



## George Washington Carver - The Artist Grade Four

*This program is made possible by the African American Experience Fund of the National Park Foundation, through a generous donation from the UPS Foundation. Through programs like this one, the African American Experience Fund seeks to connect Americans from all walks of life to the considerable contributions of African Americans throughout our country's history.*

## Table of Contents

Did You Know?	3
Art Vocabulary Words	5
Art Lessons	
“Yucca Gloriosa”	7
The Plant Doctor	14
Carver’s Many Talents	16
To Be of the Greatest Good	19
Resource to His People	23
A Colorful South	29

## Did you know?

George Washington Carver National Monument has a variety of resources available for teachers to encourage students to explore the life of George Washington Carver!

Choose from the following list and contact the park for more information or for reservations:

- **Art & Essay** - for 4<sup>th</sup> graders only! What a great way to cap off this unit! Participate in the annual George Washington Carver National Monument Art & Essay Contest. Students create original works of art or essays based on a theme selected by park staff. Prizes are awarded and winning entries are displayed in the park visitor center. Look for information on the park website.
- **Field Trip!** There is no better way to reinforce the concepts studied in these art lessons than a field trip to George Washington Carver National Monument, a national park in your own area! Research shows that students who participate in place-based education programs retain more information over a longer period of time. A “Carver, the Artist” field trip is available for classes that have utilized this curriculum. Call today and reserve your program and enjoy a special art activity in the new **Carver Discovery Center**.
- **Virtual Visit** – For those who are unable to visit the park, new technology allows you to participate in a **distance learning lesson**. Live, interactive lessons with a park ranger at George Washington Carver National Monument will be an exciting highlight of your unit. Artifacts such as Carver’s artwork will be available for students to view.
- **Traveling Trunk** – Filled with books, posters, videos, and other education materials, the George Washington Carver Traveling Trunk will supplement your study of this important African American and native son of Missouri.

## Contact the Park:

**Telephone:** 417-325-4151

**Fax:** 417-325-4231

**Email the Chief Ranger:** gwca\_interpretation@nps.gov

**See the Park Website:** <http://www.nps.gov>

**Write or Visit:**

George Washington Carver NM  
5646 Carver Road  
Diamond, MO 64840

Park rangers are ready to help you teach your students about George Washington Carver. Don't miss out on these valuable resources for your classroom. Expose your students to the challenging, hands-on activities created for you by an area art teacher. The visual and manipulative activities are tied to language arts, science and social studies standards. They are designed to give your students an unforgettable learning experience.

## **Carver the Artist Art Vocabulary Words**

Aesthetics – the branch of philosophy that deals with the nature and value of art.

Analogous – Colors next to each other on the color wheel, that have a common hue.

Background – The part of an artwork farthest away from the viewer and closest to the horizon line.

Balance – Principle of design that deals with arranging visual elements so that a composition has equal visual weight on each side of an imaginary line.

Collage – From the French word ‘coller’ that means ‘to paste.’ A collage manner, resulting in high and low surfaces which hold ink differently during printing.

Color – Element of art derived from reflected light. Color has three properties: hue, value, and intensity.

Complementary Colors – Any two colors opposite each other on the color wheel. (Ex., Red - green, blue - orange, yellow – violet.)

Composition The arrangement of the elements and/or objects in an artwork. The way principles of art are used to organize elements.

Design – A visual plan, organization or arrangement of elements in a work of art.

Focal Point – Area of an artwork that attracts the attention first.

Foreground – The part of an artwork closest to the viewer and usually positioned at the bottom of the artwork.

Formal Balance – Two sides of a composition are identical. Also called symmetrical Balance

Landscape – A picture of the outside, with the landforms being the most important part.

Monochromatic – A color scheme using tints and shades of one color.

Negative Space – Empty spaces surrounding shapes and forms.

Organic Shapes – A fluid shape having none of the angularity associated with geometric shapes. Organic shapes are often associated with objects in nature.

Pattern – A choice of lines, colors and/or shapes repeated over and over in a planned way.

Positive Space - Shapes or forms.

Relief Sculpture - Type of sculpture in which forms project from a flat background.

Shade – The dark value of color made by mixing black with a color. The opposite of tint.

Simulated Texture – Texture that is created through careful and methodical imitation of actual and natural textures.

Tint – Light value of a color made by mixing white with color.

Weaving – Interlacing two sets of parallel threads. Decorative art made by interlocking one material into other materials.

## **Teacher Resource for Lesson “Yucca Gloriosa”**

The first great highlight of George Washington Carver’s artistic aspirations was achieved in 1893 at the Chicago World’s Fair. Carver’s painting “Yucca and Cactus” won Honorable Mention. This was quite ironic because in 1891 Carver had decided to put his career in art behind him, at least temporarily. His art teacher, Miss Etta Bud, at Simpson College, in Winterset, Iowa encouraged him to pursue botany after discovering his love of plants. Miss Bud, like so many in Carver’s past, recognized his ambition, talent and intelligence. It didn’t take long for her to discover that “painting was in him” and “was natural for him.” Doubts remained in her mind, however, as to whether a black man could make a living as an artist. Etta Bud suggested that he enroll at Iowa State, the agricultural college at Ames, Iowa where her father J.L. Bud was a professor of horticulture.

Simpson College had been an ideal place for Carver to resume his quest for an education. His studies included grammar, arithmetic, art, essay writing, etymology, voice (high soprano), and piano. It was a good fit for him and he was not only accepted but respected. “They made me believe I was a real human being,” he noted.

Carver was accustomed to earning money for his living and educational expenses. Hard work was not strange to him. He provided laundry services which students used and spent time visiting with him while dropping off clothes. Students even provided him with much needed furniture and occasionally theater tickets. He later recalled that when he had paid his college fees, he had only ten cents remaining with which he bought corn meal and suet to nourish him.

Carver loved his work as an artist and was reluctant to put it behind him. He had already begun to believe that his talents were meant to be used in the elevation of “his people.” By becoming a trained agriculturist, he could obviously be of tremendous service, even if he made agriculture only a temporary career. When Carver left for Ames in 1891 he had no idea what lay ahead. He did not realize that his career at Iowa State would soon bring an end to his restless wondering.

When asked by Dr. James K. Wilson, then Dean of Agriculture, “George, why not devote a portion of your time to painting?” “Because,” he replied, “with a knowledge of agriculture I can be of greater service to my race.” Dr. Wilson, later Secretary of Agriculture under Presidents McKinley, Theodore Roosevelt, and Taft, never forgot this unselfish and

significant decision. However, Carver's insatiable desire to paint remained strong.

In December of 1892, an exhibit of the paintings of Iowa artists was held in Cedar Rapids. A group of students practically kidnapped Carver, bought him a new suit and ticket to Cedar Rapids. Carver's painting; "Yucca and Cactus" was selected to represent Iowa at the World's Columbian Exposition in Chicago.

In 1894, he wrote to a friend, upon his graduation and being made assistant botanist, "This new position will require two years of postgraduate work and I hope to include in my studies a course at the Chicago Academy of Arts." This plan never materialized.





**Grade Level:** Four

**Standards and GLE's:** Missouri Art Grade Level Expectations 1.A, 1.B, 2.A, 3.A, 3.G, National VA1, VA2, VA4, VA6, Show-Me FA1, FA2, FA4, FA5. National and State standards tie the arts to core curriculum – FA and VA 4-6 are interdisciplinary.

**Elements and Principles:** Color, Shape, Space,

**Lesson Theme:** Floral Relief Sculpture

**Medium/Supplies:** Examples of Carver's paintings, (attached to this curriculum) Model Magic, markers, cardboard for background, tempera or water color paints

**Objectives:** Students will learn about famous Missouri Scientist and Artist George Washington Carver. They will understand his love of nature and Art. Students will create a relief sculpture using model magic. Color will be kneaded into the clay to simulate the dying process of the time period. Students will use relief sculpture techniques to complete the composition.

**Vocabulary:** George Washington Carver, relief sculpture, kneaded, simulate, composition

**Process:**

- Divide class into groups of 4 to 6.
- Show students Carver's painting (picture provided from Tuskegee Institute web-site or print from next page)
- Provide each student with cardboard cut into 6"X9" pieces.
- The background should be painted blue, using watercolors or tempera, and placed aside to dry. (Be sure to have students write names on the back before beginning to paint.)
- Supply each group with one small container of white Model Magic (can be purchased at any art supply store or Wal-Mart crafts or school supply departments).
- Divide the Model Magic into equal parts.
- Give each student in the group a different colored washable marker. Students will share the color they make with all students in their group. (Use colors of flowers and stem, i.e., red, yellow, orange, pink, violet, light and dark green).
- Teacher should model this technique before having students apply color with the marker to the Model Magic and knead the color into the clay until the color is consistent. (The smaller the amount of

clay and the darker the color of marker the faster the clay will attain desired color.)

- Tear small pieces of the clay starting with the stem and leaf color and apply directly to the background surface. Simply push with enough force to get the clay to stick, no glue is needed.
- Apply the flower colors last and mold petals with inside part stuck down and outer petals pulled up and away from the background, to create a three-dimensional quality.

**Teacher Notes:** This project is fun and very aesthetically pleasing. It also promotes the understanding of kneading color into the clay. You could use berries instead of markers if you'd like to make the lesson more authentic. The project uses Carver's style with a modern twist.

**Lesson Extensions:**

1. Have students research other black artist from the same time period. (i.e., Edward Bannister, Edmonia Lewis, or Henry Ossawa Tanner's "*The Banjo Lesson*")
2. Famous White Actor John Wayne was born in Winterset Iowa. Compare and contrast what their lives were like in the same town. (May require further teacher research.)

**Assessment:**

1. **Constructed Response Question:** What kinds of hardships did George Washington Carver overcome in his quest for education?
2. **Word Find** (located on next page.)

# Yucca Gloriosa Word Search

R V M K O U I F Y L H Z L A Q K D F Z R U H G C K  
 E E E H C N R Z H X D A W G Q V R U T K S O L I L  
 H S V O D J A W E M R O R D B Y I G Q I Q R I T I  
 L E S R M B F I O W I Z T D L B J Z M U I T S E R  
 Z F G A A V G N P T U S Y T W N I P W Z E I T M E  
 U Q Y E Y C Q V E A R G D F T O S C Q A W C R H T  
 O C P S L W N S Y U C C A G L O R I O S A U I T T  
 Q W E M M L R O W R X D N E N J Y K C T X L A I A  
 G M J K J E O I T T M Q H O Q R U E A J G T F R B  
 A D J R T P J C T G S U E T C M D K N Y F U S A U  
 C O R N M E A L T I N R A M M A R G Q X T R D W D  
 O T I V F F X I F R N I C Z R E R Z T Z I E L B O  
 E W I X L J K R Q P A G H R E R U T L U C I R G A  
 C M C N S G V M O W X U A S H P C J N M U J O O M  
 I U Q Z O Q Z N Y K Y P U D A A G W G V T U W K X  
 O U Z E P A S G B C I I Q Y Q W Q G P P H A O O E  
 V G E F C A O N D D N O T N N H E N G J X L G T N  
 S Q N K V L E M S X G H B S L B B G F W H B A K C  
 R A E W O F C Y R U T G J B Y W F R R W B Z C P S  
 B M S M T Y F W Q L I V B L W V L I E O C F I V R  
 T W Y A T B W O W S E G G L M U K C P S E C H N U  
 V T S E Y P K H V C M Z Y H P Q Z H K C I G C Q O  
 E L H W T N G K Z K X U Z F S E P D T Z Z Y P U P  
 J V R N C H O H T Z A P D C B O B E O B X U M J X  
 C T C J C C H F Q K T X E Y X O K G K B F A L W E

HORTICULTURE  
 PIANO  
 SIMPSON  
 SUET  
 VOICE  
 WINTERSETIOWA  
 YUCCAGLORIOSA

AGRICULTURE  
 AMES  
 ARITHMETIC  
 ARTCOLLEGE  
 CEDARRAPIDS  
 CHICAGOWORLDSFAIR  
 CORNMEAL  
 ESSAYWRITING  
 ETTABUD  
 ETYMOLOGY

GEORGEWASHINGTONCARVER  
 GRAMMAR  
 HARDWORK

# Yucca Gloriosa Word Search

## Answer Key

R V M K O U I F Y L H Z L A Q K D F Z R U H G C K  
E E E H C N R Z H X D A W G Q V R U T K S O L I L  
H S V O D J A W E M R O R D B Y I G Q I Q R I T I  
L E S R M B F I O W I Z T D L B J Z M U I T S E R  
Z F G A A V G N P T U S Y T W N I P W Z E I T M E  
U Q Y E Y C Q V E A R G D F T O S C Q A W C R H T  
O C P S L W N S Y U C C A G L O R I O S A U I T T  
Q W E M M L R O W R X D N E N J Y K C T X L A I A  
G M J K J E O I T T M Q H O Q R U E A J G T F R B  
A D J R T P J C T G S U E T C M D K N Y F U S A U  
C O R N M E A L T I N R A M M A R G Q X T R D W D  
O T I V F F X I F R N I C Z R E R Z T Z I E L B O  
E W I X L J K R Q P A G H R E R U T L U C I R G A  
C M C N S G V M O W X U A S H P C J N M U J O O M  
I U Q Z O Q Z N Y K Y P U D A A G W G V T U W K X  
O U Z E P A S G B C I I Q Y Q W Q G P P H A O O E  
V G E F C A O N D D N O T N N H E N G J X L G T N  
S Q N K V L E M S X G H B S L B B G F W H B A K C  
R A E W O F C Y R U T G J B Y W F R R W B Z C P S  
B M S M T Y F W Q L I V B L W V L I E O C F I V R  
T W Y A T B W O W S E G G L M U K C P S E C H N U  
V T S E Y P K H V C M Z Y H P Q Z H K C I G C Q O  
E L H W T N G K Z K X U Z F S E P D T Z Z Y P U P  
J V R N C H O H T Z A P D C B O B E O B X U M J X  
C T C J C C H F Q K T X E Y X O K G K B F A L W E

## **Teacher Resource for Lesson “The Plant Doctor”**

George Washington Carver created artistic works from childhood in Diamond, Missouri, and throughout his lifetime, deriving inspiration from beauty in nature. Carver had a great passion for art, possessing the soul of an artist and an appreciation for the fine arts.

Carver’s love for art began when he was still a young boy growing up on the Carver farm. One morning, George was sent on an errand to the Baynham farm, known locally as “The Mansion.” George went into the parlor and there a new world opened to him. He saw family portraits on the walls, the first paintings he had ever encountered. Along the way home he mused, “A man made those pictures. He made them with his hands, I want to do that.” He painted his first pictures with paints he made from bark, roots and wild berries. Having no canvas, he used boards, tin cans, glass and flat rocks. His early drawings of his home and the landscape allow us to see what it looked like then. They may be the only visual representations of the 240 acre farm he grew up on.

George was a frail and sickly child. As a result, Susan and Moses Carver, his adoptive white parents, pampered him. He was given only light tasks. Susan became his most significant role model, teaching him the “womanly” skills of sewing, cooking, laundering, and needlework. However, Moses’ influence can be seen in George’s love of music and his disgust at “wastefulness.”

George was allowed considerable freedom merely to be a boy. This freedom fostered his natural curiosity and zest for life. Hours were spent roaming the woods on the Carver farm. As he explored the woods, he collected things he found beautiful. He was fascinated with the unusual, and stalking “wild game” usually of the reptile or insect variety. George carefully concealed these and other treasures in his pockets, to be secretly hoarded away in the Carver Cabin. After a few unpleasant encounters with George’s creatures, Susan required George to empty his pockets at the doorstep.

George was black, gifted, sickly, and orphaned; a unique combination in that frontier town. Three factors set George apart from his young white neighbors; his frailness, his genius, and his color. Almost from the beginning he was recognized as being “special.” His curiosity seemed to run deeper than average and he mastered whatever was taught him.

In a little “nursery” in the woods he carefully transplanted and cultivated most of the native plants. Keen observations born of curiosity led George to an understanding of the needs of each plant and ability to nurse

sick plants to health. This skill was widely appreciated in the neighborhood and caused him to be called the “Plant Doctor.”

Through George’s young life he pursued learning and had a great desire to attain an education. By the age of 12, he had learned everything that he could, not only from Moses and Susan Carver, but from a private tutor as well.

## **“The Plant Doctor” Lesson Plan**

**Grade Level:** Four

**Standards and GLE’s:** Missouri Art Grade Level Expectations 1.B, 2.A, 3.A, 3.G, National VA1, VA2, VA4, VA6, Show-Me FA1, FA2, FA4, FA5  
National and State GLE’s tie the arts to core curriculum (FA and VA 4-6 are interdisciplinary)

**Elements and Principles:** Texture, Line, Shape and Space

**Lesson Theme:** Nature’s Collage

**Medium/Supplies:** Mixed medium, twigs, leaves, construction paper, glue, and pictures of Carvers artwork using natural woven fibers and collages.  
(Pictures provided in curriculum)

**Objectives:** Students will appreciate Carver’s ability to use natural mediums in his artwork. Students will use items found in nature as well as modern art supplies to create a collage.

**Vocabulary:** Organic Shapes, Texture, Collage, Positive and Negative Space, Background, Foreground

**Process:**

- Take class on a nature walk.
- Have students collect small twigs and leaves along the walk. (If a nature walk is not possible bring in twigs and leaves for student use.)
- Glue twigs onto 12”X18” blue construction paper background to look like a tree limb. (You may use more than one in varying sizes to create the look of a tree with limbs.)
- Glue the leaves onto the branches.
- You may also have students cut and glue construction paper blossoms or apples onto the limbs

**Teacher Notes:** This is a very simple and fun project. Collage can be created from anything that you can glue to the background. You could incorporate pieces of fabric or lace for the flowers.

**Lesson Extensions:** An interdisciplinary science lesson could easily be used to compliment this art lesson. Parts of a plant could be studied and labeled and students could try to replicate the petal shapes of particular species. (i.e., tulip, day lily, rose, sunflower, peony, etc.) Find great examples at *EnchantedLearning.com*

**Assessment:**

1. Give students a contour of a flower and have them label the parts.
2. Compare and contrast life for Carver as a child to their life today.

## **Teacher Resource Lesson**

### **“George Washington Carver’s Many Talents”**

Many of the talents considered desirable in George Washington Carver were attributed to his early childhood experiences. George’s love of nature, ability to form strong bonds with white families, love of learning, and deep religious nature, including his relationship with God, were shaped on the Carver farm in Diamond Grove (now called Diamond), Missouri. George’s acts of kindness, such as whittling crutches for a crippled friend, were fondly remembered decades later. Even before he left Diamond, the contours of his life could be glimpsed.

Ironically, George’s genius made him aware of racial prejudice. He hungered for more knowledge than the Carvers’ could give. George was willing to work hard for an education, but he soon discovered that goal was more elusive than he expected.

He left the Carver farm at about age twelve, to attend school in Neosho. He was filled with eager anticipation as he stepped into that one-roomed school, however, disillusionment soon replaced excitement as he realized that the teacher knew little more than he did. Thus the second phase of his quest for knowledge began as he hitched a ride with a family moving to Fort Scott, Kansas in the late 1870’s.

Through Carver’s young life he continued a relentless and somewhat elusive journey for education. He did laundry, odd jobs, and shined shoes and kept moving with each new prospect for attaining education. He also continued to display diverse talents and to maintain his earlier religious commitments. He painted, crocheted, “fooled around with weeds,” and played the piano, mouth harp and accordion.

With each move, Carver’s talents and personality soon won him the respect of his neighbors. He was often considered to be the best educated person in the area. While living in Minneapolis, Minnesota, he developed an interest in art, taking his first lessons from Clara Ducan, a black woman who had taught at Talladega College. He played the accordion for local dances and joined the Ness City Literary Society, which met weekly for plays, music and debates.

His experiences in search of an education had already developed in him diverse skills and interests. His curiosity, intuitive grasp, and haphazard education combined to give him a remarkable understanding of natural processes, and he had developed a considerable love of music and art, with some degree of skill in both. Running through all his experiences was a growing religious faith that sustained him and opened the door to several long-lived friendships.



## **“George Washington Carver’s Many Talents” Lesson Plan**

**Grade Level:** Four

**Standards and GLE’s:** Performance Standards 1B, 3A, 3B, 3G, VA1, FA1, Elements and Principles 1D, 2A, VA2, FA2, Interdisciplinary Connections 2A, VA6, FA4, Historical Style/Period/Culture 1A, 1B, VA4, FA5

**Elements and Principles:** Color, Shape, Space, Balance, Texture, Rhythm, Movement

**Medium/Supplies:** Crayons (wax based) or oil pastels and water colors or dry tempera

**Objectives:** Students will understand the many talents and character traits that made George Washington Carver likeable to so many. Students will chose words to describe Carver’s character. They will use a variety of creative writing styles to design a paper with the words they have chosen. This will be a poster style graphic design.

**Vocabulary:** graphic, design, creative writing styles, variety, character traits, talents

**Process:**

- Supply students with construction paper 9”X12” or 12”X18.”
- Provide visual examples of creative writing styles.
- Read the Teacher Resource or have students read “George Washington Carver’s Many Talents.”
- Have students write the words on the paper which they fill are important to Carver’s life using a variety of fancy or creative writing styles. (I would suggest using a pencil and drawing lightly on the paper and using random sizes as well as placement on the paper.)
- Once students feel that the arrangement of words is complete and appealing visually, have them use warm color (yellows, oranges, and reds) crayons to trace their words. (Push hard on crayon and use only one color per word.)
- Paint over the entire paper with cool colors (greens, blues, and violets) using water color or dry tempera. (Lots of water small amount of paint or paint entire paper with water only add paint and water to complete. You want the paint to be light.)

**Teacher Notes:** This is called a resist painting. The wax in crayons or oil in oil pastels will resist the paint. You may have the students blot off excess wetness before putting the painting away. When you use the warm colors for the words and the cool colors for the empty or negative space, it will make the words stand out because light colors come forward and darker

colors recede and because warm and cool colors are opposites they compliment each other by make both colors look bolder and brighter.

**Lesson Extensions:**

1. You could use a mobile instead of a resist painting for the character trait words.
2. Have students create a poster or painting using positive character traits that they possess.
3. Assign a Famous Missourian for research and have them create a poster of character traits about this person.

**Assessment:** Have students create a word match with the definitions of each character trait that they listed.

## **Teacher Resource for Lesson**

### **“To Be of the Greatest Good”**

By 1891 Iowa State College of Agriculture and Mechanic Arts had become a leading Center of Agricultural Education and Research. The faculty in 1891 included men of widely recognized ability whom later left for distinguished careers with the Federal Government. Carver received superior training in agriculture that later provided providential to his career.

During his time at Ames, he paid his way by doing menial jobs on campus and in town. Carver also played the guitar and gave lessons to a classmate. He gratefully accepted others' discards, and one student recalled that Carver “would cut up and save used wrapping paper and his classmates would turn over their stub pencils to him for the purpose of his note taking.” He recycled old burlap and string bags into functional and attractive needlework. Bark fibers were woven into mats. Recycling was a hobby that Carver practiced throughout his life.

He did not neglect his art either; he sometimes went on sketching trips, and presented a number of faculty members and students with his paintings.

Because of his wide-ranging abilities and warm personality, Carver was affectionately called “Doctor” by other students. He was assigned research responsibilities and taught freshmen biology courses during his post graduate studies. Carver’s ability to inspire and instruct extended beyond the students under his immediate charge.

Nearing the completion of work for his Master of Agriculture degree in 1896, Carver discovered that he had a number of options for his future. Carver lamented that he had given up his cherished work as an artist because “it would not do to his people as much good as a thorough knowledge of the sciences of agriculture, which he might impart to them.” He was speaking about black southern farmers.

On April 12, 1896, Carver enthusiastically declared that “it has always been the one ideal of my life to be the greatest good to the greatest number of ‘my people’ possible and to this end I have been preparing myself for these many years; feeling as I do that this line of education is the key to unlock the golden door of freedom to our people.” Carver accepted Booker T. Washington’s offer for a position at Tuskegee Institute to uplift the blacks

in the “shadow of the plantation” in Black Belt Alabama who certainly needed help to rid themselves of the legacies of slavery: poverty, ignorance, inefficiency, and economic dependence.

While packing his drawings and paintings, Carver confided to a friend, “I hope to study art in France when I have finished my work at Tuskegee. However, Carver’s work at Tuskegee lasted for the remainder of his life. Rising at five each morning, he often worked until after midnight in his laboratory, yet he managed to turn out more than forty paintings, consisting of oil, charcoal, water color, and pen-and-ink sketches during his years at Tuskegee.

He also kept up his early interest in the piano and once made a concert tour to raise funds for his laboratory.

## **“To Be of the Greatest Good” Lesson Plan**

**Grade Level:** Four

**Standards and GLE’s:** Performance Standard 2A, 3B, 3G, VA1, FA1, Elements and Principles 1G, 2B, 2C, VA2, FA2, Interdisciplinary Connections 1A, 2A, VA6, FA4, Historical Style/Period/Culture 1A, 1B, VA4, FA5

**Elements and Principles:** Color, Space, Shape, Balance, Texture, Emphasis

**Lesson Theme:** Recycling with Cardboard

**Medium/Supplies:** Cardboard from shipping boxes cut into good sized squares or rectangles, Ex-Acto knives or utility knives, tempera or acrylic paints, and brushes

**Objectives:** Students will learn about Carver’s hobby of recycling trash and other people’s throw away items. Students will use positive and negative space while planning an aesthetically pleasing design on cardboard. Students will use utility knives to trace their drawing pushing hard enough to cut through only the top layer of cardboard. They will remove top layers in sections of the cardboard that constitutes the positive space. The corrugation, left in those areas creates texture, recess, and a focal point in the artwork. The project will be painted for completion.

**Vocabulary:** Positive Space, Negative Space, Corrugation, Texture, Focal Point, Recess, Recycle

**Process:**

- Cut cardboard with utility knife into nice sized squares or triangles.
- Have students sketch a simple organic design onto the cardboard (i.e., flower, word or words using bubble letters). Emphasize positive and negative space.
- Have students trace pencil lines with the utility knives, pushing hard enough to cut through the top layer of cardboard, but not all the way through the other side.
- Students will peel the top layer away where desired. Make sure students leave an area uncut for each area extracted.
- The corrugation creates a recess and texture.
- Have students paint the corrugated areas first using lighter colors.
- Paint the background with darker colors or opposites.

**Teacher Notes:** Make sure that the design is going to work before giving students the utility knives. Have them use the knife the same way they

use their pencils when drawing. Make sure that you go over safety procedures before giving the knives to students and be hard on any horse play. Personally pick up knives from each child when completed (possibly mark name off of list). Students really like this project and the final project is quite impressive when done correctly.

**Lesson Extensions:** Instead of the corrugated cardboard project, you could have students bring old bottles, cans, boxes, fabrics, paper towel or toilet paper tubes, any throw away items that can be used in creating a sculpture. (You will need to use hot glue to secure these items together into a sculpture). You could even have it as a homework assignment or for extra credit if they bring it to school.

**Assessments:**

1. Constructed Response or Essay Question: Why do you think that George Washington Carver made the decision to go to Tuskegee Institute?
2. Having lived most of his life among whites and being well accepted among them, what problems do you predict for him in this move that will place him on an all black campus, being paid much more than other teachers and allowed a private room, while all the other teachers had to share rooms?

## Teacher Resource for Lesson “Resource to His People”

George Washington Carver viewed Tuskegee not only as his mission field, but as a temporary one. *“You doubtless know that I am came here (solely) for the benefit of my people, no other motive in view. Moreover, I do not expect to teach many years, but will quit as soon as I can trust my work to others, and engage in my brushwork, which will be of great honor to our people showing to what we may attain, along science, history, literature, and art.”*

In 1901, Carver discontented with his accommodations, appealed to the Tuskegee Board for two more rooms. He stated *“I desire a place to do some historic painting. I greatly desire to do this that it may go down in the history of this race.”* Throughout his long tenure at Tuskegee the demands on his time were enormous. What spare time he salvaged from his hectic schedule usually went for the pursuit of loves Carver had sacrificed, like botany and art. He found time to crochet, knit, and do needlework. He found these activities satisfactory and they enabled him to produce useful items for friends. He had great appreciation for the world around him, in particular, the materials found in nature. He dyed many of his own threads and fibers with natural dyes made from local walnut, mulberry, and ochre clay.

He became a scientist, a teacher, a speaker, and more, but he never entirely let go of his art. Rather he brought it to his other pursuits, and at times even let it guide them. Carver taught art classes at Tuskegee in addition to his regular roster of courses. He also allowed his artistic talents to improve his scientific work. He drew diagrams with the fine pen of an illustrator, collected specimens with the attention of a painter and crossbred plants with profound creativity. Through out his life he maintained the soul of an artist and continued to paint. Carver was driven by science, but art remained his passion.

George Washington Carver’s talents were recognized in England as well as in the United States. In 1916, he was elected Fellow of the Royal Society of Arts.

In his final years, Carver decided that in addition to his other achievements, he wanted also to be remembered by his artistic talents. Carver’s greatest recognition as an artist came on November 17, 1941, when the Carver Art Gallery in the George Washington Carver Museum at Tuskegee was opened to the public. **Quoting an article in the Time Magazine on Monday, November 24, 1941, “By the time he had got them, all hung, Painter Carver had filled the Museum’s gallery with 71**

of his pictures.” “Many of them painted with homemade colors...” “Nearly all were deft, somewhat primly academic depictions of natural phenomena.” “Visitors, impressed by the simple realism and tidy workmanship of the pictures, found still more to admire in the adjoining collection of handicrafts (embroideries on burlap, ornaments made of chicken feathers, seed and colored peanut necklaces, woven textiles) which almost incredibly versatile Carver had turned out between scientific experiment and painting.”

“White-haired, toothless Sage Carver still sticks to his philosophy: *“Save everything. From what you have make what you want.”* His gnarled hands are always busy with bits of string, tinfoil, clay, which he fashions, as he talks, into decorative objects. He is proudest of his peaches, painted with pigment made of native clay, not as a work of art but because any child, as a result of his researches, should be able to use similar material. *“That’s just the clay we walk on every day.”* Says he. *“Our clays are just as brilliant as the ones the old masters used. Michelangelo used clay like this.”*

Pleased with his exhibition, George Washington Carver is equally pleased with a brand-new automatic elevator, a present from his admirer Henry Ford, which was installed six weeks ago to save his aged legs the 19 painful steps up to his room. *“Exquisite elevator,”* he chortled. *“The doctor said he couldn’t do much for me as long as I climbed those 19 steps. I’m not very old, but I’ve been around a long time.”*

More than 2,000 visited the gallery on opening day. His work won high praise from art critics and his painting “Peaches” attracted universal attention and was wanted by the Luxembourg Galleries in Paris. It was painted with natural clay, like the kind of clay we walk on every day. His work surprised and inspired many. Recognizing Carver’s many and varied talents, one visitor asked, “How have you been able to do so many different things?” *“Would it surprise you,”* Dr. Carver replied gently, *“If I told you that I have been doing only one thing?”* *“The artist, his writings, his weaving, his music, his paintings are just the expressions of his soul in search for truth.”*



**“Resource to His People”  
Lesson Plan**

**Grade Level:** Four

**Standards and GLE’s:** Performance Strand 1E, 3G, VA1, FA1, Artistic Perception 2A, VA3, FA3, Interdisciplinary Connections 2A, VA6, FA4, Historic Style/Period/Culture 1A, VA4, FA5

**Elements and Principles:** Line, Color, Texture, Rhythm, Pattern

**Lesson/Theme:** “Friendship Bracelet”

**Medium/Supplies:** Cross-stitch thread and safety pin

**Objectives:** Students will understand the George Washington Carver used many types of mediums, including fibers, in his artwork. Students will value Carver’s many skills and his capacity to form lasting friendships. Students will learn to weave a bracelet. They will pick their own colors using their knowledge of color theory. Students will also be encouraged to give the bracelet to a friend whose friendship they cherish.

**Vocabulary:** Analogous Colors, Complementary Colors, Diagonal Line,

**Process:** Weaving instructions are included on

**Teacher Notes:** Students love to weave. Allow them plenty of time to complete the bracelet. You may even want to let them take it home if time is short. Once they have the hang of the weave, those who understand it and are successful can also help others.

# FRIENDSHIP BRACELETS

READ ALL DIRECTIONS CAREFULLY BEFORE BEGINNING.

Learn the basic bracelet stitch before undertaking the more difficult patterns

## BASIC STITCH BRACELET

1. Start with 1 yard each of 4 colors. Lay them all together about 3" down with an overhand knot.

2. Pin the knot to a sturdy surface i.e., a pillow, your jeans, a knotting board.

3. Separate the strands calling them A -B- C and D. Keep strands separated near the bottom to prevent tangling.

4. Lay strands A and B as pictured, wrapping A over and then under B. lighten the knot by holding B taut and pulling A up. Too tight will result in a stiff bracelet, too loose, will cause holes between the knots.

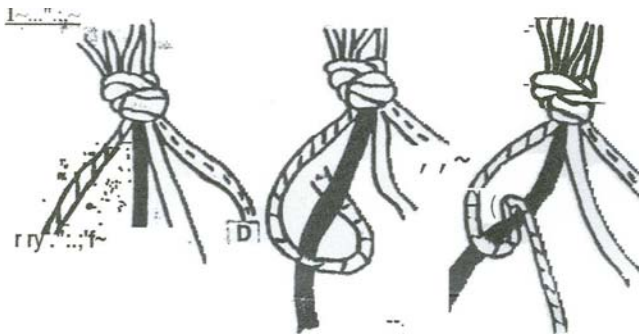
5. Repeat .step 4. Now place .strand B to the left side.

6 Using .strands A and C, repeat .steps 4 and 5 placing strand C to the left.

7. Using strands A and D, repeat .steps 4 and 5

8. Now working from the left again, tie strand .B and C as pictured in steps 4 and 5, placing strand C to the left. Continue across, ending with .strand B on the right.

9. Continue knotting until desired length is reached. Make knot to end off.

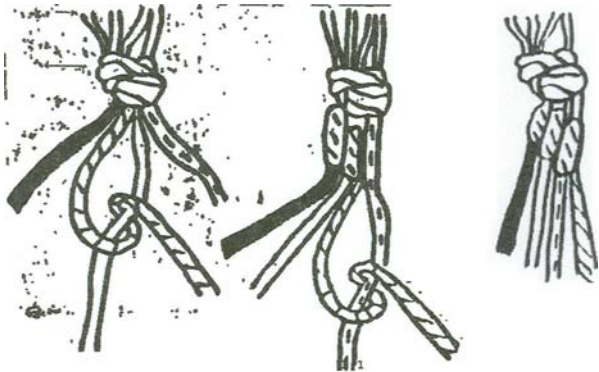


## ARROW STITCH BRACELET

1. Choose 4 colors. Cut 2 one yard pieces of each color. lie together.

Color: Red-Yellow-Blue-White, White-Blue-Yellow-Red

3. This pattern uses the basic stitch and the basic stitch reversed. Using the first 4 strands on the left, follow steps 4 through 7 of Basic Stitch. Now work from the right to the left (see illustration for reversed basic stitch) using the 4 strands on the right.



2. Arrange colors and indicate letters as in illustration. The 4 strands on the right should be just the reverse arrangement of the 4 strands on the left.

4. After the first row is finished, tie the 2 center strands D & E together in a basic knot. They both should be the same color. Continue until desired length is reached. Knot to end off.

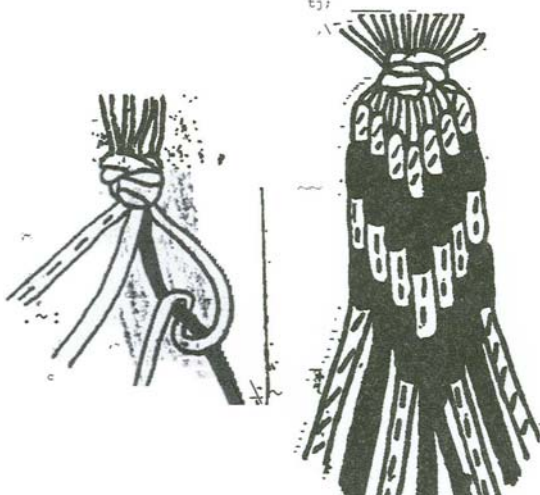
## TWIST BRACELET

1. This pattern requires 2 strands 90" long each and 6 strands 15" long each. This is a solid color bracelet. Knot the 2 long strands together and pin to anchor.

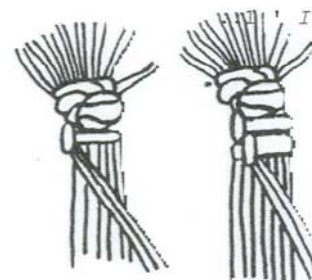
2. Separate the strands, placing the 2 long strands together on the left and the 6 short strands together on the right. Treat these as 2 strands the 2 long strands as A and the 6 short strands as B.

3. Tie strands as in step 4 of Basic Stitch

4. Continue knotting in exactly the same way. A diagonal row of knots will form, slanting towards the right. Try to work the knots under each other rather than on top. This will keep the spiral uniform. Continue knotting, turning bracelet slightly as you work. The bracelet is long enough to fit around your wrist. Make knot to end off



## TWIST



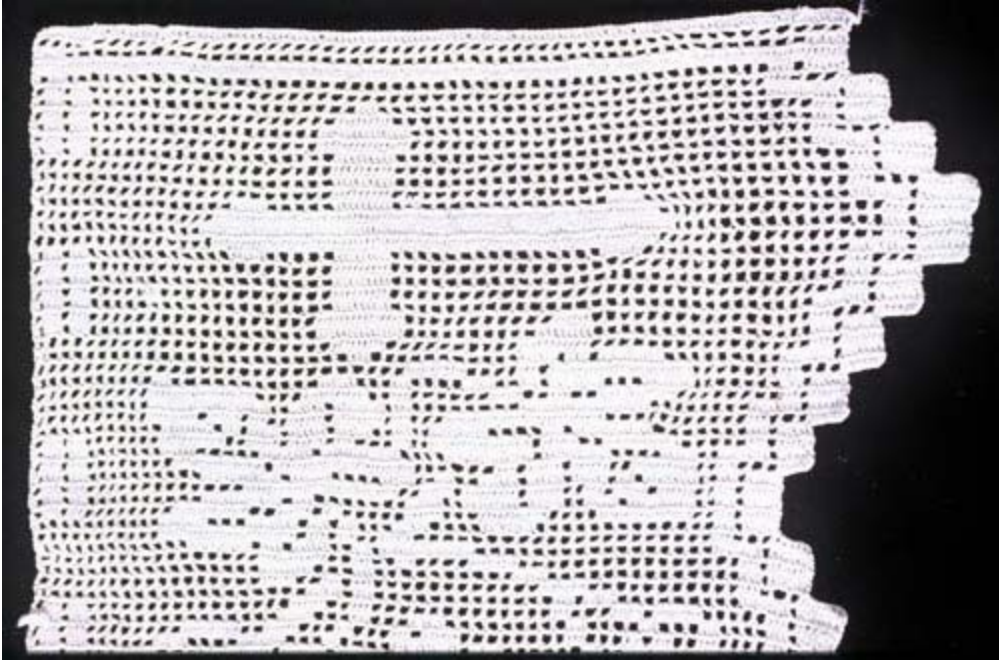
### Lesson Extensions:

1. Have students cut out two pictures of the same size from magazines and cut one vertical and the other horizontal for weaving. This creates an optical illusion and can be very interesting. It can also connect to recycling for which Carver was well known.
2. You could have students dye their own strips material, possibly tie-dye, and weave it into long braids. Once the braids are completed, have students roll the braid into a round coaster. Secure by sewing together where needed on the bottom.
3. The entire article from the Time Magazine can be found at [www.time.com/time/magazine/printout/0,8816,801330,00.html](http://www.time.com/time/magazine/printout/0,8816,801330,00.html) The title is **Black Leonardo**. It's only a page and a half of easy reading. It would be a great starter for the students to write a news article in their own words.

**Assessment:** Journal Reflection – Why do you think that George Washington Carver became such a famous historical American?

**Images:** Tuskegee Institute National Historic Site





## “A Colorful South”

### Teacher Resource

As early as the days of his youth, Carver made his own paints and pigments. As a child, he made paints from crushed berries, seeds and flowers. Creating his own paints remained a hobby throughout his life.

As an adult he became interested in the natural colors in clay. In 1901, he discovered that Alabama Clays produced beautiful, long lasting pigments when mixed with starches, pastes or oils. He refined the extracted pigments and made paints.

When no chemical lab was provided for him at Tuskegee, he more or less constructed his own. *“I went to the trashpile at Tuskegee Institute.”* Carver recalled, *“and started my laboratory with bottles, old fruit jars and any other thing I found could use.”* Carver was able to provide valuable services with his makeshift lab. He went from cook stove chemist to creative chemist.

At the heart of his activities, were the ideas that nature produced no waste and even the poorest man could improve his living conditions through the proper use of natural resources. Native clays were the only natural resources that interested Carver from a natural standpoint during the first two decades of his work. He advanced the use of native clays in beautifying farmhouses with color washes. He maintained intrigued with the possibility that pain production could become a leading industry for the area and made several unsuccessful attempts to arouse interest in the commercialization of Alabama Clays.

Wanting the South to be beautiful as well as fed, George shared his paint-mixing recipes freely in bulletins and talks. Carver hoped to show poor people how to surround themselves with beauty without spending a penny. His pigments were used to color several buildings on Tuskegee’s campus and in nearby towns.

Carver began displaying his work at county fairs and colleges throughout the South. His artistic abilities helped him to create eye-catching displays. His swatches of coordinating colors showed people how to match up paint colors for aesthetically pleasing outcomes. Agricultural chemist, Carver discovered three hundred uses for [peanuts](#) and hundreds more uses for soybeans, pecans and sweet potatoes. Among the listed items that he

suggested to southern farmers to help them economically were his recipes and [improvements](#) to/for: adhesives, axle grease, bleach, buttermilk, chili sauce, fuel briquettes, ink, instant coffee, [linoleum](#), [mayonnaise](#), meat tenderizer, metal polish, paper, plastic, pavement, shaving cream, shoe polish, synthetic rubber, talcum powder and wood stain. Only three patents were every issued to Carver.

Carver also worked at developing industrial applications from agricultural crops. During World War I, he found a way to replace the textile dyes formerly imported from Europe. He produced dyes of 500 different shades of dye and he was responsible for the invention in 1927 of a process for producing paints and stains from soybeans. For that he received three separate patents:

- U.S. 1,522,176 Cosmetics and Producing the Same. January 6, 1925. George W. Carver. Tuskegee, Alabama.
- U.S. 1,541,478 Paint and Stain and Producing the Same June 9, 1925. George W. Carver. Tuskegee, Alabama.
- U.S. 1,632,365 Producing Paints and Stains. June 14, 1927. George W. Carver. Tuskegee, Alabama.

Carver did not patent or profit from most of his products. He freely gave his discoveries to mankind. Most important was the fact that he changed the South from being a one-crop land of cotton, to being multi-crop farmlands, with farmers having hundreds of profitable uses for their new crops. "God gave them to me." he would say about his ideas, "How can I sell them to someone else?" In 1940, Carver donated his life savings to the establishment of the Carver Research Foundation at Tuskegee, for continuing research in agriculture.

George Washington Carver was bestowed an honorary doctorate from Simpson College in 1928. He was an honorary member of the Royal Society of Arts in London, England. In 1923, he received the Spingarn Medal given every year by the National Association for the Advancement of Colored People. In 1939, he received the Roosevelt medal for restoring southern agriculture. On July 14, 1943, U.S. President Franklin Delano Roosevelt honored Carver with a national monument dedicated to his accomplishments. The area of Carver's childhood near Diamond Grove, Missouri preserved as a park, this park was the first designated national monument to an African American in the United States.

**"He could have added fortune to fame, but caring for neither, he found happiness and honor in being helpful to the world." - Epitaph on the grave of George Washington Carver.**



**Carver in the Alabama fields which were the inspiration for his clay paints**



**Color Swatches used by George Washington Carver to influence area farmers to beautify their homes.**



## **“A Colorful South” Lesson Plan**

**Grade Level:** Four

**Standards and GLE’s:**

**Elements and Principles:** Color, Value

**Lesson Theme:** “Monochromatic Paint Swatches”

**Medium/Supplies:** Pre-mixed tempera paints, construction paper cut into 6” X 12” strips, paint brushes

**Objectives:** Students will understand Carver’s desire to create a colorful South. They will learn about color value using one color plus white and black to get as many tints and shades of that color possible.

**Vocabulary:** color value, monochromatic, tint, shade, color swatch

**Process:**

- Give each student one color of tempera paint plus black and white.
- Have students start in the center of the paper and paint the pure color without anything added.
- Begin adding small amounts of white to get color variations (tints). Paint each color onto paper touching the previous color, going up on the paper.
- Do the same thing by adding black (shade) to the true color going down on the paper.

**Teacher Notes:** You might start by showing students examples of paint swatches from hardware or paint stores. It’s an easy lesson that makes Carver’s swatches more memorable to students.

**Lesson Extensions:**

1. The same lesson using analogous or warm and cool colors.
2. Try the lesson using complementary colors (Opposites) for a much different effect.
3. Explore the artwork of George Washington Carver at the National Park Service website “Legends of Tuskegee”:  
<http://www.cr.nps.gov/museum/exhibits/tuskegee/>

**Assessment:** The color swatches can be considered a performance event. You could grade the value range and give students a specific number of colors for grading purposes. Have students explain the process and tell about their favorite color that was created in the process.