word is.
- 13. Students will be able to correctly write their first and last names.
- 14. Students will be able to apply their knowledge by creating an accurate picture, which will portray what they just learned.
- 15. Students will create a collage showing five products that can be made from peanuts.
- 16. Students will actively learn the third verse of the song “George Washington Carver.”
- 17. Students will discuss possible ways to let others know about the many products created through peanuts and sweet potatoes.
- 18. Students will predict how George Washington Carver helped the farmers sell peanuts and sweet potatoes.
- 19. Students will be able to count pictures and circle the correct corresponding number.
- 20. Students will be able write the correct number or peanuts they have on a graph.
- 21. Students will distinguish what is heavier with a scale: peanuts or pennies.
- 22. Students will distinguish what is heavier with a scale: peanuts or crayons.

23. Students will distinguish what is heavier with a scale: peanuts or feathers.
24. Students will record their results from weighing items on a recording sheet.
25. Students will be able to distinguish who has the most and the least peanuts in a group.
26. Students will be able to count peanuts by twos.
27. Students will be able to graph the results of their shelling activity.
28. Students will be able to read the graph and decide which group had more students.
29. Students will be able to figure out if their peanut shells had two peanuts per shell by counting and using deductive reasoning (10 = two per shell, 9 or less = not two per shell)
30. Discuss information learned about George Washington Carver.
31. Students will enter their like or dislike for the homemade peanut butter on a graph by drawing a happy or sad face.
32. Students will compare the results of the graph and decide which column has more responses.

III. BACKGROUND KNOWLEDGE

A. For Teachers

1. Adler, D. *A Picture Book of George Washington Carver*. New York: Holiday House, 1999. 0-8234-1429-9.
2. Benitez, M. *George Washington Carver, Plant Doctor*. Milwaukee, WI: Raintree Publishers, 1989. 0-8172-3522-1.
3. Rogers, T. *George Washington Carver, Nature's Trailblazer*. Frederick, ML: Henry Holt and CO., Inc., 1992. 0-8050-2115-9.

B. For Students

1. Plants and Plant Growth (page 19)

IV. RESOURCES

1. Adler, D. *A Picture Book of George Washington Carver*. New York: Holiday House, 1999. 0-8234-1429-9.
2. Benitez, M. *George Washington Carver, Plant Doctor*. Milwaukee, WI: Raintree Publishers, 1989. 0-8172-3522-1.
3. Coil, S. *George Washington Carver*. New York: Franklin Watts, 1990. 0-531-10864-3.
4. Hirsch, E.D., Jr. & Holdren, J. *What Your Kindergartner Needs to Know*. New York, NY: Dell Publishing, 1996. 1-56305-631-3.
5. Rogers, T. *George Washington Carver, Nature's Trailblazer*. Frederick, ML: Henry Holt and CO., Inc., 1992. 0-8050-2115-9.

V. LESSONS

Lesson One: What is a Slave?

A. Daily Objectives

1. Concept Objective(s)
 - a. Understand that societies are diverse and have changed over time.

2. Lesson Content
 - a. Some people were not free: slavery in early America
 - b. George Washington Carver
 - c. Know parts of a story (for example, title, beginning, end) and their functions.
 - d. Understand and follow oral directions.
 - e. Tell in his or her own words what happened in stories or parts of stories, and predict what will happen next in stories.
 - f. Distinguish fantasy from realistic text.
 - g. Listen to and understand a variety of texts, both fiction and nonfiction.
 - h. Literary terms: author
 - i. Literary terms: illustrator
 - j. Write his or her own name (first and last).
 - k. Use letter-sound knowledge to write simple words and messages, consistently representing initial and final consonant sounds (for example, writing “boat” as “bot”).
3. Skill Objective(s)
 - a. Compare their own lives to the lives of slaves.
 - b. Use initial and final consonants in their writing.
 - c. Write about why it would be difficult to be a slave.
 - d. Draw a picture, which relates to their writing.
 - e. Compare and contrast the lives of some masters (cruel) to those of the Carvers (caring).

B. *Materials*

1. *George Washington Carver, Nature’s Trailblazer* by Teresa Rogers, pages 10-13 or *A Picture Book of George Washington Carver* by David A. Adler, pages 1-4
2. *What Your Kindergartner Needs to Know* by E.D. Hirsch, Jr. and John Holdren, page 146
3. A copy of Appendices A and B for each student
4. One copy of Appendix C
5. Writing utensils

C. *Key Vocabulary*

1. Slave- a person who is owned (like property) by another
2. Master- someone who owns a slave
3. Property- the exclusive right to possess, enjoy, and dispose of, a thing; ownership (taken from *Webster’s New Collegiate Dictionary*)
4. Fantasy story- a story that is not true
5. Realistic story- a story that is true or could be true
6. History- something that happened in the past
7. African American- a person with black skin, whose descendants came from Africa and who now live in America

D. *Procedures/Activities*

1. *Who can tell me what your favorite thing is that you own?* Accept all answers and write them up on the board.

2. *I notice that no one mentioned people. Why not?* Answers may vary: You can't own people.
3. Introduce the students to the book *George Washington Carver, Nature's Trailblazer*. Here is a possible way to introduce the book:
 - a. *The title of this book is "George Washington Carver, Nature's Trailblazer." What is a title?* The name of a book.
 - b. *The author of this book is Teresa Rogers. What is an author?* The person who writes the book.
 - c. *The illustrator of this book is Antonio Castro. What is an illustrator?* The person who draws the pictures in the book.
 - d. *When I look at the cover I see a man standing next to a field. What do you think this book might be about?* Accept all answers.
4. Read pages 10-13 from *George Washington Carver, Nature's Trailblazer* or pages 1-4 from *A Picture Book of George Washington Carver* to the students.
5. Discuss the reading selection. Possible discussion questions are:
 - a. *Why did Moses Carver purchase Mary (George's mother)?* He needed help on his farm and could find no one to hire.
 - b. *What happened to George's mother when he was a baby?* She was kidnapped.
 - c. *What happened to George?* He was kidnapped too, but was later found.
 - d. *Who took care of George and his brother Jim while they were growing up?* Moses and Sarah Carver.
 - e. *The book said that George was a slave. What do you think a slave is?* Accept all answers.
 - f. *Was George's real last name Carver?* No.
 - g. *What was his real last name?* He didn't have one.
 - h. *Why didn't he have a last name?* Slaves didn't have last names.
 - i. *When did he take the last name Carver?* When he was freed.
 - j. *Where did he get the last name Carver?* From the people who took care of him and owned him.
6. *It seems awful strange that the Carvers owned George and his brother Jim. Do you think this is a realistic story or a fantasy story? Why?* Fantasy because you can't own a person.
7. *I am going to read another short selection to you about our history in this country.*
8. Read page 146 from *What Your Kindergartner Needs to Know*.
9. Discuss the reading. Possible discussion questions are:
 - a. *What is a slave?* A person who was not free; they were owned by someone else.
 - b. *What were some of the things that slave had to do?* Cut tobacco, pick cotton, pull vegetables, and cook for other people.
 - c. *Does it sound like the slaves were treated well? Explain.* No, because they weren't allowed to rest.

- d. *Think back to the first story we read. Did the Carvers treat George and Jim well? Yes, they raised them like they were the Carver's own children.*
- e. *Do we still have slavery today? No.*
- 10. *Do you think that George liked being a slave? Why or why not? Accept all answers.*
- 11. *Slavery is hard for us to understand because no one owns us.*
- 12. *What do you want to be when you grow up? Accept all answers.*
- 13. *I want us to pretend for a minute that you are all slaves and I am your master. Now that you are all my slaves you can't be what you just mentioned. You are all going to work in my classroom for me. We will have no recess, no snack time, no playing, no reading, and no free time. You will come in very early in the morning and stack papers for me. You will only get to stop at the end of the day when the sun goes down. You have to live here in the room and you won't be allowed to see your parents or siblings.*
- 14. *Do you think that this is something you would like? Why or why not? Accept all answers.*
- 15. Hand out Appendix A to each student.
- 16. The students will be writing about why they would not want to be a slave.
- 17. Remind the students to write their first and last name and to sound out all of their words.
- 18. If there is time have the students share their writing.
- E. *Assessment/Evaluation*
 - 1. Checklist for writing, Appendix B
 - 2. Anecdotal notes, Appendix C

Lesson Two: A Good Education

A. Daily Objectives

- 1. Concept Objective(s)
 - a. Understand that societies are diverse and have changed over time.
- 2. Lesson Content
 - a. George Washington Carver
 - b. Know parts of a story (for example, title, beginning, end) and their functions.
 - c. Understand and follow oral directions.
 - d. Tell in his or her own words what happened in stories or parts of stories, and predict what will happen next in stories.
 - e. Listen to and understand a variety of texts, both fiction and nonfiction.
 - f. Literary terms: author
 - g. Literary terms: illustrator
- 3. Skill Objective(s)
 - a. Compare and contrast the educational opportunities for white and black children when George Washington Carver was a child.

- b. Actively learn the first verse of the song “George Washington Carver.”
 - c. Participate in a discussion about how our society has changed for people since George Washington Carver’s lifetime.
- B. *Materials*
- 1. *George Washington Carver, Nature’s Trailblazer* by Teresa Rogers, pages 18-22, or *A Picture Book of George Washington Carver* by David Adler, pages 5-16
 - 2. One copy of Appendix D copied onto chart paper
- C. *Key Vocabulary*
- 1. Segregation- the separation of black and white people
 - 2. Discrimination- the act of treating someone as if they were not important because of the color of their skin
- D. *Procedures/Activities*
- 1. Review the previous lesson. Possible review questions are:
 - a. *What is a slave?* Someone who is the property of another.
 - b. *Was George Washington Carver a slave?* Yes.
 - c. *Was George a slave all of his life?* No.
 - d. *Who took care of George when he was growing up?* The Carver family.
 - 2. *Does everyone go to school in our country?* No.
 - 3. *Who doesn’t go to school?* Babies, small children (4 and under), adults.
 - 4. *Don’t some adults take classes in college?* Yes.
 - 5. *So everyone goes to school sooner or later?* Yes.
 - 6. *Why is school important?* Answers may vary: you learn how to read, write and lots of other things important to know.
 - 7. *You are right. School is very important. There are many things in this world that are almost impossible to do without having gone to school first.*
 - 8. *Do you think that George Washington Carver went to school?* Accept all answers.
 - 9. Show the book *George Washington Carver, Nature’s Trailblazer* by Teresa Rogers or *A Picture Book of George Washington Carver* by David Adler. Remind students that you read from this book the day before.
 - 10. Read *George Washington Carver, Nature’s Trailblazer* by Teresa Rogers, pages 18-22, or *A Picture Book of George Washington Carver* by David Adler, pages 5-16.
 - 11. Discuss the reading. Possible discussion questions are:
 - a. *Why didn’t George go to the school where the Carvers lived?* It was a school for white children only.
 - b. *How did George finally get to school?* He had to leave his home and go to a different town that had a school for black children.
 - c. *Was George able to go to college right away? Why or why not?* No, because he was black.
 - d. *When George finally got to college, was it a college for only black people?* No, he was the only black student on campus.

12. *Do you think back in George’s time all children went to school? Why or why not?* No, because black children could only go to special schools for black children. There may not have been a school like that available for them.
 13. *Do you think that is fair?* Accept all answers.
 14. *Are schools still like that?* No.
 15. *Someone tell me what schools are like today in the United States?* All kids can go to school no matter what they look like.
 16. *How is that different from when George Washington Carver was a child?* White and black children couldn’t go to school together.
 17. Teach the students the first verse of the song “George Washington Carver” from Appendix D.
- E. *Assessment/Evaluation*
1. Teacher observation

Lesson Three: What is Wrong With the Soil?

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment.
 2. Lesson Content
 - a. George Washington Carver
 - b. Know parts of a story (for example, title, beginning, end) and their functions.
 - c. Understand and follow oral directions.
 - d. Tell in his or her own words what happened in stories or parts of stories, and predict what will happen next in stories.
 - e. Listen to and understand a variety of texts, both fiction and nonfiction.
 - f. Literary terms: author
 - g. Literary terms: illustrator
 - h. Farming: How farmers must take special care to protect their crops from weeds and pests
 - i. Write his or her own name (first and last).
 3. Skill Objective(s)
 - a. Students will compare and contrast how soil might look if it were growing cotton or peanuts.
 - b. Students will be able to follow oral directions.
 - c. Students will actively learn the second verse of the song “George Washington Carver.”
 - d. Students will be able to focus on the first letter of a printed word to help figure out what the word is.
 - e. Students will be able to correctly write their first and last names.
 - f. Students will be able to apply their knowledge to creating an accurate picture, which will portray what they just learned.

C. *Materials*

1. *George Washington Carver, Plant Doctor* by Mirna Benitez, pages 12-22 or *A Picture Book of George Washington Carver* by David Adler, pages 19-20
2. One copy of Appendix D copied onto chart paper
3. Peanuts (optional)
4. Cotton (optional)
5. Glue
6. A copy of Appendices E and F for each student
7. Drawing utensils
8. Dirt (optional)

D. *Key Vocabulary*

1. Soil- the dirt that plant grows in
2. Nitrogen- a chemical that plants get from soil
3. Pests- insects that are harmful to crops
4. Boll weevil- an insect that eats cotton
5. Crop- something that is grown in a field

E. *Procedures/Activities*

1. Before doing this lesson check to see if any students have allergies to peanuts.
2. Sing the first verse of the song “George Washington Carver,” which was taught in the previous lesson.
3. Review the previous lesson. Possible review questions are:
 - a. *Did George Washington Carver go to school where he grew up? Why or why not?* No, because the school was only for white children.
 - b. *How was George able to go to school?* He had to leave town.
 - c. *Did George go to college?* Yes.
4. Introduce the book *George Washington Carver, Plant Doctor*. Here is a possible way to introduce the book:
 - a. *The title of this book is “George Washington Carver, Plant Doctor.” What is a title?* The name of a book.
 - b. *What do you think the book is about?* George Washington Carver.
 - c. *The author of this book is Mirna Benitez. What does the author do?* Writes the story.
 - d. *The illustrator of this book is Meryl Henderson. What does the illustrator do?* Draws the pictures for the book.
5. Read pages 12-22 from the book *George Washington Carver, Plant Doctor*.
6. Discuss the reading selection. Possible discussion questions are:
 - a. *Why did George leave Iowa State?* An important man named Booker T. Washington asked him to help out at an African American college.
 - b. *What surprised George about the school?* It was so new that they didn’t have a science lab. George had to make his own lab with old cups, plates, pots, and pans.

- c. *Who else did George help besides the students?* The farmers.
 - d. *Why did the farmers need help?* Their soil was going bad and their cotton crops weren't growing well.
 - e. *What was wrong with the cotton?* Boll weevils were eating the cotton.
 - f. *What are boll weevils?* Insects or pests.
 - g. *How was the cotton hurting the soil?* The cotton was hurting the soil by taking out nitrogen.
 - h. *What was George's solution to the problem?* The farmers should plant peanuts and sweet potatoes.
 - i. *Why were peanuts and sweet potatoes better than cotton?* Boll weevils don't eat them and they put nitrogen back into the soil.
 - j. *Why do you think George helped the farmers?* Answers will vary.
7. *When was the soil better, when the cotton was growing or when the peanuts were growing?* Peanuts.
 8. Hand out a copy of Appendix E, peanuts, cotton, and dirt to each student.
 9. The students will create a picture of a field. On one side of the line the field will be growing cotton and on the other the field will be growing peanuts. The students should show in their picture the different things they learned from the story.
 10. **IMPORTANT:** If you don't want a huge mess, make sure the students put the glue on the paper first, not the object being glued on!
 11. As a group, discuss what should be included in the drawing.
 12. Point out to the students that the sides are labeled cotton and peanut, they should be able to figure out which side is which by looking at the labels.
 13. Things that should be included in this drawing are:
 - a. First and last names
 - b. Boll weevils on the cotton side
 - c. Cotton side looks unhealthy
 - d. Peanut side looks healthy
 - e. Sweet potatoes are drawn on the peanut side
 - f. Peanuts should be glued (or drawn) on the correct side according to the label
 - g. Cotton should be glued (or drawn) on the correct side according to the label
 14. Have the students share their drawings with one another.
 15. Teach the students the second verse of the song "George Washington Carver."
- F. *Assessment/Evaluation*
1. Checklist, Appendix F
 2. Teacher observation

Lesson Four: What Can You Do with Peanuts?

A. Daily Objectives

1. Concept Objective(s)
 - a. Understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment.
2. Lesson Content
 - a. George Washington Carver
 - b. Know parts of a story (for example, title, beginning, end) and their functions.
 - c. Understand and follow oral directions.
 - d. Tell in his or her own words what happened in stories or parts of stories, and predict what will happen next in stories.
 - e. Listen to and understand a variety of texts, both fiction and nonfiction.
 - f. Write his or her own name (first and last).
 - g. Farming: How some food comes from farms as crops
3. Skill Objective(s)
 - a. Students will create a collage showing five products that can be made from peanuts.
 - b. Students will actively learn the third verse of the song “George Washington Carver.”
 - c. Students will discuss possible ways to let others know about the many products available through peanuts and sweet potatoes.
 - d. Students will predict how George Washington Carver helped the farmers sell peanuts and sweet potatoes.

B. Materials

1. Magazines
2. Glue
3. Writing utensils
4. *George Washington Carver, Plant Doctor* by Mirna Benitez, pages 24-28
5. *George Washington Carver, Nature’s Trailblazer* by Teresa Rogers, pages 66-68 or *George Washington Carver* by Suzanne Coil, pages 40-44
6. A copy of Appendix D on chart paper or an overhead
7. A copy of Appendices G and H for each student

C. Key Vocabulary

1. Products- things that are created from a crop
2. Ad campaign- creating advertisements for a certain product

D. Procedures/Activities

1. Sing the first two verses of the song “George Washington Carver,” which was taught in previous lessons.
2. Review the previous lesson. Possible review questions are:
 - a. *Yesterday we learned that farmers were having some troubles in Alabama with their crops. What were the two problems? Pests (the boll weevil) were destroying the cotton by eating it and the cotton was destroying the soil.*

- b. *How did George suggest that the farmers solve the problem? By planting sweet potatoes and peanuts instead.*
 - c. *Why were sweet potatoes and peanuts better than the cotton? Because they were safe from the boll weevil and they put something back into the soil to make it healthier.*
3. *How many of you have ever eaten sweet potatoes or peanuts? Accept all answers.*
4. *What can you make from sweet potatoes? Accept all answers.*
5. *What do you think that you can make from peanuts? Accept all answers.*
6. *Wow, that doesn't seem like very many things. You can make a lot of things from cotton. That is why cotton was so easy to sell and why so many people grew it on their farms. I wonder how easy it was to sell the sweet potatoes and peanuts.*
7. *Read page 24 from the book *George Washington Carver*.*
8. *What did the farmer think she would do with the peanuts once they had grown? She didn't know what to do with them because no one wanted to buy them.*
9. *How do you think George is going to help? Accept all answers and allow a moment for discussion on the matter.*
10. *Read pages 26-28 from the book *George Washington Carver, Plant Doctor*.*
11. *Discuss the rest of the reading. Possible discussion questions are:*
 - a. *How did George help the farmers? He came up with new uses for peanuts.*
 - b. *How many uses did he come up with for the peanut? More than 300.*
 - c. *What were a few of the things that he made with peanuts? Ink, cream, coffee, and other foods.*
 - d. *Why do you think finding more uses for peanuts would help the farmers sell the peanuts? Because there is a larger demand for the peanuts.*
12. *If George found more uses for peanuts, do you think he would have done the same thing for sweet potatoes? Accept all answers.*
13. *He found 150 different uses for sweet potatoes. Do you think this would help sell the sweet potatoes as well? Yes.*
14. *Teach the third verse of the song "George Washington Carver."*
15. *Read (or list on the board) several of the peanut products and sweet potato products that George Washington Carver discovered from pages 66-68 of the book *George Washington Carver, Nature's Trailblazer*.*
16. *Did you know that you could make all of these things from sweet potatoes and peanuts? Chances are the students won't know about most of the products.*
17. *Most people don't realize how many things you can make from these two crops. How do you think we could let other people know about this? Accept all answers.*

18. *Today we are going to make an advertising campaign for peanuts. We are going to put up ads like you see on billboards or magazines to let people know about the different things you can make from peanuts.*
 19. Give each student a copy of Appendix G, glue, writing implements, and magazines.
 20. The students will cut five pictures from magazines or draw five items, which can be made from peanuts.
 21. Before starting the project, discuss as a group the various items that they may want to look for.
 22. Remind all students to write their first and last names.
 23. If there is time have the students share their collages and then as a group sing the song "George Washington Carver."
- E. *Assessment/Evaluation*
1. Teacher observation
 2. Rubric for collage, Appendix H

Lesson Five: Peanuts, Peanuts Everywhere!

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Develop number sense and use numbers and number relationships in problem-solving situations and communicate the reasoning used in solving these problems.
 2. Lesson Content
 - a. George Washington Carver
 - b. Understand and follow oral directions.
 - c. Write his or her own name (first and last).
 - d. Using concrete objects and pictorial representations, compare sets: most
 - e. Using concrete objects and pictorial representations, compare sets: least
 - f. Using concrete objects and pictorial representations, compare sets: same as (equal to)
 - g. Using concrete objects and pictorial representations, compare sets: more than
 - h. Using concrete objects and pictorial representations, compare sets: less than
 - i. Count and write the number of objects in a set.
 - j. Weight mass: Heavier than, lighter than
 3. Skill Objective(s)
 - a. Students will be able to count pictures and circle the correct corresponding number.
 - b. Students will be able write the correct number of peanuts they have on a graph.
 - c. Students will distinguish what is heavier with a scale: peanuts or pennies.

- d. Students will distinguish what is heavier with a scale: peanuts or crayons.
- e. Students will distinguish what is heavier with a scale: peanuts or feathers.
- f. Students will record their results from weighing items on a recording sheet.
- g. Students will be able to distinguish who has the most and the least peanuts in a group.

B. *Materials*

- 1. Bag of unshelled peanuts (a small handful for each student)
- 2. One copy of Appendix I for each student
- 3. Writing utensils
- 4. A copy of Appendix D on chart paper
- 5. One copy of Appendix J for every eight students (precut)
- 6. One copy of Appendix K copied onto chart paper
- 7. One copy of Appendix L for each group
- 8. One scale for each group
- 9. Five feathers for each group
- 10. Five pennies for each group
- 11. Five crayons for each group

C. *Key Vocabulary*

- 1. Weigh- to measure how heavy or light an object is

D. *Procedures/Activities*

- 1. Before doing this lesson check to see if any students have allergies to peanuts.
- 2. Sing the song “George Washington Carver,” which was taught in previous lessons.
- 3. Review the previous lesson. Possible review questions are:
 - a. *Why did the farmers have a hard time selling the peanuts and sweet potatoes?* People didn’t know what to use them for.
 - b. *How did George Washington Carver help the farmers sell them?* He came up with 300 different uses for peanuts and 150 uses for sweet potatoes.
- 4. *Today we are going to do some counting with peanuts.*
- 5. Set up a signal with the students that will indicate when they are supposed to stop whatever they are doing, put their hands in their laps, and listen to your instructions. (Clapping works well.)
- 6. Have each student take a small handful of peanuts to their seat and count what they have.
- 7. After all of the students have counted their peanuts give them one of the pictures from Appendix J and have them each write their name and the number of peanuts on it.
- 8. Have the students glue their peanut picture on the graph copied onto chart paper from Appendix K.
- 9. As a group discuss the graph. Possible discussion questions are:

- a. *How many students had three peanuts?* Continue until you have covered all the numbers.
 - b. *Which number has the most amount of students?*
 - c. *Which number has the least amount of students?*
 - d. *Is there a number that has the same number of students?*
10. Divide the students into three or four groups.
 11. Give each group a copy of Appendix L.
 12. Have the students write their first and last names in the box in the upper left hand corner.
 13. Have the students figure out who has the fewest peanuts in their group and write that person's name in the box with only two peanuts in it (upper right hand corner).
 14. Have the students figure out who has the most peanuts in their group and write that person's name in the box with the most peanuts in it (middle left box).
 15. Next have the students keep five peanuts in their group and give the rest back to you.
 16. Give each group five pennies and a scale. Have the students weigh the pennies and the peanuts on the scale to figure out which one is heavier. The students will then circle the correct answer.
 17. Follow the same procedure with feathers and crayons.
 18. Have the students hand in Appendix L
 19. Give each student a copy of Appendix I.
 20. Explain that the students are going to count the number of pictures in each box and circle the correct number to represent the pictures.
 21. Draw the following example on the board and do it as a class:
 - a. Draw two happy faces on the board in a small box.
 - b. Write the numbers 1, 2, 3, 4, and 5 underneath the two happy faces.
 - c. Ask a student to count the happy faces and tell the class how many are there.
 - d. Ask another student to come to the board and circle the number 2.
 22. Draw a few more examples on the board.
 23. Ask if there are any questions.
 24. Let the students do both sides of Appendix I by themselves.
 25. Be sure to circulate around the room to make sure that all students understand the assignment.

E. *Assessment/Evaluation*

1. Teacher observation
2. Counting sheet, Appendix I
3. Recording sheet, Appendix L

Lesson Six: How Many Peanuts Are in a Peanut Shell?

A. Daily Objectives

1. Concept Objective(s)
 - a. Develop number sense and use numbers and number relationships in problem-solving situations and communicate the reasoning used in solving these problems.
2. Lesson Content
 - a. George Washington Carver
 - b. Understand and follow oral directions.
 - c. Count from 1 to 10 by twos
 - d. Interpret simple pictorial graphs.
 - a. Using concrete objects and pictorial representations, compare sets: most
 - b. Using concrete objects and pictorial representations, compare sets: least
3. Skill Objective(s)
 - a. Students will be able to count peanuts by twos.
 - b. Students will be able to graph the results of their shelling activity.
 - c. Students will be able to read the graph and decide which group had more students.
 - d. Students will be able to figure out if their peanut shells had two peanuts per shell by counting and using deductive reasoning (10 = two per shell, 9 or less = not two per shell)

B. Materials

1. A copy of Appendix D on chart paper
2. Paper plates
3. A bag of unshelled peanuts
4. A copy of Appendix N on an overhead transparency
5. Overhead projector
6. Overhead pens
7. One copy of Appendix O

C. Key Vocabulary

1. Pairs- items that go together in groups of two

D. Procedures/Activities

1. Before doing this lesson check to see if any students have allergies to peanuts.
2. Sing the song "George Washington Carver," which was taught in previous lessons.
3. Review previous lesson. Possible review questions are:
 - a. *When we did our weight experiments, which was heavier the peanuts or the pennies?* Pennies.
 - b. *When we did our weight experiments, which was heavier the peanuts or crayons?* Crayons.
 - c. *When we did our weight experiments, which was heavier the peanuts or feathers?* Peanuts.
4. Hold up an unshelled peanut. *What is inside this shell?* Accept all answers.

5. Break open the peanut shell and show the students the two peanuts inside.
 6. *How many peanuts were inside this shell?* Two.
 7. *Most peanuts have two peanuts inside of a shell. Once in awhile you can come across a peanut that has only one peanut inside.*
 8. Pass out five unshelled peanuts and a paper plate to each student.
 9. *I want to figure out how many peanuts we have. We know that we should have two peanuts in each shell, so how could we figure out how many peanuts we have? Count by twos.*
 10. As a group count the peanut shells by twos.
 11. *How many peanuts should we have if there are two peanuts inside each shell?* Ten.
 12. *Everyone take away two peanut shells.*
 13. *Who can tell me how many peanuts we have now?* Six.
 14. Continue to change the number of shells the students have so they can practice counting until you are sure most students understand the concept.
 15. *Now, we are going to break open our five peanut shells and then count how many peanuts we really have.*
 16. Have the students break open the peanuts and throw away the shells.
 17. Have the student count how many peanuts they have.
 18. *If each peanut shell had two peanuts inside of it, how many peanuts should you have?* Ten.
 19. *We are going to graph if we had two peanuts in each shell. How will we know if there were two peanuts in each shell?* If you have 10 peanuts, then you had two in each shell.
 20. *How can we tell if we did not have two peanuts in each shell?* If you do not have 10 peanuts, then you did not have two peanuts in each shell.
 21. One at a time have the students come up to the projector and write their answer down with a happy face to represent two peanuts per shell or a sad face to represent fewer than two peanuts per shell.
 22. As a group decide which group is larger, the group that had two peanuts per shell or the group that did not have two peanuts per shell.
 23. *How many students had two peanuts per shell?* Answer will vary according to graph results.
 24. *How many students did not have two peanuts per shell?* Answers will vary according to graph results.
- E. *Assessment/Evaluation*
1. Teacher observation
 2. Anecdotal notes, Appendix O

Lesson Seven: Peanut Butter

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Understand the characteristics and structure of living thing, the processes of life, and how living things interact with each other and their environment.

2. Lesson Content
 - a. George Washington Carver
 - b. Know parts of a story (for example, title, beginning, end) and their functions.
 - c. Listen to and understand a variety of texts, both fiction and nonfiction.
 - d. Tell in his or her own words what happened in stories or parts of stories, and predict what will happen next in stories.
 - e. Listen to and understand a variety of texts, both fiction and nonfiction.
3. Skill Objective(s)
 - a. Discuss information learned about George Washington Carver.
 - b. Students will enter their like or dislike for the homemade peanut butter on a graph by drawing a happy face, and neutral face, or a sad face.
 - c. Students will compare the results of the graph and decide which column has more responses.

B. *Materials*

1. A copy of Appendix M (Peanut butter recipes)
2. *George Washington Carver, Plant Doctor* by Mirna Benitez
3. Unsalted shelled roasted peanuts (amount varies according to recipe chosen)
4. Salt (amount varies according to recipe chosen)
5. Vegetable oil or peanut oil (amount and type vary according to recipe chosen)
6. Blender or food processor
7. Measuring spoons
8. Measuring cups
9. Napkins
10. Paper plates
11. Crackers or celery
12. Plastic knives
13. A copy of Appendix D on chart paper
14. Filled out graph from previous lesson
15. One copy of Appendix Q made into a transparency or copied on the board
16. Overhead projector
17. Overhead pens

C. *Key Vocabulary*

1. Recipe- a list of directions to make food

D. *Procedures/Activities*

1. Before doing this lesson check to see if any students have allergies to peanuts.
2. Sing the song “George Washington Carver,” which was taught in previous lessons.
3. Review the previous lesson. Possible review questions are:
 - a. *How many peanuts are there usually in a peanut shell?* Two.

- b. *Are there always two peanuts in a shell?* No, sometimes there is only one.
- c. Display graph from previous lesson. *Were there more students with two peanuts per shell yesterday or more who had fewer than two peanuts per shell?* Answers will vary according to graphing exercise from day before.
- 4. *We have learned a lot about George Washington Carver. I would like to read one more story about George Washington Carver.*
- 5. Read the book *George Washington Carver, Plant Doctor*.
- 6. *Who can tell me some things we have learned about George Washington Carver.* Accept all answers.
- 7. *Today we are going to be making a peanut product.*
- 8. Make the peanut butter (recipes provide in Appendix M) so that the students can watch.
- 9. You may choose to ask for volunteers to help measure out ingredients.
- 10. Serve the peanut butter on crackers or celery.
- 11. After the students have finished their snack draw a graph on the board similar to the graph on Appendix Q or make Appendix Q into an overhead transparency.
- 12. Have the students come up to the board or overhead one at a time to indicate if they liked, didn't like, or didn't care one way or another about the peanut butter.
- 13. As a group decide which response had more students.
- 14. Sing the "George Washington Carver" song.
- E. *Assessment/Evaluation*
 - 1. Teacher observation

VI. CULMINATING ACTIVITY

- A. George Washington Carver Quiz (Appendix P)

VII. HANDOUTS/WORKSHEETS

- A. Appendix A: Writing page, Lesson One
- B. Appendix B: Checklist for writing, Lesson One
- C. Appendix C: Anecdotal notes, Lesson One
- D. Appendix D: "George Washington Carver" song
- E. Appendix E: Cotton/Peanut/Potato Drawing Page
- F. Appendix F: Checklist, Lesson Three
- G. Appendix G: Collage, Lesson Four
- H. Appendix H: Rubric for Collage, Lesson Four
- I. Appendix I: Counting sheet, 2 pages
- J. Appendix J: Peanuts for graphing, Lesson Five
- K. Appendix K: Graph for peanuts, Lesson Five
- L. Appendix L: Recording sheet, Lesson Five
- M. Appendix M: Peanut butter recipes
- N. Appendix N: Graph for pairs of peanuts
- O. Appendix O: Anecdotal notes, Lesson Six

- P. Appendix P: George Washington Carver Quiz, 2 pages
- Q. Appendix Q: Graph for peanut butter
- R. Appendix R: Supplementary adding sheet

VIII. BIBLIOGRAPHY

- A. Adler, D. *A Picture Book of George Washington Carver*. New York: Holiday House, 1999. 0-8234-1429-9.
- B. Benitez, M. *George Washington Carver, Plant Doctor*. Milwaukee: Raintree Publishers, 1989. 0-8172-3522-1.
- C. Bethel, J. (Editor). *Webster's New Collegiate Dictionary*. Springfield, MA: G. & C. Merriam Co., Publishers, 1959.
- D. Coil, S. *George Washington Carver*. New York: Franklin Watts, 1990. 0-531-10864-3.
- E. Coulter, G. & Rough, R. "George Washington Carver." *Teach the Children: A Tribute to African-American History In Song & Poetry by The Medicine Man YaYa (Cassette Tape)*. U.S.A.: Lightyear Entertainment, 1997. 1-56896-226-6.
- F. Means, F. *Carvers' George*. Grey Castle Press: Lakeville, CN, 1952. 1-55905-075-6.
- G. Rogers, T. *George Washington Carver, Nature's Trailblazer*. Maryland: Henry Holt and Co., Inc., 1992. 0-8050-2115-9.

Appendix B-Peanuts For George Washington Carver

Student Evaluated: _____

Date of Evaluation: _____

1. Did the student correctly write his/her first name?
yes no

2. Did the student correctly write his/her last name?
yes no

3. Did the student attempt to sound out his/her own word,
using beginning and ending consonants in words?
yes no

4. Did the student write why he/she would not want to be a
slave?
yes no

5. Did the student seem to understand the concept?
yes no

6. Did the student draw a related picture?
yes no

Comments:

Appendix C-Peanuts For George Washington Carver

Anecdotal Notes:

Date: _____

As a class did the students understand what slavery is?

Were there any students who did not seem to understand or participate in the discussion?

Are there any students who seem to have a strong grasp of the concept?

As a class, did the students understand that slavery as a whole was in the past?

Comments/Concerns:



Appendix D-Peanuts For George Washington Carver

George Washington Carver

To the tune: *Where is Thumbkin*

George Washington Carver
was a slave
owned by the Carvers and made free.
Went to school to learn
about plants
and became a teacher
and a plant doctor.

George Washington Carver
went to Alabama
to help the farmers
with their cotton troubles
He said plant peanuts
instead of using cotton
It will help the soil
So they planted the peanuts.

George Washington Carver
was a hero.
He saved the soil
with peanuts.
He came up with 300
uses for peanuts,
like peanut oil
and peanut butter.

Appendix E-Peanuts For George Washington Carver

Name _____

Cotton

Peanuts

Appendix F-Peanuts For George Washington Carver

Student: _____ Date: _____

1. Did the student correctly write his/her first name? yes 😊 no ☹️

2. Did the student correctly write his/her last name? yes 😊 no ☹️

3. Did the student show cotton growing on the cotton side? yes 😊 no ☹️

4. Did the student show peanuts growing on the peanut side? yes 😊 no ☹️

5. Did the student draw boll weevils on the cotton side? yes 😊 no ☹️

6. Did the cotton side look sick? yes 😊 no ☹️

7. Did the peanut side look healthy? yes 😊 no ☹️

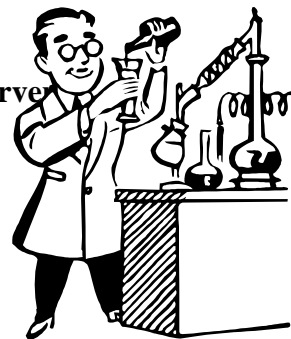
8. Were there sweet potatoes drawn on the peanut side? yes 😊 no ☹️

Comments:

pts./8 pts.

Appendix G-Peanuts For George Washington Carver

Name _____



I know what peanuts can make!

Appendix H-Peanuts For George Washington Carver

Rubric for Peanut Collage

Student evaluated: _____

Date of Evaluation: _____

Points	0	1	2	3	4	5
Peanut Products	No products included	1 product included	2 products included	3 products included	4 products included	5 products included
Student Name	Name is not on paper	Only one name was attempted	One name correctly written 2nd name not attempted	Both names attempted but incorrectly written	One name correctly written 2nd name attempted but is incorrect	First and last name written correctly



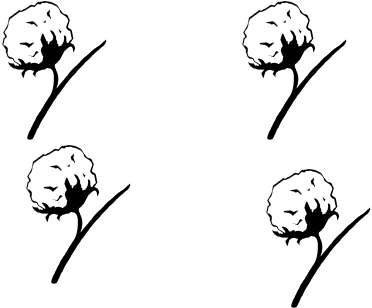
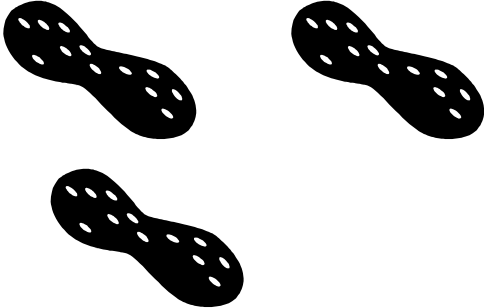

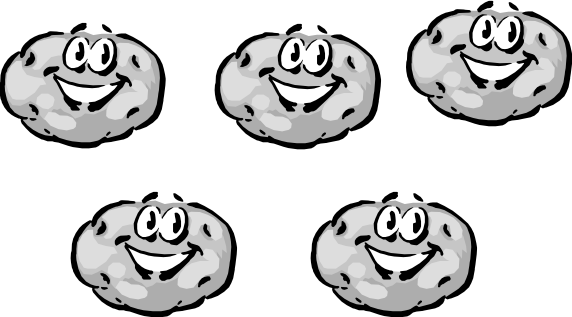
Comments:

pts./10 pts.

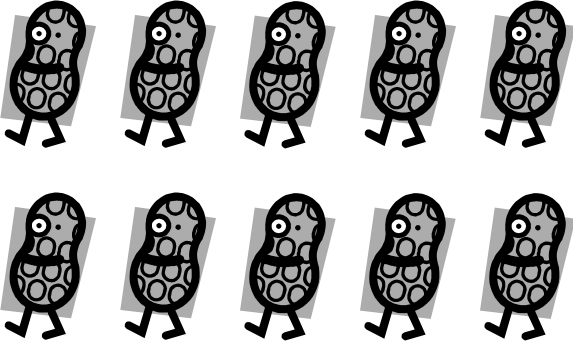


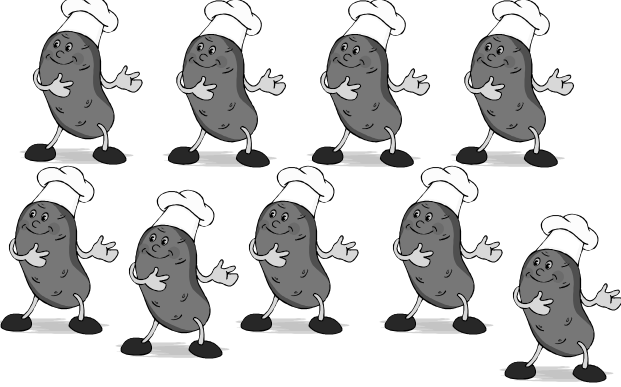
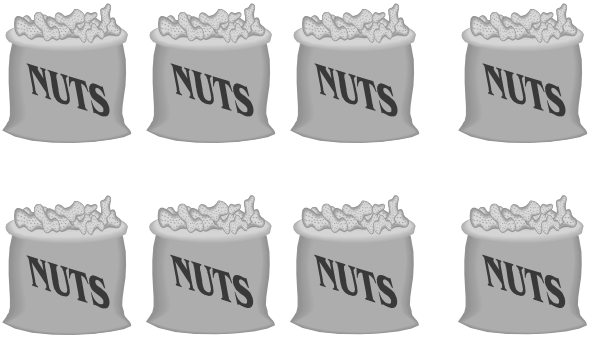
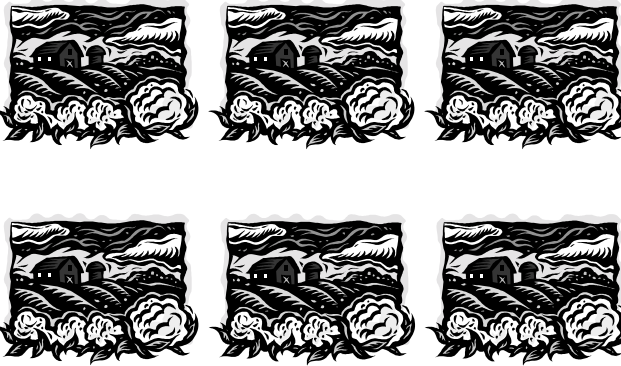
Appendix I, page 1-Peanuts For George Washington Carver

How many do you see?

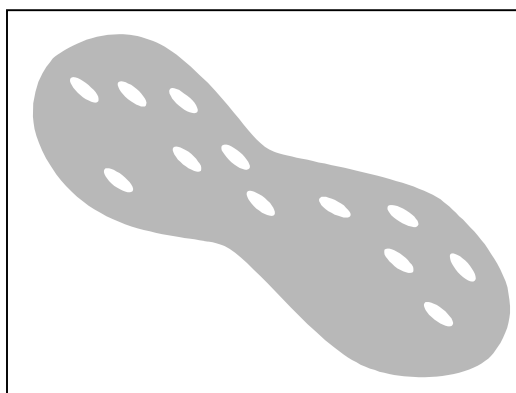
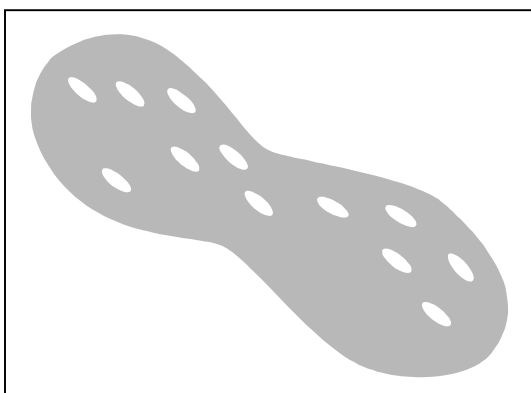
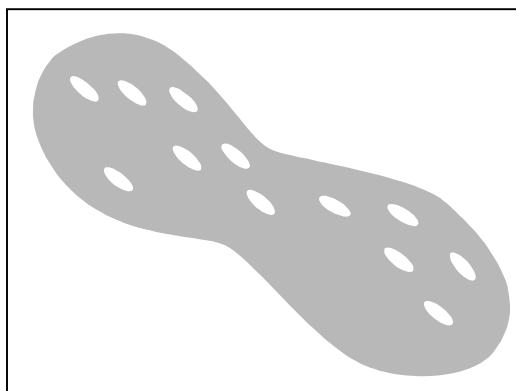
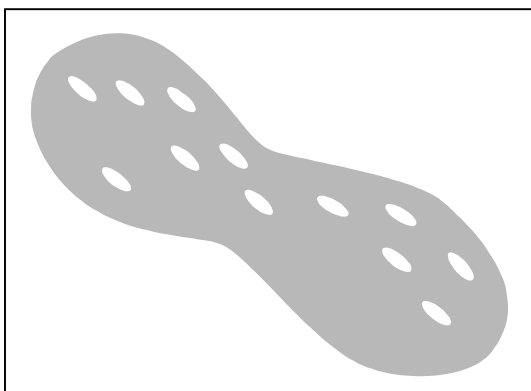
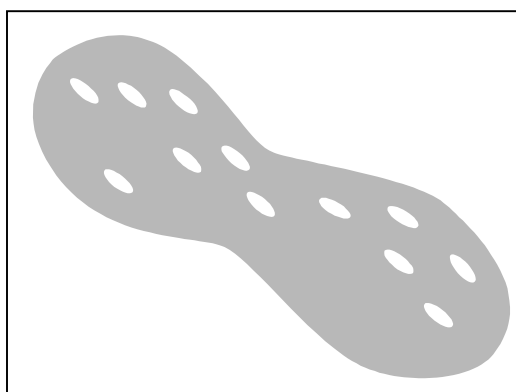
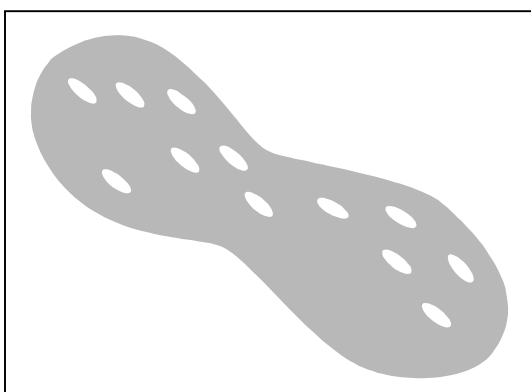
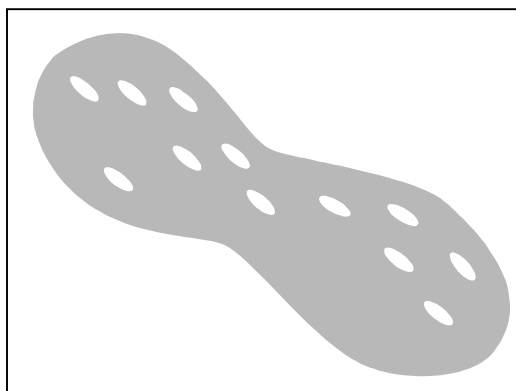
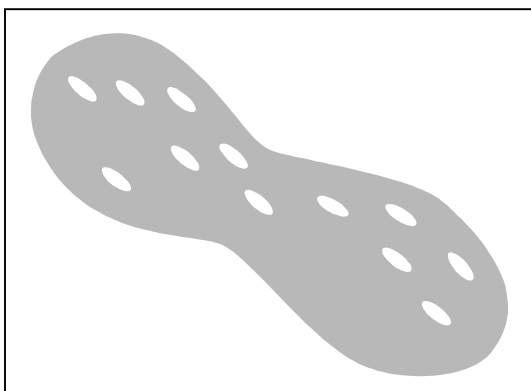
Name _____

 <p>1 2 3 4 5</p>	 <p>1 2 3 4 5</p>
 <p>1 2 3 4 5</p>	 <p>1 2 3 4 5</p>
 <p>1 2 3 4 5</p>	 <p>1 2 3 4 5</p>

Appendix I, page 2-Peanuts For George Washington Carver

 <p>6 7 8 9 10</p>	 <p>6 7 8 9 10</p>
 <p>6 7 8 9 10</p>	 <p>6 7 8 9 10</p>
 <p>6 7 8 9 10</p>	 <p>6 7 8 9 10</p>

Appendix J-Peanuts For George Washington Carver



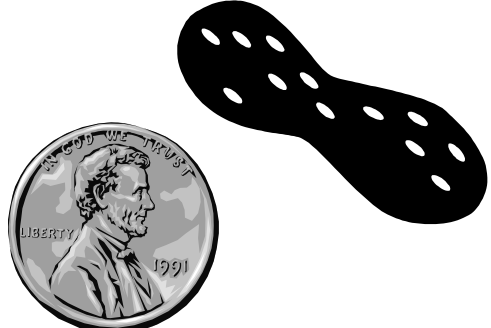

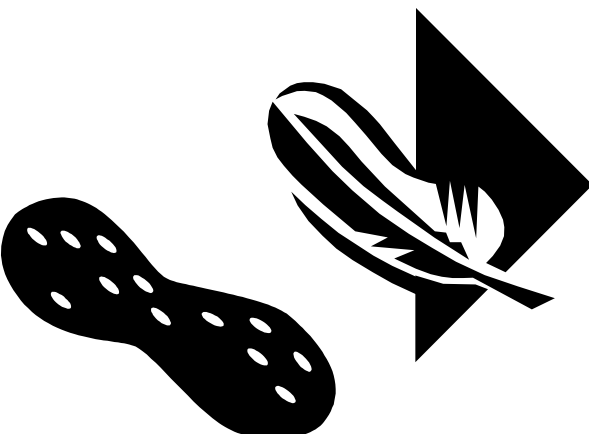


Appendix K-Peanuts For George Washington Carver

3	4	5	6	7	8	9	10	+

Appendix L-Peanuts For George Washington Carver

Recording Sheet

<p>Names:</p>	<p>Who has the fewest peanuts? </p>
<p>Who has the most peanuts? </p>	<p><u>Which is heavier?</u> </p>
<p><u>Which is heavier?</u> </p>	<p><u>Which is heavier?</u> </p>

Appendix M-Peanuts For George Washington Carver

Recipes for Peanut Butter

Electric Blender Recipe

2 C. peanuts

4 Tbsp. vegetable oil

1 tsp. salt

Mix all ingredients in blender.

Another Electric Blender Recipe

1 C. unsalted roasted shelled peanuts

1 ½ tsp. peanut oil

¼ tsp. salt

¼ C. chopped roasted peanuts (optional for crunchy style)

Combine roasted shelled peanuts, peanut oil, and salt in blender. Mix in blender until mixture has a creamy texture. Makes ½ C. smooth or ¾ C. crunchy peanut butter.

Food Processor Recipe

2 C. unsalted roasted shelled peanuts

½ tsp. salt

½ C. chopped roasted peanuts (optional for crunchy style)

Combine roasted shelled peanuts and salt in food processor. Mix in processor until mixture has a creamy texture. Makes 1 C. smooth or 1 ½ C. crunchy peanut butter.

FOR ALL RECIPES:

The longer you blend the softer the peanut butter will be. Optional add ¼ C. to ½ C. of chopped roasted peanuts to creamy mixture. Store in refrigerator in a tightly closed container.

Appendix O-Peanuts For George Washington Carver

Anecdotal Notes:

Date: _____

As a class did the students understand counting by twos?

Were there any students who did not seem to understand or participate in the activity?

Are there any students who seem to have a strong grasp of the concept?

As a class, did the students understand how to read the graph?

Were there any students who did not seem to understand the graph?

Comments/Concerns:

Appendix P, page 1-Peanuts For George Washington Carver
George Washington Carver Quiz

1. Was George Washington Carver the first president of the United States?



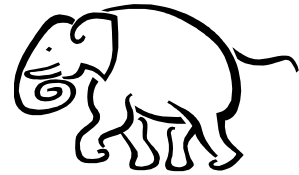
2. George Washington Carver loved to work with:



plants



cars



elephants

3. Was George Washington Carver a slave when he was a boy?



4. Did George have a hard time getting to school?



5. Did George go to college?



6. George Washington Carver was famous for developing:



peanuts



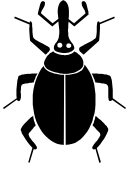
cotton



corn

Appendix P, page 2-Peanuts For George Washington Carver

7. What was eating the cotton on the farms George helped?



bugs (boll weevils)



dogs

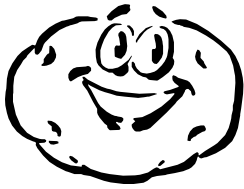


rabbits

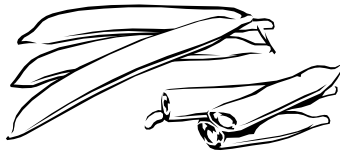
8. Is George Washington Carver a little boy?



9. George Washington Carver worked with peanuts and



sweet potatoes




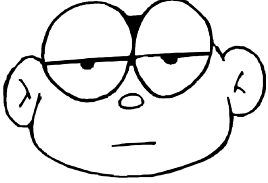

green beans



carrots

10. What is something you can make from peanuts?

Appendix Q-Peanuts For George Washington Carver

Appendix R-Peanuts For George Washington Carver
George Washington Carver Adding Sheet

Name _____

