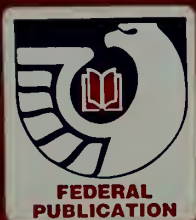


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# **FOURTH GRADE CURRICULUM**

## **George Washington Carver National Monument**

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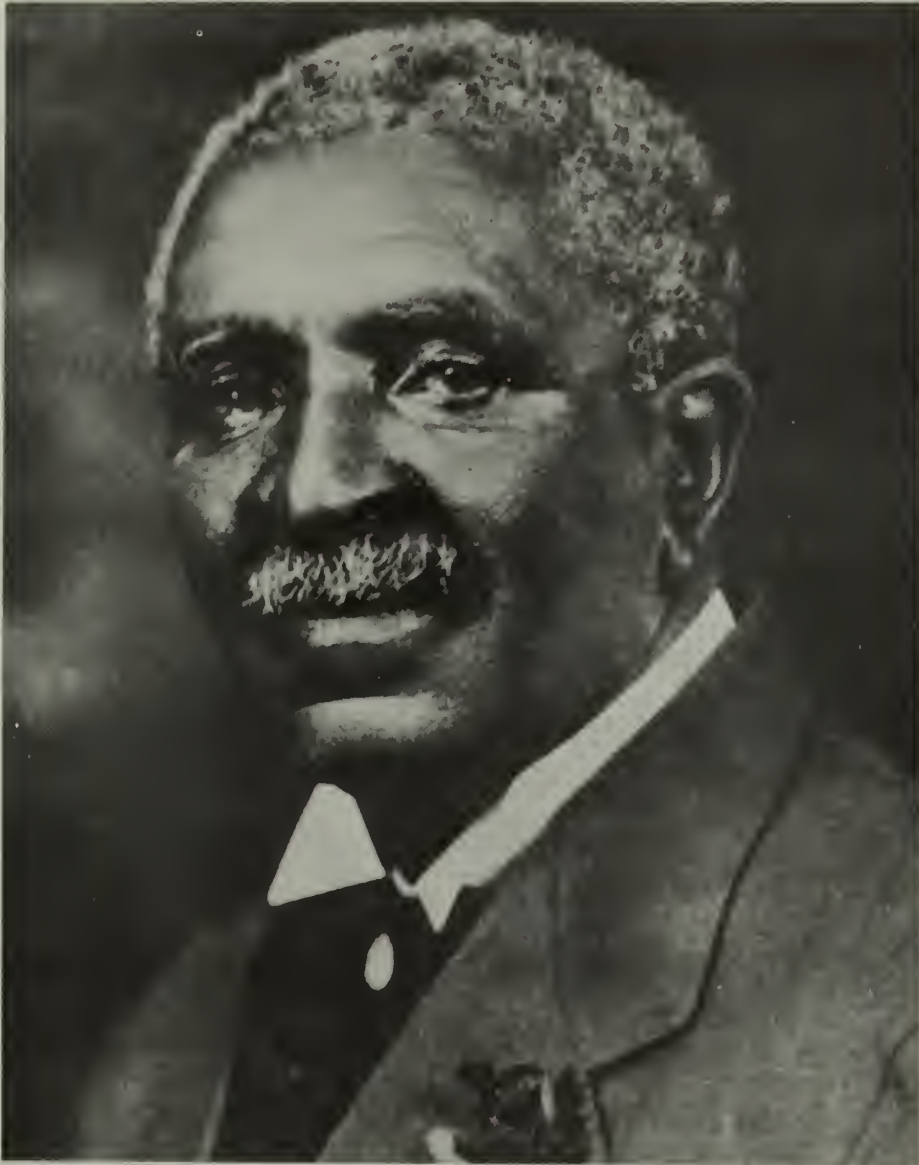
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## OVERVIEW:

George Washington Carver was a great scientist, educator and humanitarian. He serves as a role model for persistence, determination, and the value of imagination and inspiration in all aspects of our lives. This curriculum is intended to help a teacher prepare a fourth grade class for a visit to the George Washington Carver National Monument, or to study George Washington Carver in the classroom. In addition, it is designed to complement the required state history portion of the fourth grade curriculum in Missouri.



**George Washington Carver**

Circa 1864-1943



## TEACHER BACKGROUND

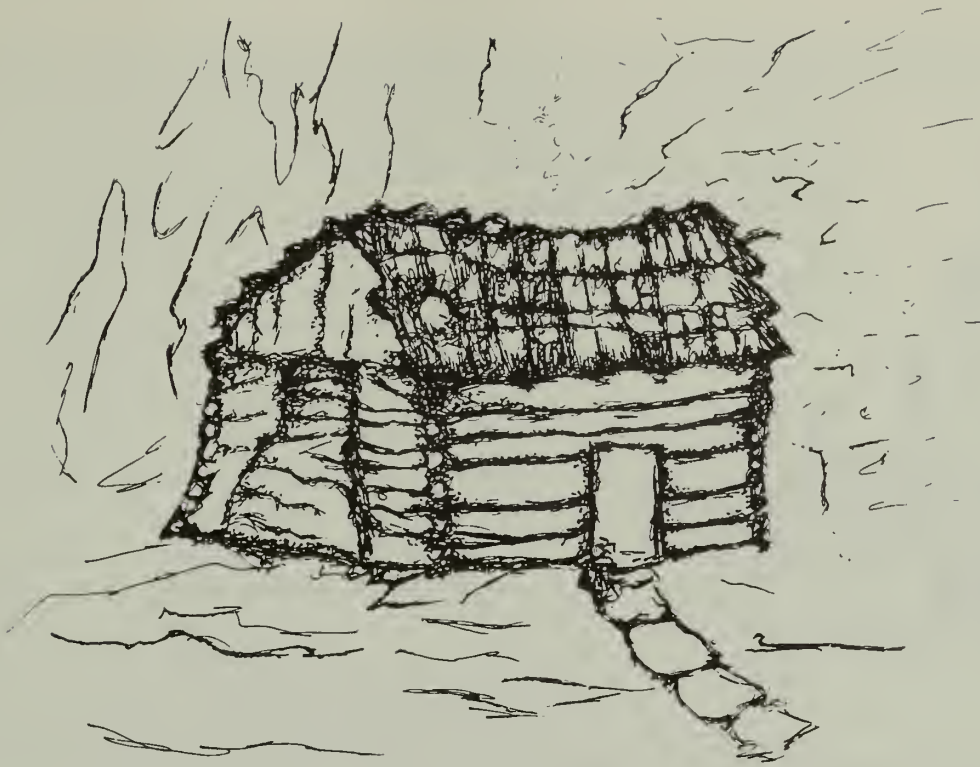
George Washington Carver National Monument is the birthplace and boyhood home of George Washington Carver. It was established in 1943, less than a year after Dr. Carver's death, and is the first national monument to an African-American, the first to an agricultural scientist, and the first birthplace monument to a person other than a United States President. Dr. Carver is also remembered at Carver Museum at Tuskegee Institute National Historic Site; in a museum in Indianola, Iowa; in a park in Winterset, Iowa; and at the Henry Ford Museum located in Greenfield Village in Dearborn, Michigan. This material provides basic background information on Dr. Carver.



*Boy Carver Statue*







*Birthplace Cabin*

little is known about Dr. Carver's early life. Even his own recollections are sketchy and not supported by fact. The following two articles are meant to provide a general overview of Dr. Carver's life and should not be used as the definitive sources on his life.

### 1897 OR THEREABOUTS - GEORGE WASHINGTON CARVER'S OWN BRIEF HISTORY OF HIS LIFE

As nearly as I can trace my history, I was about two weeks old when the war closed. My parents were both slaves. Father was killed shortly after my birth while hauling wood to town on an ox wagon.

I had three sisters and one brother. Two sisters and my brother, I know to be dead only as history tells me, yet I do not doubt it, as they are buried in the family burying ground.

My sister, mother and myself were \*kuckluckled, and sold in Arkansaw, and there are now so many conflicting reports concerning them, I dare not say if they are dead or alive. Mr. Carver, the gentleman who owned my mother, sent a man for us, but only I was brought back, nearly dead with whooping cough, with the report that mother and sister was dead, although some say they saw them afterwards going north with the soldiers.

My home was near Neosho, Newton County, Missouri, where I remained until I was about 9 years old. My body was very feeble and it was a constant warfare between life and death to see who would gain the mastery.

From a child, I had an inordinate desire for knowledge, and especially music, painting, flowers, and the sciences, algebra being one of my favorite studies.

Day after day I spent in the woods alone in order to collect my floral beauties, and put them in my little garden I had hidden in brush not far from the house, as it was considered foolishness in the neighborhood to waste time on flowers.

And many are the tears I had shed because I would break the roots or flowers of some of my pets while removing them from the ground, and strange to say all sorts of vegetation seemed to thrive under my touch until I was styled the plant doctor, and plants from all over the country would be brought to me for treatment.

Note: This is Carver's word, and appears to mean "kidnapped."



At this time I had never heard of botany and could scarcely read. Rocks had an equal fascination for me and many are the basketfull that I have been compelled to remove from the outside chimney corner of the old log house, with the injunction to throw them downhill, I obeyed but picked up the choicest ones and hid them in another place, and somehow the same chimney corner would, in a few days or weeks, be running over again to suffer the same fate. I have some of the specimens in my collection now and consider them the choicest of the lot. Mr. and Mrs. Carver were very kind to me and I thank them so much for my home training. They encouraged me to secure knowledge, helping me all they could, but this was quite limited. As we lived in the country, no colored schools were available. So I was permitted to go 8 miles to a school at town (Neosho). This simply sharpened my appetite for more knowledge. I managed to secure all my meager wardrobe from home, and when they heard from me I was cooking for a wealthy family in Ft. Scott, Kansas, for my board, clothes, and school privileges.

Of course, they were indignant and set for me to come home at once to die, as the family doctor had told them I would never live to see 21 years of age, I trusted to God and pressed on (I had been a Christian since about 8 years old). Sunshine and shadow were profusely intermingled such as naturally befall a defenseless orphan by those who wish to prey upon them.

My health began improving and I remained here for two or three years. From here to Olathe, Kansas to school. From there to Paola Normal School. From there to Minneapolis, Kansas, where I remained in school about 7 years finishing high school, and in addition some Latin and Greek. From here to Kansas City, entered a business college of shorthand and typewriting. I was here to have a position in the union telegraph office as stenographer and typewriter, but the thirst for knowledge gained the mastery and I sought to enter Highland College at Highland, Kansas. Was refused on account of my color. I went from here to the Western part of Kansas where I saw the subject of my famous yucca and cactus painting that went to the World's fair. I drifted from here to Winterset, Iowa, began as head cook in a large hotel. Many thanks here for the acquaintance of Mr. & Mrs. Dr. Milholland, who insisted upon me going to an art school, and chose Simpson College for me.

The opening of school found me at Simpson attempting to run a laundry for my support and batching to economize. For quite one month, I lived on prayer, beef suet and cornmeal, and quite often being without the suet and meal. Modesty prevented me telling my condition to strangers.

The news soon spread that I did laundry work and really needed it, so from that time on favors not only rained but poured on me. I cannot speak too highly of the faculty, students and in fact, the town generally. They all seemed to take pride in seeing if he or she might not do more for me than someone else.

But I wish to especially mention the names of Miss Etta M. Budd, my art teacher, Mrs. W. A. Liston & family and Rev. A. D. Field & family. Aside from their substantiate help at Simpson, were the means of my attendance at Ames. (Please fix this to suit).

I think you know my career at Ames and will fix it better than I. I will simply mention a few things. I received the prize offered for the best herbarium in cryptogamy. I would like to have said more about you Mrs. Liston & Miss Budd, but I feared you would not put it in about yourself, and I did not want one without all.

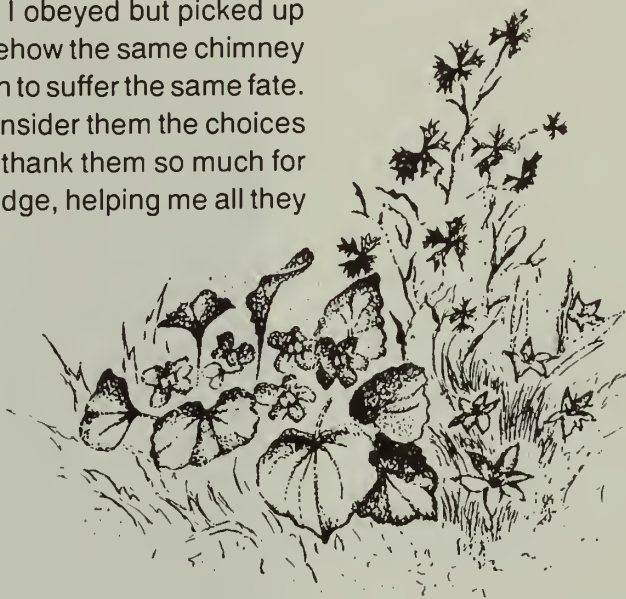
I received a letter from Mrs. Liston and she gave me an idea that it was not to be a book or anything of the kind this is only a fragmentary list.

I knit, crochet, and make all my hose, mittens, etc., while I was in school.

If this is not sufficient, please let me know, and if it ever comes out in print, I would like to see it.

God Bless you all,

Geo. W. Carver









## THE GENTLE GENIUS: GEORGE WASHINGTON CARVER

Excerpts from Article by **Peggy Robbins**

Born out of slavery and reared in Reconstruction, this humble man emerged to become a great benefactor to his people and his section.

George Washington Carver was born into slavery during the Civil War, in the midst of bloody guerrilla warfare in Missouri. A tiny, sickly baby, he was soon orphaned, and his very survival beyond infancy was against the laws of nature.

That he, a Negro, became the first and greatest chemurgist, almost single-handedly revolutionized southern agriculture, and received world acclaim for his contributions to agricultural chemistry was against accepted patterns. But, seen from today's distance, possibly the most amazing facet of the life of this gentle genius is the manner in which he overcame enormous prejudices and poverty in his struggle from nameless black boy to George Washington Carver, B.S., M.S., D.Sc., Ph.D., Fellow of the Royal Society of Arts, London, and Director of Research and Experiment at Tuskegee Institute, Alabama -- all without a trace of bitterness, with total indifference to personal fortune, and thought only to make the world, and America in particular, a better place for all mankind.

George Washington Carver did not know the exact date of his birth, but he thought it was in January, 1864 (some evidence indicates July, 1861, but not conclusively). He knew it was sometime before slavery was abolished in Missouri, which occurred in January, 1865. (The Emancipation Proclamation freed only those slaves whose masters were "in rebellion against the United States," which was not the case in Missouri, where slaves were finally freed by state action.)

George grew up on the farmlands of Missouri, reared by his mother until her seizure by a band of raiders; and then by Moses and Susan Carver, his mother's former owners, who had a homestead near Diamond Grove. Because the frail little boy was not required to help with the heavy farm chores, he had many free daylight hours in which to do exactly as he chose, and he chose to explore the wonders of nature. He talked



the wildflowers, asking why some of them required sunlight and some didn't, and how roots that looked exactly alike produced different-colored blossoms, and, he said many years later, the flowers answered him the best they could. He investigated insects, tree bark, leaves, ferns, seeds, and the like and made all of them his precious playthings. He tended the roses, sweet peas, and geraniums around the Carver house, and they flourished so strikingly a visitor asked him what she might do to make her flowers prettier. "Love them" the boy answered.

Word spread around Diamond Grove that "Carver's George" had a magic way with growing things, and people began calling him the Plant Doctor. He made house calls, either prescribing remedies for ailing plants or taking them to his secret garden in the woods where he tenderly nursed them. His "magic" with growing things was largely the result of his patient testing of different combinations of sand, loam and clay in potting soil for various plants, his experimentation with different amounts of sunlight and water, and his knack of picking up and knocking down or damaging insects and the like. When the Carver's finest apple tree began withering, George crawled along its limbs until he found some on which colonies of codling moths had taken up residence. "Saw off those branches," he told Moses Carver, "and the tree will get well." And it did.

Occasionally, George and his older brother Jim were allowed to go with Moses to Neosho, the county seat, about eight miles from Diamond Grove. Once, to George's surprise, he saw a line of colored children straggling into a log schoolhouse. When the door closed behind them, he crept up to it and listened. They were reciting lessons, just like the white children at Locust Grove. He peeped through a knothole. The Negro teacher was reading to the pupils just like the white teacher at Locust Grove. It was, truly, a school for Negro children. George, who was 11 at the time, knew he **had** to attend that school.

Back at the Carver house, the boy told Moses, Susan and Jim that he was going to move to Neosho so he could go to school. They asked him where he would sleep and how he would eat. He replied that he would find a place where he could sweep and wash clothes and do the other things Susan had taught him in exchange for his board. They did not try to stop him, and early one morning they watched him start, alone, down the dusty road toward Neosho. He carried the best of his rock collection and a clean shirt in a bundle slung over his shoulder, and a package of food -- loaves of baked corn bread and strips of home-cured fat meat sandwiched in the middle -- under his arm. He turned once and waved a skinny arm, and then he was gone, driven by a deep yearning for the education that would help him find answers to all the questions buzzing in his mind.

George's courage wavered after he got to the county seat, and he wandered up and down the streets until dark without speaking to anyone. Then, exhausted, he crawled into the loft of a barn near the schoolhouse, nestled down into the hay and fell asleep. At dawn the next morning, he ventured from the loft and crawled atop the woodpile in the yard behind a neat frame house next door to the school. The yard was grassy and had flowers in it, and that, to George, made it a good place to wait for the schoolhouse to be opened.

Suddenly, the back door of the house opened and a Negro woman came into the yard. She asked the big-eyed, frightened boy who he was and where he had come from. He stammered that he was Carver's George and he had come from the Moses Carver's farm to Neosho to go to school so that he could find out what made snow and hail, and whether the color of a flower could be changed by changing the seed. The woman, Mariah Watkins, told him she doubted if he could find out those things in Neosho, or even in Joplin or Kansas City, but that she had a feeling he would learn them somewhere. She had him scrub at the pump, and then took him inside and served him breakfast along with her husband, Andrew.

Mariah was a midwife and washerwoman, and Andrew was a hard-working odd-jobs man. They were a religious couple, well thought of in the county seat. They told George they had no children and that he could stay with them and go to school if he'd work. Overjoyed, the boy began listing all the household chores the Carvers had taught him to do. "That's fine," Mariah interrupted. "You call us Aunt Mariah and Uncle Andrew, and listen now, don't ever again say your name is Carver's George. It's George Carver. Now run to school, and come back at noon for a bit of lunch."

With his keen, retentive mind and restless curiosity, little George was soon making faster progress than any of the other seventy-five pupils packed in Neosho's Lincoln School for Colored Children. And he was







*Mariah Watkins with local children*

the happiest. He didn't join in the rough-and-tumble play in the schoolyard, but he was blissfully satisfied sitting alone in a corner, drawing pictures on his slate, while the other youngsters played. At home, he had a reader or speller propped in front of him even while he scrubbed cloths or washed dishes. He became an expert at ironing -- even though he read while doing that, too.

By the end of 1876, George Carver had learned everything the teacher at the Lincoln School knew and everything in the books available to the school, and the teacher gave him a certificate of merit saying just about that. The 13-year-old boy faced the sad fact that, to continue his education, he would have to leave his happy life with Aunt Mariah and Uncle Andrew and his warm association with brother Jim, who had also moved to Neosho. He heard some neighborhood Negroes say they were going to move to Fort Scott, Kansas, a comparatively large town about seventy-five miles from Neosho. He offered to tend the mules along the way if they would let him ride in their wagon, and they agreed.

George Carver nearly starved before he found a job in Fort Scott. When he did find one, as a cook in a private residence, it did not leave him time to attend school. He lived in a tiny room under the back steps of the house, and saved every penny of his meager wages. As soon as he thought he had enough to carry him through a term of school, he quit the job as a cook. He rented a lean-to behind the stagecoach depot for a dollar a week, and enrolled at a big brick school which taught subjects he had never even heard of before. He allowed himself a dollar a week for food and bought almost nothing else. He studied by candlelight far into each night, and he read every book, pamphlet, and newspaper he could acquire.

By the end of the term he was penniless. He worked all summer washing and ironing bed linen for the hotel and doing laundry for businessmen and ranchers who came and went by stagecoach. By fall, he had enough money saved to go back to school.



It was a lonely life, and George was sometimes the object of cruelty and prejudice. After his schoolbooks were taken from him and destroyed by two white boys, he had to finish a school term without textbooks. He wrote long afterward, "Sunshine was profusely intermingled with shadows, such as are naturally cast on defenseless orphan . . ." and they went on to tell that many people were kind to him and that he began to make friends over his laundry tub and bar of soap.

During George's second year in Fort Scott, he worked a few hours a day for a colored blacksmith, keeping the stable and grooming and delivering newly shod horses. Late one afternoon, returning to his room from the blacksmith shop, he watched in horror as a Negro man was dragged from the jail and lynched. During the night, the troubled boy bundled up his few belongings and fled from Fort Scott, never to return. During the next several years, George moved through the Western country, always managing to attend school. In the spring of 1885, by which time he was nearly six feet tall and had given himself the middle name Washington, the proud young man graduated from Minneapolis, Kansas High School. He immediately applied for admission to Highland College, a small Presbyterian school in northeast Kansas, and was accepted for the semester beginning September 20, 1885. He spent the summer in Kansas City learning shorthand and typing, and working to accumulate a few dollars to tide him over at college until he could find employment.

On September 20, George arrived at Highland and presented himself to the principal, the Reverend Duncan Brown, D.D., who had signed his admission acceptance. Dr. Brown shook his head, "There has been a mistake. You didn't tell me you were Negro. Highland College does not take Negroes."

George wandered about the country in a state of shock for a time. Then, in 1886, he filed a claim on a 60-acre homestead in Ness County, Kansas, built himself a sod house, and financed the planting of crops by doing housework at a nearby livestock ranch. He did not make a financial success of the farm, nor did he live there long enough to fulfill the five-year residence requirement for ownership, but he carried out agricultural experiments that were to be valuable to him later, and he saved enough money from the work he did at the livestock ranch to pay a semester's tuition at Simpson College, in Indianola, Iowa, which accepted him knowing, George made sure, that he was a Negro.



In September 1890, when George matriculated at Simpson, he was the only Negro among the 300 students, but he was accepted kindly. Simpson had been endowed by Matthew Simpson, a Methodist bishop, a friend of Lincoln's and a staunch advocate of the equality of all men.

After George paid his \$12 tuition, he had ten cents left, and with that he bought some corn meal and beef suet. A Simpson teacher wrote, "George Carver has come to us with a satchel full of poverty and a burning zeal to know everything." The president of the college, Reverend Edmond Holmes, allowed George to set up a laundry in an unused shack at the edge of the campus, and arranged for him to buy equipment -- tubs, washboard, flatiron, soap and starch -- on credit. In a few weeks, the young Negro was one of the most admired figures -- and certainly the busiest -- on campus. He was doing quite well in art and music studies as well as required college work. He was told by his teachers that he could have a successful career as either pianist or painter, but he was primarily interested in a life work that would best help those who needed help, and he decided that work would be in the field of experimental agriculture.





He reluctantly transferred from Simpson to the Iowa State Agricultural and Mechanical College at Ames, and there, under the direction of two able teachers who were to become his close friends -- James G. Wilson, director of the Agricultural Experiment Station, and Henry Cantwell Wallace, professor of Agriculture -- his future was shaped. Each of these men later served as Secretary of the United States Department of Agriculture. It was George Carver who interested Henry C. Wallace's youngest son, Henry Agard, in the mysteries of plant life, an experience Henry A. Wallace recalled with delight and gratitude after he became the President of the United States.

At Iowa State, Carver continued to do menial work to pay his expenses, but he took part in the social activities of undergraduate life and enjoyed the fellowship of the student body. He became a captain in the school's National Guard unit and strutted in plumed helmet and white gloves along with the others.

George Carver received his B.S. in Agriculture from Iowa State in 1894, when he was 30. He was appointed to the faculty and put in charge of systematic botany and all work in the college greenhouses.

Louis H. Pammel, the distinguished botanist with whom George worked, called him "a brilliant student, the best collector and the best scientific observer I have ever known."

In April 1896, just after George finished the requirements for his M.S., he received a letter from Booker T. Washington, the young Negro educator who had been struggling to get Tuskegee Institute on its feet. This school in Alabama had been founded in 1881. Washington and the Board of Trustees had come to realize that, since 85 percent of the Negroes in the Gulf states were farmers, Tuskegee's greatest need was an Agricultural Department. They had no one with knowledge of agricultural science to head the department, and almost no funds for its operation, but Washington had heard about the work of Mr. George Washington Carver up in Iowa and decided to appeal to him for help. He wrote Carver, "I cannot offer you money, position or fame. The first two you have. The last, from the place you now occupy, you will no doubt achieve. These things I now ask you to give up. I offer you in their place work -- hard, hard work -- the task of bringing a people from degradation, poverty and waste to full manhood."

For George Carver, there was no decision to make. "Why," he exclaimed excitedly, "this has been God's plan for me all along." His friends at Iowa State could not bring themselves to try to hold him, much as they wanted to.

It was a time when the South desperately needed scientific help. The one-crop "Cotton is King" economy that had once given wealth and power to the South was ruining it. The heavy-feeding cotton plant, the same acreage year after year, drained the soil of its mineral and vegetable resources and left it wasted and barren. The big planters cut or burned fine pine forests to make new and fertile cotton-crop acres, and the little farmers left their barren, eroded fields to search for something better or to work for the big planters. With the arrival of the boll weevil in the 1890s, the farming South faced bankruptcy.

George Carver began his first class at Tuskegee with thirteen students; he saw it grow to seventy-five the second semester. From the time he arrived at Tuskegee Institute, he taught soil conservation through diversification of crops, nor did he confine his teaching to his classroom. He went around the country, attending rural meetings and talking to one farmer or a hundred about crop trouble. He told farmers to rotate their crops and give the soil a chance to breathe, and he advocated the use of manures to replace minerals depleted from the soil.





cotton-growing. Pod-bearing plants, he explained, drew nitrogen from the air and enriched the soil. "Plant peanuts," he said. "That'll keep the soil productive. And the boll weevils don't attack peanuts."

Soon the farmers were listening and producing peanuts in great abundance. But the solution of one problem brought another: how could all those peanuts, which, after all, were "just good for sometimes eating," be marketed profitably? To solve the agricultural-economic problem, George Carver set about work for which he was to become particularly famous. Experimenting in his Tuskegee laboratory, which he called "God's little workshop," he discovered nearly 300 valuable uses to which the peanut could be put; during Carver's lifetime, that once negligible crop covered 10 million acres and had an annual value of \$200 million.

One of his most surprising peanut-related contributions to mankind was his extraction of a peanut oil which aided in restoring wasted tissues. To prove the value of the oil, he took photographs of the deformed faces of children before treating them and then after a year of treatment. The remarkable improvement evinced by the pictures started a stream of ailing children to his laboratory, and, with the help of his students, all were treated.

Carver went on from peanuts to produce such things as paving blocks from cotton and rubber from the goldenrod. In collaboration with Henry Ford, he perfected



process for extracting rubber from the milk of the goldenrod. On the experimental farm at Tuskegee, he developed several new strains of cotton, the most important of which was "Carver's Hybrid", a cross between short-stalk cotton -- it had fatter bolls but many were near enough to the ground to be ruined by a splash of sand -- and tall-stalk cotton. The hybrid had the better characteristics of both, and he evolved strains of vegetables that were finer in quality and larger in size than had been grown before.

The versatile scientist made spectacular advances in soil fertilization, and he instituted a visiting day at Tuskegee for small farmers to come and learn about the use of various types of fertilizer. For those who couldn't come to the campus, he started a "school on wheels" to go into the communities and give demonstrations. His movable farm school was so successful the idea was soon adopted by the United States Department of Agriculture, and later put to use in several foreign countries.

Carver's first publication from Tuskegee, his 1898 pamphlet "Feeding Acorns to Livestock," was followed during the next three decades by forty-three others ranging from "How to Raise Pigs with Little Money" to "How to Meet New Economic Conditions in the South," all aimed at helping the small farmer help himself. They were followed in 1942 by a wartime favorite, "Nature's Garden for Victory and Peace." He was finding great satisfaction at that time in the fact that nutrition experts were earnestly emphasizing the value of peanut butter in a good diet, particularly for children. In an effort to reach a broad audience, George for a long time wrote a syndicated newspaper column, "Professor Carver's Advice," in which he answered questions relating to scientific agriculture in simple language.

To the Wizard of Tuskegee came honors, doctorates, citations, medals, and lavish praise from every level of society, but he remained indifferent to personal fortune -- he repeatedly refused to accept an increase in his \$125 monthly Tuskegee salary -- or to stylish apparel. He usually wore an aged cap and a tattered old gray tweed suit with pants quite bagged at the knees, a condition resulting from the hours Dr. Carver spent kneeling while examining -- and talked to -- his plants. But there was always one delightful





ect of his attire: he never failed to have a fresh flower in his lapel.  
n 1910, the Board of Trustees at Tuskegee established a Department of Agricultural Research with Carver in charge. He turned most of his classes over to others and thereafter devoted his time to creative nce. He was much sought after for lectures in distant states, and he answered those calls when he could re his work at Tuskegee. At the Institute he received delegations from all over the world and worked with n to solve agricultural problems, always refusing payments for these efforts to help those in need. or many years, George Carver kept up his music, and one year even toured as a pianist to raise money he Institute, but it was his painting that came second in his heart to his agricultural research. His pictures unique in that he made all the paints he used from Alabama soils. He created many beautiful colors, uding one blue which was believed to be a rediscovery of an old Egyptian blue for which modern pigment ers had been searching for years.

he 1936-37 school year at Tuskegee was dedicated to honoring Dr. Carver's fortieth year at the school, plans were made for the erection of the George Washington Carver Museum to recognize Carver's tributions to science and provide permanent exhibit rooms for his scientific collections and his paintings. Carver's entire savings -- which, thanks to his bizarre frugality, totaled about \$60,000 -- went, during his years and at his death, to the Carver Museum and to the George Washington Carver Foundation, which as its purpose the support of young Negroes engaged in scientific research.

George Washington Carver died quietly on January 5, 1943, and was buried -- with a bright, fresh flower s lapel -- at Tuskegee beside his friend Booker T. Washington. Condolences poured in to the Institute o great men of all races, and lesser folk by the thousands mourned the friend and benefactor they had



## GEORGE WASHINGTON CARVER: 1864-1943

### BIOGRAPHICAL NOTE

- 864, July 12 Born, Diamond Grove, Missouri
- 1890 Enrolled at Simpson College to study piano and art
- 1891 Transferred to State Agricultural College at Ames, Iowa
- 1893 Paintings exhibited and received honorable mention at Chicago World's Fair
- 1894 Bachelor of Agriculture Degree, State Agricultural College
- 1894 Appointed member of faculty, Iowa State College
- 1896 Master of Agriculture Degree, Iowa State College
- 96, October 8 Came to Tuskegee as Director of Agriculture at the invitation of Booker T. Washington
- 1896 Appointed Director of the Agricultural Experiment Station which had been authorized for Tuskegee by Alabama Legislature
- 906, May 24 Initiated Jesup Wagon with T. M. Campbell, Sr.
- 1916 Elected Fellow of the Royal Society for the Encouragement of Arts, London, England
- 1921 Appearance, U.S. House of Representatives, Committee on Ways and Means, for tariff on peanuts
- 1923 Recipient, Spingarn Medal for Distinguished Service to Science
- 1928 Honorary Degree, Doctor of Science, Simpson College
- 1935 Appointed Collaborator, Mycology and Plant Disease Survey, Bureau of Plant Industry, U.S. Department of Agriculture
- 937, June 2 Bronze Bust of Carver unveiled on campus, a tribute from his friends throughout the nation for his 40 years of creative research
- 1938 Feature Film, "Life of George Washington Carver" made in Hollywood by the Pete Smith Specialty Company
- 1938 Development of the George Washington Carver Museum by Board of Trustees of Tuskegee Institute
- 1939 Recipient, Roosevelt Medal for Outstanding Contribution to Southern Agriculture
- 1939 Honorary Membership, American Inventors Society
- 41, March 11 The George Washington Carver Museum dedicated at Tuskegee Institute by Henry Ford, Sr.
- 1941 Special Exhibition, George Washington Carver Art Collection, Tuskegee Institute
- 1941 Honorary Degree, University of Rochester
- 1941 Recipient, Award of Merit by Variety Clubs of America
- 1942 Honorary Degree, Doctor of Science, Selma University, Alabama
- 1942 Erection of George Washington Carver Cabin, Greenfield Village at Dearborn, Michigan, by Henry Ford to honor and commemorate Dr. Carver's achievements and contributions to American life
- 1942 Official Marker authorized by the Governor of Missouri
- 43, January 5 Died, Tuskegee Institute, Alabama
- \* \* \* \* \*
- 1943 His entire Estate, amounting to over \$60,000 was bequeathed to the George Washington Carver Foundation
- 1943 78th Congress passed legislation H.R. 647, Public Law 148, creating the George Washington Carver National Monument, Diamond Grove, Missouri. This legislation was sponsored by Representative William Short and Senator Harry S Truman of Missouri
- 1946 79th Congress-Joint Resolution, Public Law 290, January 5, 1946, designated as George Washington Carver Day, issued by President Harry S Truman



1947	Issuance of postage stamp in honor of George Washington Carver
1947	George Washington Carver Museum fire (restored 1951)
1948	First Day Sale of the Three-cent Carver Commemorative Stamp
1951	Fifty-cent piece coined to likeness of George Washington Carver and Booker T. Washington
1952	Selected by <i>Popular Mechanics</i> magazine as one of 50 Outstanding Americans and listed in their 50th Anniversary Hall of Fame
1956	Polaris Submarine George Washington Carver launched at Newport News, Virginia
1956	Simpson College dedicated Science Building in memory of George Washington Carver
1968	Iowa State College dedicated Science Building in memory of George Washington Carver
1969	Elected to Agricultural Hall of Fame, Kansas City, Kansas
1973	Elected, Hall of Fame for Great Americans
1977	Enshrined, Hall of Fame for Great Americans
1990	Elected, Inventor's Hall of Fame



# LIST OF BY-PRODUCTS FROM PEANUTS BY GEORGE WASHINGTON CARVER

(As Compiled by the Carver Museum)

## BEVERAGES

Beverage for Ice Cream  
Blackberry Punch  
Evaporated Peanut Beverage  
Cherry Punch  
Normal Peanut Beverage  
Peanut Beverage Flakes  
Peanut Lemon Punch  
Peanut Koumiss Beverage  
Peanut Orange Punch #1  
Peanut Punch #2

## COSMETICS

All Purpose Cream  
Antiseptic Soap  
Baby Massage Cream  
Face Bleach and Tan Remover  
Face Cream  
Face Lotion  
Face Ointment  
Face Powder  
Fat Producing Cream  
Glycerine  
Hand Lotion  
Lotion for Hair and Scalp  
Peanut Oil Shampoo  
Cream made for Scalp  
Cream made for Skin  
Shampoo  
Shaving Cream  
Lotion and Dandruff Cure  
Toilet Soap  
Vanishing Cream

## DYES, PAINTS AND STAINS

Dyes for Cloth (30)  
Dyes for Leather (19)  
Paints  
Wood Stains (17)  
Special Peanut Dye

## STOCK FOODS

Stock Food for Laying  
(peanut hearts)  
Poultry Feed  
Peanut Hay Meal  
Peanut Hull Bran  
Peanut Hull Meal  
Peanut Meal  
Peanut Stock Food (3)

## FOODS

Cherry Candy  
Breakfast Food (5)

## FOODS (continued)

Bisque Powder  
Buttermilk  
Butter from Peanut Milk  
Caramel  
Cheese Cream  
Cheese Nut Sage  
Cheese Pimento  
Cheese Sandwich  
Cheese Tutti Frutti  
Chili Sauce  
Chocolate Coated Peanuts  
Chop Suey Sauce  
Cocoa  
Cooking Oil  
Cream Candy  
Cream from Milk  
Crystallized Peanuts  
Curds  
Dehydrated Milk Flakes  
Dry Coffee  
Flavoring Paste  
Golden Nuts  
Instant Coffee  
Lard Compound  
Malted Substitutes  
Mayonnaise  
Meat Substitutes  
Milks (32)  
Mock Goose  
Mock Chicken  
Mock Meat  
Mock Oyster  
Mock Veal Cutlet  
Oleomargarine  
Pancake Flour  
Peanut Bar #1  
Peanut Bisque Flour  
Peanut Brittle  
Peanut Butter, regular (3)  
Peanut Cake (2)  
Peanut Chocolate Fudge  
Peanut Dainties  
Peanut Flakes  
Peanut Flour (11)  
Peanut Hearts  
Peanut Kisses  
Peanut Meal, brown  
Peanut and Popcorn Bars  
Peanut Relish (2)  
Peanut Sausage  
Peanut Surprise  
Peanut Tofu Sauce  
Peanut Wafers

## FOODS (continued)

Pickle, plain  
Salad Oil  
Salted Peanuts  
Shredded Peanuts  
Substitute Asparagus  
Sweet Pickle  
Vinegar  
White Pepper, from vines  
Worcestershire Sauce

## MEDICINES

Castoria Substitute  
Emulsion for Bronchitis  
Goiter Treatment  
Iron Tonic  
Laxatives  
Medicine similar to Castor Oil  
Oils, Emulsified with Mercury for  
venereal disease (2)  
Rubbin Oil  
Tannic Acid  
Quinine

## GENERAL

Axle Grease  
Charcoal from Shells  
Cleaner for Hands  
Coke (from Hull)  
Diesel Fuel  
Fuel Briquettes  
Gas  
Gasoline  
Glue  
Illuminating Oil  
Insecticide  
Insulating Boards (18)  
Linoleum  
Lubricating Oil  
Nitroglycerine  
Paper (colored) from skins  
Paper (Kraft) from vines  
Paper (white) from vines  
Printer's Ink  
Plastics  
Rubber  
Shoe and Leather Blacking  
Sizing for Walls  
Soap Stock  
Soil Conditioner  
Wall Boards from hulls (11)  
Washing Powder  
Wood Filler  
Laundry Soap  
Sweeping Compound







# LIST OF PRODUCTS MADE FROM SWEET POTATOES BY GEORGE WASHINGTON CARVER

## FOODS

After Dinner Mints (3)  
 Asque Powder  
 Breakfast Food (5)  
 Candies (14)  
 Chocolate  
 Coffee, dry  
 Dried Potatoes (2)  
 Egg Yolk  
 Flour (4)  
 Granulated Potatoes  
 Instant Coffee  
 Lemon Drops  
 Meal (4)  
 Rock Coconut  
 Syringes (3)  
 Syringe Drops  
 Potato Nibs  
 Sauce  
 Spiced Vinegar  
 Syring  
 Syringe  
 Synthetic Ginger  
 Tapioca  
 Vinegar  
 Yeast

## STOCK FOODS

Hog Feed  
 Stock Feed Meal (3)

## GENERAL

Alcohol  
 Dyes (73)  
 Fillers for Wood (14)  
 Library Paste  
 Medicine  
 Paints  
 Paper (from vines)  
 Rubber Compound  
 Shoe Blacking  
 Stains  
 Synthetic Cotton  
 Synthetic Silk  
 Writing Ink



## BULLETINS BY GEORGE WASHINGTON CARVER

Number	Date	Title
1	1898	Feeding Acorns
2	1898	Experiments with Sweet Potatoes
3	1899	Fertilizer Experiment with Cotton
4	1901	Some Cercospora of Macon County, Alabama
5	1903	Cow Peas
6	1905	Cotton Growing on Sandy Upland Soils
7	1905	How to Build up Worn-Out Soils
8	1906	Successful Yields of Small Grain
9	1906	The San Jose Scale in Alabama
10	1906	Saving the Sweet Potato Crop
11	1907	Relations of Weather and Soil Conditions to the Fruit Industry of Southeast Alabama
12	1907	Saving the Wild Plum Crop
13	1908	How to Cook Cow Peas
14	1908	How to Make Cotton Growing Pay
15	1909	Increasing the Yield of Corn
16	1909	Some Ornamental Plants of Macon County, Alabama
17	1910	Possibilities of the Sweet Potato in Macon County
18	1910	Nature Study and Gardening for Rural Schools
19	1911	Some Possibilities of the Cow Pea in Macon County
20	1911	Cotton Growing for Rural Schools
21	1911	White and Colored Washing with Native Clays from Macon County, Alabama
22	1912	Dairying in Connection with Farming
23	1912	Poultry Raising in Macon County
24	1912	The Pickling and Curing of Meat in Hot Weather
25	1913	A Study of Soils of Macon County, Alabama and Their Adaptability of Certain Crops
26	1915	A New and Prolific Variety of Cotton
27	1915	When, What and How to Can and Preserve Fruits and Vegetables in the Home
28	1915	Smudging an Orchard with Native Material in Alabama
29	1915	Alfalfa, The King of all Fodder Plants, Successfully Grown in Macon County
30	1915	Possibilities of the Sweet Potato in Macon County (revision of #17)
31	1916	How to Grow the Peanut and 105 Ways of Preparing it for Human Consumption
32	1916	Three Delicious Meals Every Day for the Farmer
33	1917	Twelve Ways to Meet the New Economic Conditions Here in the South
34	1917	Forty-three Ways to Save the Wild Plum Crop
35	1917	How to Grow the Cow Pea and 40 Ways to Prepare it as a Table Delicacy
36	1918	How to Grow the Tomato and 105 Ways to Prepare it for the Table
37	1918	How to Make Sweet Potato Flour, Starch, Bread, Sugar and Mock Coconut
38	1918	How the Farmer Can Save His Sweet Potatoes
39	1927	How to Make and Save Money on the Farm
40	1935	The Raising of Hogs
41	1936	Can Live Stock Be Raised Profitably in Alabama?



## BULLETINS BY GEORGE WASHINGTON CARVER

(continued)

Number	Date	Title
42	1936	How to Build Up and Maintain the Virgin Fertility of Our Soils
43	1942	Nature's Garden for Victory and Peace
44	1943	The Peanut
Circular	1912	The Canning and Preserving Fruits of Vegetables in the Home
Leaflet	1915	A New and Prolific Variety of Cotton
Leaflet	1915	How to Raise Pigs with Little Money
Leaflet	1916	How to Live Comfortably this Winter
Leaflet	1916	What Shall We Do for Fertilizer this Year?
Leaflet	1931	Some Peanut Diseases
Leaflet	1938	Some Choice Wild Vegetables that Make Fine Foods



## SCHEDULING YOUR VISIT

Most groups combine viewing one of the park orientation films with looking at the museum and touring of the nature trail. To effectively visit the monument, a class should plan to spend at least two hours. The class could see the 12-minute film on Carver's boyhood, or the 30 minute "Carver, Man of Vision" film, spend 15-20 minutes looking through the museum and receive a one-hour guided tour of the nature trail, with a half hour for rest room breaks and/or a lunch break. The following information will help you prepare for your visit: You should schedule your trip with the park staff as far in advance as possible by calling 417-325-4151 between 8:30 a.m and 5:00 p.m., Monday through Friday. Also, you may schedule a tour through the mail by writing the park at P.O. Box 38, Diamond, Missouri 64840. Due to staffing and budget limitations, the park cannot guarantee that each school group scheduled in advance will receive a ranger-guided tour of the nature trail. In the absence of a ranger-guided program, this and the Carver Nature Trail Guide are available to complement the other features of the site. Even if you do not need a ranger-guided tour, the staff appreciates a call to schedule your visit, so we can be prepared to offer you the best possible service and to avoid conflicts with other groups.

Also, we encourage field trips during the fall months, as time slots during the spring fill up very quickly. Usually school groups are split into groups of no more than 30 children. This is an optimum size for guided tours of the nature trail, and for use of the park auditorium which only seats 30. Therefore, some parts of the overall group may be seeing the film, while others look around the museum or go out on the trail. Groups of more than 100 people will need to schedule additional time at the park.

The teacher should plan to accompany the group, and provide discipline while the ranger gives the program. Ideally, there should be one adult present for every 10 children. The more preparation the teacher has provided about Dr. Carver before the visit, the more the children will get out of their trip to the park.

Please try to arrive 10 to 15 minutes early to give the children a chance to stretch their legs and go to the rest room before the program. If for some reason you may be late, you may lose the opportunity to have a guided tour of the trail, or to see the films or the museum. During the peak of the spring school group season, scheduling becomes very tight and the park has far less flexibility.







## I. CLASSROOM -- PRE-VISIT ACTIVITIES

### ACTIVITY 1:

From the list of resources included in this curriculum, read aloud and/or have the students read a biography of Dr. Carver.

### OBJECTIVES:

To introduce the students to the basic information about Dr. Carver's life.

To stimulate the students to think about Carver's achievements in relationship to the social environment of the times, the many difficulties he faced and the personal influences on his early life.

### MATERIALS:

Biography on Dr. Carver

Section V, Resources, contains a list of suggested reading.

### PROCEDURE:

Read or have the students read the biography. Discuss the material. You may want to use some of the discussion questions included in this curriculum.



## ACTIVITY 2:

Compare and contrast George Washington Carver's childhood activities to the lives of the students.

## OBJECTIVES:

By participating in this activity, students will be able to:

- Name three ways that Dr. Carver's life in the 1870s differed from their lives in the late 20th century.
- Identify the activities and chores that George Washington Carver participated in as a child on the Carver farm.
- Imagine what his early life may have been like.

## MATERIALS:

- Blackboard and chalk or flip chart
- Background materials on George Washington Carver
- Samples of food used 100 years ago, pictures of children's dress, toys, houses, utensils used in the home, etc.
- Pencils, paper, crayons

## PROCEDURE:

Preparation: If necessary, read a book or watch a video on Dr. Carver.

This activity is designed to take place after the children have already had a basic introduction to the life of George Washington Carver. The teacher may read a book on Carver to the class, or assign the book to the students. The students may watch one of the videos available on the life of Carver. Included in this curriculum are some sketches of Carver's life that may also be used.

Begin by discussing life on a farm in Missouri in the 1870s. Mark several categories on the board or flip chart, such as:

WATER	FOOD	CLOTHING	SHELTER	PLAY-RECREATION
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Discussion: List aspects of Carver's life on the farm.

Have the children make lists of where and how these things affect their lives today. For example, ask, "Where do you get water in your house?" The children may respond with "the faucet", "the hose", etc.

Then ask the children how they think the Carver family got their water. The intent is to stimulate discussion on the differences between their lives and the lives of people in George Washington Carver's boyhood. It will illustrate that the life of George Washington Carver was physically much more involved with providing the basic necessities of life than our lives today.

Write a diary page.

Have the children write a sample diary page, as if they were a child living on a farm close to the Carver farm during George Washington Carver's time. Would they have played with George? Would they have gone to school with him? What kind of chores would they have done? Would they have as much time for play as they do now? What would they do for fun? They may want to illustrate their diary entry.



### ACTIVITY 3:

Create an action plan to improve relations between peoples.

#### OBJECTIVES:

After participating in this activity, the student will:

- Name three things denied to George Washington Carver because of discrimination.
- Define prejudice and discrimination and state the difference between the two.
- Name the ways George Washington Carver used to overcome these obstacles.
- Name three forms of discrimination allowed in Carver's time no longer allowed today.
- Name three forms of discrimination, against any ethnic group, that still occur today.
- Suggest ways to follow Dr. Carver's example and increase understanding between people.

#### MATERIALS:

Current magazine or newspaper pictures depicting cooperation, understanding and tolerance  
Paper, pencils

#### PROCEDURE:

##### A. Discussion:

###### 1. What were the obstacles Carver faced?

Lead into a discussion of the obstacles Carver faced because of discrimination. Ask them if they have ever been left out of a game, or disappointed because someone would not let them participate when they wanted to. How did they feel? List the feelings on the blackboard. Now have the children list the things they remember from the story of George Washington Carver that happened because of his race. Some examples: being born in slavery; his mother's kidnapping by raiders; not being able to go to school in Diamond; the lynching in Fort Scott that so frightened him he left the area; his rejection at Highland College.

###### 2. What did George Washington Carver do to overcome these obstacles?

###### 3. What form does discrimination take today?

These things happened more than 100 years ago. Do things like this still happen today? If so, what? How can we change them and make them better? Discuss both the positive changes in race relations, and the things we still need to do.

George Washington Carver succeeded because he never gave up, even when people deliberately made his life more difficult because of his race. He believed in doing the most you can with what you are given.

##### B. Group Action Plan

Divide the class into groups of 3 or 4 students. Have each group pick one of the problems that still exist today that they listed in the discussion. If George Washington Carver were alive today, what might he do to provide a solution?

###### 1. Discuss the problems within each group.

###### 2. Have the group list at least one positive action they can carry out to improve the situation.

###### 3. Present actions to the class.

##### C. Have one child from the group read their solution to the class, using the sentence, "If George Washington Carver lived today, he might have . . . to help make the world a better place."





## V. GEORGE WASHINGTON CARVER NATIONAL MONUMENT -- ON-SITE ACTIVITIES

### FACILITIES:

Visitor center, with museum and orientation films, is open between 8:30 a.m. and 5:00 p.m. daily and until 7:00 p.m. during the summer months. Rest rooms are available in the visitor center. Picnic area with tables and drinking fountain is also available.

### ACCESSIBILITY:

The visitor center is accessible, however, the rest rooms are accessible only with difficulty. The nature trail is paved to the Boy Carver statue, but the slope to the statue does not meet accessibility standards. Past the statue the trail is gravel. The 12-minute film, "The Boyhood of George Washington Carver," is captioned. If a group with special needs schedules a tour, we will make every effort to tailor our services to meet those needs.

### FILMS:

"The Boyhood of George Washington Carver", 12 minutes, captioned. This film depicts Carver's life on the Moses Carver farm. Many children identify with this film because it shows Carver as a child.

"Carver, Man of Vision", 30 minutes. This film provides a comprehensive overview of Carver's life and achievements, with emphasis on his artistic and spiritual qualities as well as his scientific achievements.

"Remembering George Washington Carver: Personal Perspectives", 30 minutes. Produced in 1989, the film provides insights into the character and legacy of Dr. Carver through the stories told by people who knew him personally.

"George Washington Carver", Kaw Valley Films, 30 minutes. This film is the orientation film shown by Tuskegee National Historic Site. It provides a comprehensive overview of Dr. Carver's life, with emphasis on his scientific achievements and his time at Tuskegee.

Films are shown on request with the auditorium seating 30 people. The park has a free video loan library and all of the films listed above are available for loan on 1/2" video tape. To obtain a copy, simply write or call the park.

### ADDITIONAL MATERIALS:

Carver Nature Trail Guide contains the essential information a ranger would provide on a guided tour of the nature trail. It is available at the visitor center.

The Carver Birthplace District Association (CBA) operates a book sales outlet in the visitor center. Books, postcards, reproductions of historical documents and similar items are available for purchase. Books listed in Section V, Resources, of this curriculum are available from CBA. A CBA order form is included in this curriculum.

### NEARBY FACILITIES:

The nearest restaurant is 2 miles east of the park in Diamond. There is also a small grocery store and a convenience store in Diamond. The park has a soft drink machine and a candy and peanut vending machine at the visitor center. The nearest fast food places are located in Joplin, Neosho and Carthage, Missouri.

The children may wish to bring money for a soft drink or snack, or to purchase a postcard or book from the Carver Birthplace District Association.

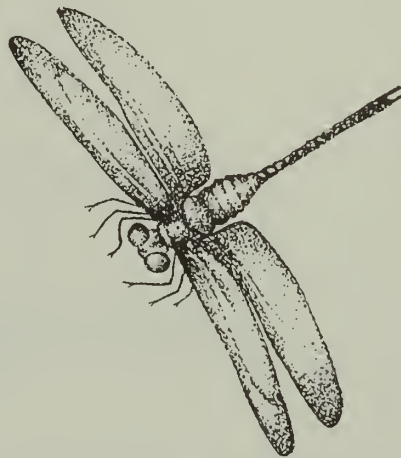


## SAFETY TIPS:

The nature trail winds through a natural area which contains poison ivy. At the beginning of the trail a sign identifies poison ivy. If everyone stays on the trail, there should be few problems. Some individuals are so violently allergic to poison ivy that they have difficulty even walking near the plant. You should identify any such individuals and perhaps let them perform alternate activities in the visitor center while the group is on the nature trail.

Animals that can sting or bite are all part of the natural environment, and therefore, can be found in the woods and prairies of the monument. All plants and wildlife in a national park are protected, and most animals are as anxious to avoid us as we are to avoid them. Please observe them from a distance and do not attempt to feed or touch them. If you see something you feel may be a hazard, keep the children clear of the area and report it to a ranger. The rangers are trained in standard first aid and CPR.

Please emphasize to the students that a national park or monument belongs to all of us, and is set aside to preserve the history, culture and environment of the area. Thus, they can help us carry out our mission by not handling objects in the museum, picking the flowers, or damaging anything on the monument.



*Dragonfly*



*Poison Ivy*





# GEORGE WASHINGTON CARVER

## ON-SITE ACTIVITIES

### ACTIVITY 1:

#### Biological Diversity Hunt

### OBJECTIVES:

Students will be able to:

- Identify the biodiversity present in the park.
- Describe some of the differences found in separate areas of the park.
- Relate Carver's beliefs and work to Biological Diversity.

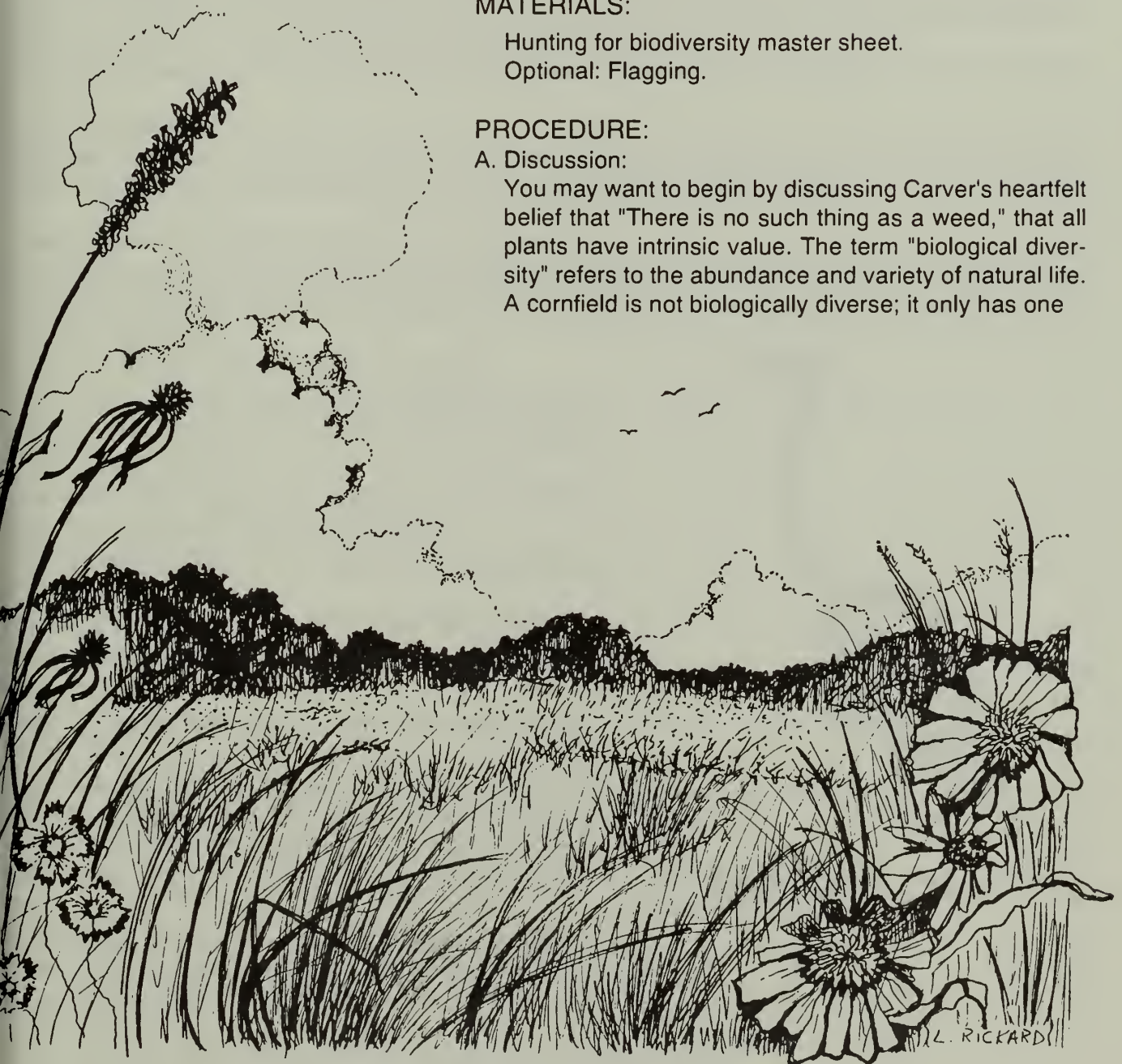
### MATERIALS:

Hunting for biodiversity master sheet.  
Optional: Flagging.

### PROCEDURE:

#### A. Discussion:

You may want to begin by discussing Carver's heartfelt belief that "There is no such thing as a weed," that all plants have intrinsic value. The term "biological diversity" refers to the abundance and variety of natural life. A cornfield is not biologically diverse; it only has one



*Prairie*





species of plant, and a few species of animals or insects. A prairie, with its variety of grasses and forbs, insect, and animal life, is biologically diverse. Carver's work encouraged and supported biological diversity in agriculture and in the wild, even though Dr. Carver may never have heard the term "biological diversity". He understood that to remain healthy, a natural system needs an abundance of different kinds of plants and animals.

The nature trail is a good place for this activity, as the children can compare and contrast the diversity of a managed, landscaped area with the woods, pond and prairie.

When the children are participating in the Biological Diversity Hunt, be sure they can recognize and avoid poison ivy.

#### Preparation

Make a copy of Hunting for Biodiversity master sheet and cut it into cards. Place the cards in a sturdy envelope.

1. Identify Areas: On the Carver Nature Trail, select two or three sites that are different and are easily supervised, such as the pond, the prairie, and the woods near the Boy Carver Statue or near the Carver House. Point out the boundaries of the area. You may want to use flagging to mark the boundaries. Remind students they are not to collect or damage anything.

2. Divide into Teams: Divide the class into teams of three curious naturalists. Give each team two cards.

#### Hunt for Biodiversity

Give each team ten minutes to find what their cards ask for. Have the teams take the class to the finds. Collect the cards or have the students exchange them for use on the next site.

Analysis - Ask the students these kinds of questions:

What are some words that describe the plants growing on this site? This is a good time to remind students that all the plants and animals living together here make up a community. (If it has a name, name it, for example, the prairie.)

What did you learn about animals on this site?

What are some ways we could learn more about animals on this site? How did Carver learn from the "natural" world when he lived here?

How would you describe the biological diversity of this site: Rich or Poor? What is your evidence?

Did anyone find a plant or evidence of an animal that no one else found?

Are some plants more abundant than other plants?

What would you say is the least abundant plant on this site?

What are some words you would use to describe this place?

Which of us is best dressed for hiding in this area? Break the class into small groups, give them a minute to invent a game to test that. Remind them about poison ivy!

How did Dr. Carver's work encourage biological diversity?

What do you think Dr. Carver would recommend doing if he were alive today to help preserve biological diversity?

How can you help?





## HUNTING FOR BIODIVERSITY

FIND THREE DIFFERENT SIZED LEAVES FROM THE SAME PLANT	FIND AT LEAST THREE DIFFERENT KINDS OF HOLES MADE BY ANIMALS
FIND AT LEAST THREE DIFFERENT KINDS OF PLANTS GROWING UNDER A TREE	FIND THREE DIFFERENT SIGNS OF AN ANIMAL HAVING EATEN SOMETHING
FIND AT LEAST THREE DIFFERENT ORGANISMS AND GIVE THEM DESCRIPTIVE NAMES	FIND AT LEAST THREE DIFFERENT KINDS OF LEAVES
FIND AT LEAST THREE DIFFERENT KINDS OF PLANT "SKINS"	FIND AT LEAST THREE LEAVES WITH DIFFERENT TEXTURES
FIND A PLANT WHICH HAS THREE DIFFERENT COLORS	FIND AT LEAST THREE DIFFERENT PLANTS
FIND AT LEAST THREE DIFFERENT KINDS OF SEEDS	FIND THREE DIFFERENT KINDS OF CONSUMERS (ANIMALS) OR EVIDENCE OF THEM
FIND THREE DIFFERENT SPIDER WEBS	FIND THREE DIFFERENT KINDS OF DECOMPOSERS
FIND AT LEAST THREE DIFFERENT KINDS OF LEAF STALKS	FIND AT LEAST THREE PLANTS WITH DIFFERENT ODORS
FIND THREE DIFFERENT LICHENS	FIND BIODIVERSITY IN AT LEAST THREE DIFFERENT SHAPES - SQUARE, TRIANGLE, OVAL, HEART, RECTANGLE
FIND THREE DIFFERENT FLOWERS	FIND AT LEAST THREE DIFFERENT INSECTS



ACTIVITY 2:  
Flash Card Circle Game

OBJECTIVE:  
Students will be able to describe the interdependence of human/plant/animal biodiversity. Dr. Carver did this in much of his work.

MATERIALS:  
For each team:  
A set of index cards  
2 felt tip markers (broad and fine)

PROCEDURE:  
A. Discuss Dr. Carver's work with plants, and how it could benefit animals as well as humans. We are all part of the web of life and interdependent. Talk about Carver's childhood on the farm, wandering through the woods and fields and learning from nature. He probably was familiar with the species included in this flash card game.  
B. Preparation  
1. Divide the class into groups of six to ten players each, depending on the habitat you choose and the age and ability of the students.  
2. Give each player a prepared 3" x 5" card with two names on it: a) a species in the habitat's food web (large, bold print); and b) a species it is looking for (small, fine print).  
Six player sequences for Carver National Monument are:

PRAIRIE:	<b>FOX</b> (rabbit)	<b>RABBIT</b> (prairie grasses)	<b>PRAIRIE GRASSES</b> (deer)
	<b>DEER</b> (coyote)	<b>COYOTE</b> (human)	<b>HUMAN</b> (fox)
POND:	<b>DUCK</b> (duckweed)	<b>DUCKWEED</b> (turtle)	<b>TURTLE</b> (fish)
	<b>FISH</b> (insects)	<b>INSECTS</b> (human)	<b>HUMAN</b> (duck)

The links are not strict food chain relationships; they are interdependent relationships. Each player is to keep both names secret. One player receives a card labeled **HUMAN**.  
3. The players act out the organisms in bold print on their card and look for the organism in fine print. When they think they have found it, they grab the player's hand, who flashes his/her card. If it is right, they continue holding hands. The search continues until the group is linked in a circle.  
4. Discuss the game. Make some points about the management of biodiversity in the park or the importance of parks in preserving biodiversity. What is the human doing in this game anyhow? How are coyotes and humans dependent on each other? What do you think Carver knew about these kinds of interdependent relationships? Do you think he thought these things important?





### ACTIVITY 3:

#### Free Ecosystem Services?

#### OBJECTIVES:

Students will be able to describe:

- The services natural ecosystems provide;
- The importance of national parks in preserving biological diversity; and
- The responsibility that humans have in preserving biological diversity.

#### MATERIALS:

- 3" x 5" cards, class set
- Yarn or string



#### PROCEDURE:

##### A. Discussion/preparation

1. There are many reasons for pursuing biodiversity.

One is that the ecosystem services all the things in it.

2. Prepare a set of 3" x 5" cards using the ecosystem services from the examples provided or from the Carver Nature Trail and surrounding area and loop yarn through them.

##### B. Search for the Services

Divide the class into teams. Give each team cards. Tell them that they are to find plants and animals that do the jobs/tasks. Then they are to hang or place cards on or near the object that performs the job. Teams can use evidence as well as the real object (for example, animal trails, scat, dens . . . ). Emphasize safety concerns such as poison ivy.

#### Examples of Cards

Garbage hauler  
Construction worker  
Demolition worker  
Air Conditioner  
Cleaner/cleaning product  
Highway/road/path  
Organic farm  
evidence of food use)  
Drug store/pharmacy  
(first aid kit)  
Sponge  
Manufacturer  
Broom  
Storage facility  
Filter/steamer  
Air cleaner

#### Examples of Answers

raptor, ants, wasps  
ants, spider web, bird nest, den  
mushrooms, earthworm, soil organism  
plants (they make a temp. difference)  
stream/lake (self-cleaning)  
deer path, mouse tunnel, insect tracks (leaf miner, bark beetle)  
almost everything!  
berry patches, sunflowers, browse, holes in leaves  
molds, witch hazel, jewelweed, blue violet, rose hips, willow bark  
  
soil  
plant (food and oxygen)  
wind  
seeds, soil, (water)  
soil  
plants



### C. ANALYSIS

When they are done, use this opportunity to discuss the importance and responsibility of preserving biodiversity. Emphasize the interdependence within natural systems and our dependence on them. Nature's services appear to be free; e.g. wind - it's a broom (or a fan). Summarize with these questions:

Do you think George Washington Carver might have understood these concepts when he was your age, living on this farm?

How is garbage handling in a natural community different from garbage handling in a city/small town?

What are some things we can learn from nature about our garbage problem? (Recycling)

What are some of the many ways we are dependent on nature?

In what ways are human communities like natural communities? Different from natural communities?

In what ways do you think George Washington Carver thought natural areas are important?

What do you think George Washington Carver might suggest we do to help our environment?

What are some reasons biodiversity is important?



**ACTIVITY 4:**

**The Value in Parks**

**OBJECTIVE:**

Students will be able to examine some value issues related to a park community.

**MATERIALS:**

None

**PROCEDURE:**

Background: As noted in the Executive Summary of the National Park and Conservation Association's National Park System Plan (1988),

"Protecting parks 'unimpaired for future generations', as the Organic Act mandates, requires attention to -- and often intervention in -- a bewildering array of forces and factors. These include biological, cultural, geophysical, and aesthetic conditions, with a host of regulatory issues accompanying them."

Park communities change after the legal delineation of park boundaries. These changes are caused by both natural events, e.g., plant succession, and by humans, e.g., the introduction of alien species, pollutants and land use changes in the zone immediately adjacent to parks.

**A. Decision Making Activity**

Present students with a short decision making activity related to a problem associated with a park community. This could be a change in a natural regime (e.g. fire), the introduction of an alien (non-native)



*Pond Community*





species, a conflict between humans and an animal, or a pollutant. Park management and research staff can provide you invaluable help.

1. Give the class a study question (see examples below)

2. Divide the class into several small groups and give them a few minutes to discuss the question.

Summarize with a brief discussion - below are two example issues:

If the students were in charge of the park, would they try to make it as historically accurate as possible?

This would include restoring the historic landscape to as close as possible to when Carver lived there.

How far would they take this process? What about the visitor center and the trail? Would they rebuild the

cabin site? How much information is available on what the cabin looked like? The pond was added in

the 1930s. Would they remove it to try to return the area to something like what the young boy Carver

saw? What about the pond community that has been supporting a variety of organisms for over 50 years?

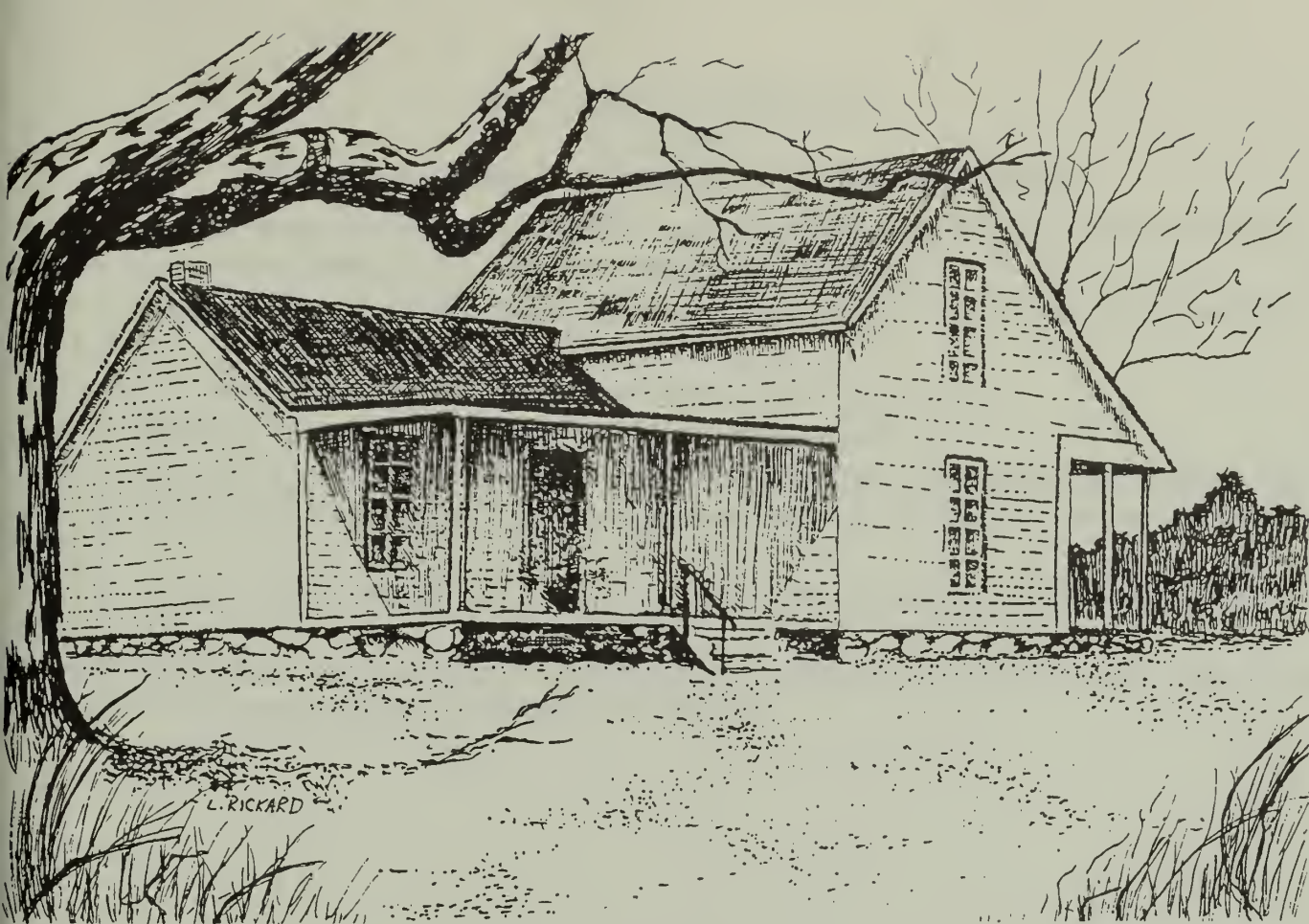
How would they balance these issues?

Non-native species have invaded the prairie habitat in the form of sumac, fescue, and other Asian or

European plant species. These plants can "choke out" or out-compete with the native plants for limited

resources. What is their opinion on what to do, and the consequences of their choices.





1881 Moses Carver House

## CHECKLIST OF HISTORICAL ITEMS SITE VISIT GEORGE WASHINGTON CARVER NATIONAL MONUMENT

Students can check off these items as they discover them on their site visit. This can encourage questions and enthusiasm as they learn about the site, or take the guided tour of the trail.

- |   |   |
|---|---|
| <input type="checkbox"/> George Washington Carver's birthplace site | <input type="checkbox"/> Hanging tree                     |
| <input type="checkbox"/> Statue of Carver as a boy                  | <input type="checkbox"/> Williams pond                    |
| <input type="checkbox"/> 1881 Moses Carver House                    | <input type="checkbox"/> Ash hopper                       |
| <input type="checkbox"/> Horse-drawn plow                           | <input type="checkbox"/> Wagon                            |
| <input type="checkbox"/> Persimmon tree                             | <input type="checkbox"/> Walnut fence row                 |
| <input type="checkbox"/> Carver family cemetery                     | <input type="checkbox"/> Restored prairie                 |
| <input type="checkbox"/> Cross-section of 100 year old elm tree     | <input type="checkbox"/> James Carver's headstone         |
| <input type="checkbox"/> Plant samples Carver prepared              | <input type="checkbox"/> Items from archeological dig     |
| <input type="checkbox"/> Theodore Roosevelt medal                   | <input type="checkbox"/> Carver half-dollar               |
| <input type="checkbox"/> Mariah Watkins' wedding dress              | <input type="checkbox"/> Carver's bedroom furniture       |
| <input type="checkbox"/> Old school books                           | <input type="checkbox"/> Mariah Watkins' bible            |
| <input type="checkbox"/> Model of a sod house                       | <input type="checkbox"/> Old microscope                   |
| <input type="checkbox"/> Moses Carver's fiddle                      | <input type="checkbox"/> Original of Carver bulletin      |
| <input type="checkbox"/> Quotes from Carver                         | <input type="checkbox"/> Picture of Carver and Henry Ford |



**DISCUSSION QUESTIONS**  
**SITE VISIT**  
**GEORGE WASHINGTON CARVER NATIONAL MONUMENT**

1. Compare and contrast your life today to George Washington Carver's life on the farm when he was your age. How was his life different from yours? How was it similar to yours?
2. What skills did George Washington Carver learn while living on Moses Carver's farm that helped him in his later life?
3. What one word would you use to best describe George Washington Carver?
4. What does the term "National Monument" or "National Park" mean?
5. Many people today are concerned about the environment. How did George Washington Carver's work help the environment? Do you think any of his ideas about nature and the environment would be useful today?
6. What do you think is the most important thing or idea that George Washington Carver contributed to the world?
7. George Washington Carver experienced discrimination. Do you think discrimination occurs today? If so, what can you do to help prevent discrimination and bigotry?





## V. CLASSROOM POST-VISIT ACTIVITIES

### ACTIVITY 1:

#### Art with Natural Materials

### OBJECTIVES:

- After participating in this activity the student will:
- Use Carver's methods of producing art from local materials to gain a closer understanding of the boy Carver and his love for art and nature.
  - Understand how common plants can have many uses, i.e., for food, dye and paints.
  - Name three plants from which paint can be made.

### MATERIALS:

- Pieces of wood, sycamore bark, paper bags or plain newsprint, berries, grasses, onion skins, coffee grounds, marigolds, any natural materials that can be used for dyes or paints. The students may want to research these and suggest ideas themselves.
- Horsehair, twigs, twine
- Egg whites or powdered milk

### PROCEDURE:

Background: In the park's 12-minute film, the students will have seen a scene of the young Carver painting with homemade brushes and paints on a piece of wood. A number of books mention how at Tuskegee he made his own paints out of the Alabama clays, as does the film, "Carver, Man of Vision." The students will experiment and learn about the properties and uses of the plants, and about making paints. This will also give them an insight into Carver's early life, where he had to provide anything he needed himself for learning or for play.

#### A. Assemble Materials, Make Equipment

1. Have the children make their brushes from horsehair, twine or twigs. However they want to do it is fine; the point is for them to experiment.
2. Spread a cloth or newspaper over the working area. Have the children bring old clothes to school, or provide them with smocks, as the natural dyes will stain their clothing. Have plenty of cloths or paper towels to wipe their hands and to help with clean-up.

#### B. Create Equipment and Paints from Natural Materials

The children can experiment with making their own paints from the various materials, such as boiled onion skins for brown, crushed marigolds for yellow, raspberries for red, etc. The egg whites or powdered milk can be used as a binding agent to thicken the paint and allow it to stick. Native Americans used powdered iron ore as a paint. Use your imagination! The teacher may want to experiment beforehand so that he or she can suggest a few ideas that work well.

#### C. Paint on Natural Materials

Have the children paint scenes of their choice on the wood, sycamore bark or paper. Rather than using fresh art paper from the store, recycle brown paper bags for the artwork, to keep more in the spirit of the exercise.



ACTIVITY 2:

Carver Cooking

OBJECTIVES:

- After participating in this activity, the students will:
- Be able to name three ways to use peanuts developed by Carver.
  - Appreciate the scope and variety of Carver's imagination in discovering ways to use the peanut and other plants.
  - Gain a hands-on appreciation for the work Carver did with the peanut.

MATERIALS:

- Pamphlet, *How to Grow the Peanut and 105 Ways to Prepare It*. Available from the Carver Birthplace District Association sales outlet in the visitor center in the park.
- Peanuts, sugar, peanut butter, crackers, other ingredients depending on recipe chosen.
- Blender

PROCEDURE:

A. Discussion

Discuss the reasons Carver had to discover 300 ways to use the peanut, based on what the students have learned through reading about Carver and their visit to the park. Carver encouraged farmers to plant peanuts to restore the soil worn out through the monoculture of cotton in the South. Those who heeded his advice found themselves with lots of peanuts and very little market to sell them. So, Carver set out to discover ways to increase the public's use of peanuts to provide that market for the poor farmers. He did not "invent" the peanut or peanut butter, but he greatly increased their popularity.

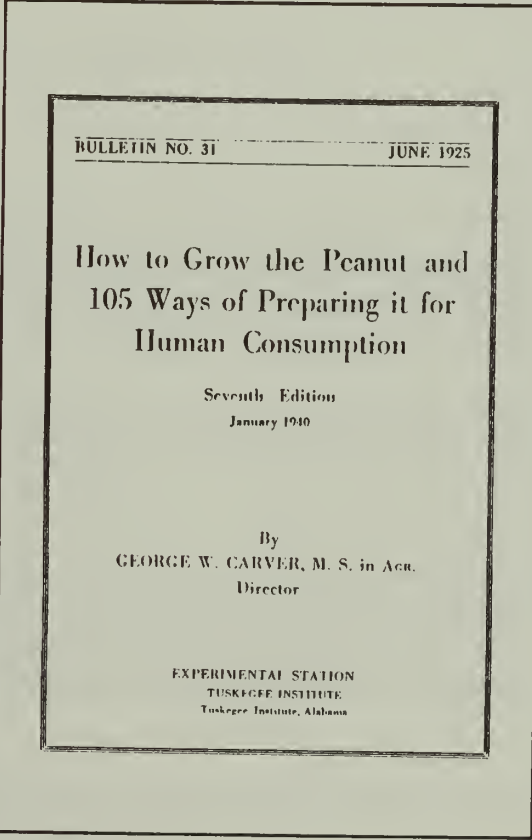
B. Choose Recipes, Cook Them

Using the pamphlet, *How to Grow the Peanut and 105 Ways to Prepare It*, choose two or three recipes that would be practical to prepare in the classroom.

1. PEANUT BUTTER - You may want to begin by simply making peanut butter. Put shelled, preferably unsalted, peanuts in a blender and grind them to a smooth consistency. Put on crackers and pass around to the students. Try adding a touch of salt or sugar to alter the flavor. Explain that commercial peanut butters add preservatives and other agents to keep the oil from separating, but are essentially just ground up peanuts.
2. OTHER RECIPES - Prepare the recipes, with the students assisting or preparing the recipes. Number 80, peanut butter fudge, is a good one.

C. Clean Up/Discussion

As the students clean up after sharing the goodies, discuss the impact Carver had on society. From all that they have learned, do they think this work with the peanut is his greatest contribution? He is most famous for his work with the peanut. Is what makes a historical figure famous necessarily his or her greatest contribution? If not, why not?





**ACTIVITY 3:**

Recycling, Then and Now

**OBJECTIVES:**

- To introduce the student to Dr. Carver's ideas on waste and recycling.
- To provide the student with the concept that recycling is not a new idea; in fact, it is a historical idea that had fallen out of favor in modern society.
- To show that whether an item is "waste" or trash can be a state of mind . . . that successful recycling depends on viewing the world the way Dr. Carver did.

**MATERIALS:**

"Trash"! Clean plastic milk bottles, egg cartons, foil, old bicycle tires, the pull tabs or plastic six-pack rings from soft drink cans, anything you can think of that we think of as trash, but could be adapted to another use. Don't prejudge whether or not you as the teacher could think of another use. If an item is clean and safe for the children to handle, include it. You may want to make a class assignment as part of the activity to have the children bring an item of "trash".

Scissors, glue, tape, construction paper, staples, paper clips . . . whatever is needed.

**PROCEDURE:**

**A. Brainstorming Session**

Begin with a brainstorming session with the kids. Describe Carver's early days at Tuskegee. No money for lab equipment, so he made crucibles out of hubcaps and raided the junkpile to create his equipment. All of his life he demonstrated that nothing needs to be thrown away, there is almost always another use. He crocheted rugs from cornstalks, and doilies from old string. So, the children should try to think like Dr. Carver.

1. What useful or beautiful objects can they create from these things that they would normally throw away.
2. Can it be reused for a similar or the same original purpose? Can the materials be melted down and used again to make other products? Can we convert it to another use?

**B. Recycling Solutions**

Turn the students loose on their pile of materials, and see what they come up with. They can write down solutions that they do not have the tools or equipment to implement, such as recycling the plastic in the milk jugs, or using the styrofoam as insulation in a house. Encourage the kids to think of as many ways as possible. If a solution is wildly unlikely, according to your knowledge of the properties of the material, discuss this with the children.

**C. Creative Recycling**

Have them create a useful or beautiful (or both) object from the materials at hand. Explain that Dr. Carver would have approved of taking "trash" and returning it to a functional use.

**D. Analysis**

Discuss how the solid waste problem relates to their lives today. As well as recycling, what else can be done? Discuss excess packaging. Do they need their toys shrink-wrapped in plastic, then bubble-packed onto cardboard, then put into a paper box? How many resources does this impact? For example, plastic can last thousands of years in landfills, and produces toxic by-products when manufactured. Trees are cut to make the cardboard. How long is this packaging on the toy? How useful is it?

Explain that the children can help fulfill Dr. Carver's vision not only by recycling what they presently throw away, but by choosing food, toys and other items with less packaging, buying in bulk, etc.





#### ACTIVITY 4:

"It is simply service which measures success."

#### OBJECTIVES:

- To introduce the student to Dr. Carver as a humanitarian.
- To provide through activity a sense of Dr. Carver's commitment to helping people.

#### MATERIALS:

Resource list of helping organizations in the area.

#### PROCEDURE:

- A. Introduce Carver's humanitarian work.
- B. Discuss ways the students can act on his example.
- C. Create a contract with the student to complete one of the following options:
  1. Volunteer time at a helping organization.
  2. Visit an organization, then write a newspaper article or report on the activities of that organization.
  3. Identify problems within your school -- loneliness, isolation, perhaps students with special needs or disabilities. Use Dr. Carver's example to create an action plan to help alleviate the problem, then contract with your students to do it.

#### Background information for Dr. Carver's humanitarian work:

He used peanut oil to massage the limbs of people crippled by infantile paralysis. Although his own health was frail, he spent many hours on Saturdays and Sundays ministering to these people.

He held weekly bible classes emphasizing service and harmony.

He turned down offers of large salaries and prestige from Henry Ford, Thomas Edison, Josef Stalin, and others in order to continue working with the people who needed him most.

All his work was aimed at the common person, the poorest farmers in the South. He did not work for tenure or prestige. His bulletins were written so anyone could understand them. He invented the moveable school in order to reach those too poor to come to Tuskegee.

He refused to patent his work. He said that anyone could share his knowledge "for the price of a postage stamp."



## WORD SEARCH

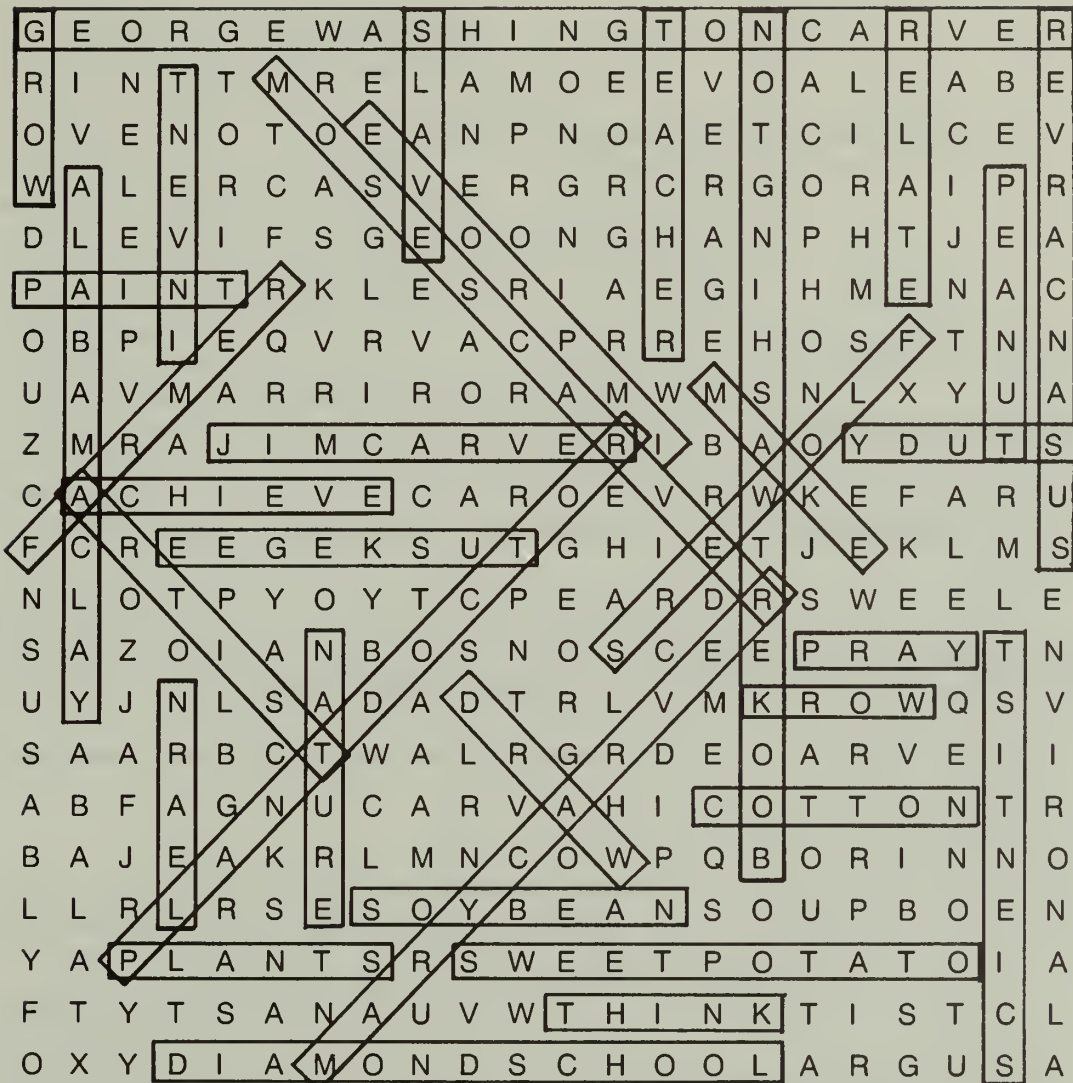
Circle these words relating to Dr. Carver and his life. See how many you can find! The words can be horizontal, vertical, or diagonal, in any direction, including backwards.

peanut	learn	soybean	nature
sweet potato	plant doctor	cotton	grow
Alabama clay	improve	plants	farmers
flowers	paint	work	draw
slave	study	scientist	relate
artist	achieve	teacher	make
Mary Carver	invent	Jim Carver	think
Moses Carver	pray	Susan Carver	Tuskegee
Diamond School	George Washington Carver	Booker T. Washington	

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



# KEY TO WORD SEARCH







# GEORGE WASHINGTON CARVER CROSSWORD PUZZLE

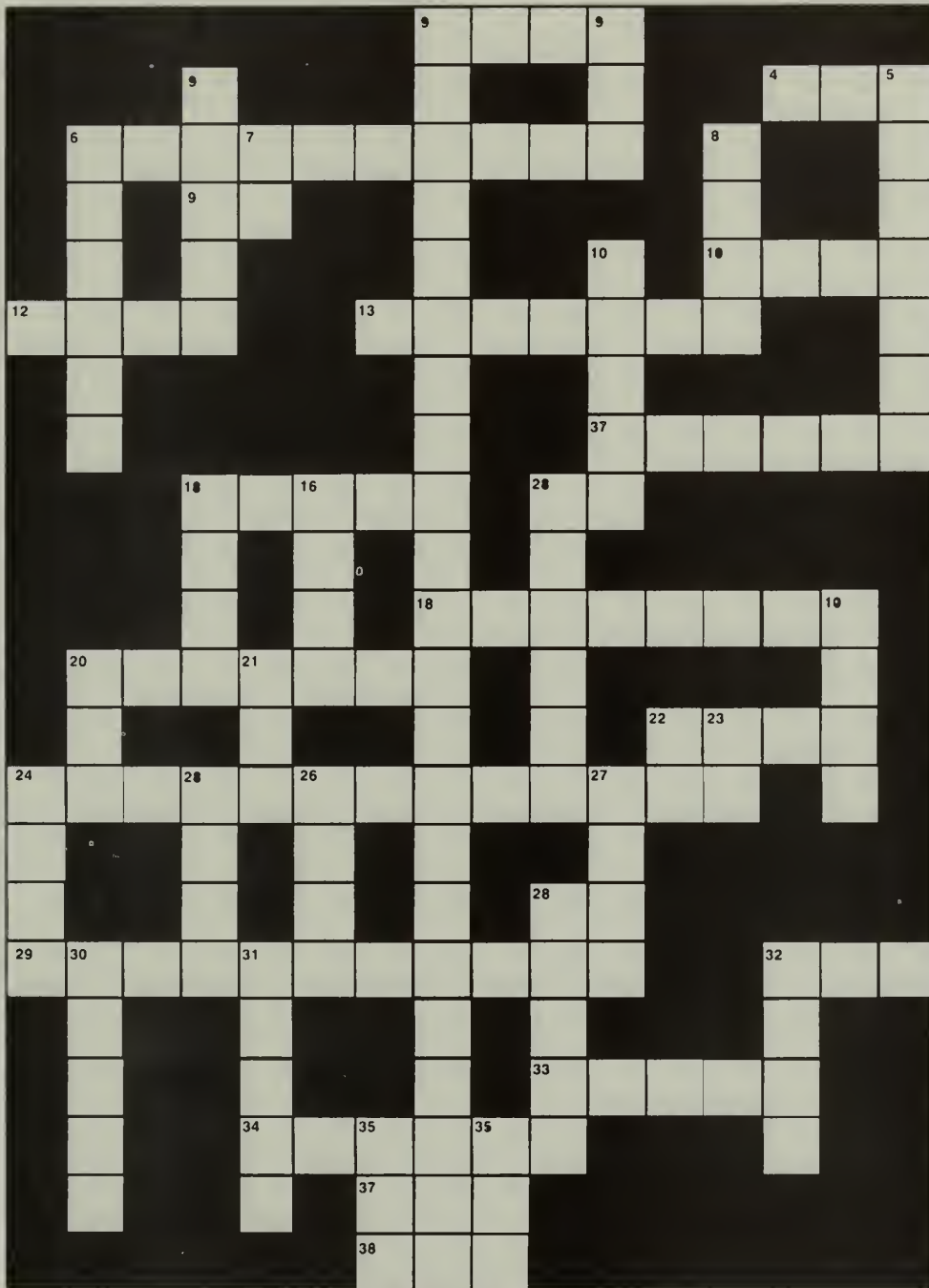
## ACROSS:

1. George Washington Carver helped plants \_\_\_\_\_.
4. Missouri pioneers enjoyed eating corn on the \_\_\_\_\_.
6. To help your neighbor is a \_\_\_\_\_ thing to do.
9. Many people said \_\_\_\_\_ to George Washington Carver, but he did not let this stop him.
11. George Washington Carver had to \_\_\_\_\_ hard to achieve success.
12. If something is clean and unpolluted, it is \_\_\_\_\_.
13. George Washington Carver is most famous for his work with \_\_\_\_\_.
14. Before Carver decided to study plant science, he wanted to be an \_\_\_\_\_.
15. George's white foster father was named \_\_\_\_\_ Carver.
17. The opposite of out.
18. Carver was famous for being a great \_\_\_\_\_ of uses for peanuts, soybeans and sweet potatoes.
20. Name a plant Carver discovered more than 100 uses for.
22. When George was about 12 years old, he had to \_\_\_\_\_ 8 miles to school in Neosho, Missouri.
24. George Washington Carver also invented ways to use the \_\_\_\_\_.
28. A word for yourself.
29. When he was a little boy, Carver was so good with plants his neighbors called him the \_\_\_\_\_.
32. Sounds like two, but means "also".
33. Dr. Carver believed that \_\_\_\_\_ person can achieve success.
34. In order to get an education, Carver had to \_\_\_\_\_ through Missouri, Kansas, and Iowa.
37. When he was an old man, Carver liked to make \_\_\_\_\_ from various weeds, to drink for his health.
38. An old-fashioned word meaning "to make a mistake".

## DOWN:

1. The name of a great scientist, teacher, artist and inventor.
2. When he was a boy, Carver often asked this question.
3. Something used to hang a door.
5. \_\_\_\_\_ . Washington hired Carver to work at Tuskegee.
6. George Washington Carver loved to learn about \_\_\_\_\_.
7. The opposite of stop.
8. When Carver was born, people had passed \_\_\_\_\_ that declared slavery was legal.
10. \_\_\_\_\_ Carver was George's white foster mother, and the wife of 15 across.
15. \_\_\_\_\_ Carver was the name of George's mother, who was kidnapped by slave raiders.
16. Carver was very frugal, he liked to \_\_\_\_\_ his money.
17. Carver did this when he thought up 300 ways to use the peanut.
19. George helped with chores. One of the chores may have been to \_\_\_\_\_ leaves.
20. Carver \_\_\_\_\_ some scary things when bushwhackers came to the farm.
21. Carver started with nothing, \_\_\_\_\_ he never quit trying.
22. \_\_\_\_\_ the people . . .
23. Similar to.
24. Susan Carver made lye from water and wood ashes. She used the lye to make \_\_\_\_\_.
25. The opposite of odd.
26. A small body of water. An example is the \_\_\_\_\_ on the Carver Nature Trail at George Washington Carver National Monument.
27. The opposite of under.
28. A kind of mushroom found in the spring. Carver probably saw these growing in the woods.
30. Carver had to \_\_\_\_\_ home in order to get an education.
31. Carver believed his work was a search for \_\_\_\_\_.
32. Carver was poor as a boy. He did not have many \_\_\_\_\_ to play with.
35. Carver \_\_\_\_\_ food like anyone else.
36. To "lend an \_\_\_\_\_" means to listen.













## V. RESOURCES

### SUGGESTED READING

These resources are available from the Carver Birthplace District Association book sales outlet at George Washington Carver National Monument. They are also available from libraries and bookstores.

#### ADULTS:

- Kremer, Gary, *Carver in His Own Words*, University of Missouri Press, Columbia, Missouri, 1987.
- McMurray, Linda, *George Washington Carver: Scientist and Symbol*, Oxford University Press, New York, 1981.
- Pilant, Richard, *George Washington Carver -- Poor People's Scientist*, School of the Ozarks Press, 1971.
- Clark, Glenn, *The Man Who Talked With Flowers*, Macalester Park Publishing Company, Saint Paul, Minnesota, 1939.

#### CHILDREN:

- Moore, Eva, *The Story of George Washington Carver*, Scholastic Book Services, New York, 1971.
- Mitchell, Barbara, *A Pocket Full of Goobers*, Carolrhoda Books, Inc., Minneapolis, Minnesota, 1986.
- The People Who Made America Great, *George Washington Carver*, pamphlet.
- Empak Publishing, *A Salute to Black Scientists and Inventors*, pamphlet, 1985.
- Adair, Gene, *George Washington Carver*, Black Americans of Achievement series, Chelsea House Publishers, New York, 1989.

#### NATURE BOOKS AND FIELD GUIDES:

Arnett, Dr. Ross H., Jr., and Jacque, Dr. Richard L. J., *Simon and Schuster's Guide to Insects*, Simon and Schuster, New York, 1981. (Simon and Schuster publishes a series of wildlife guides.)

*Audubon Society Field Guides*, Alfred A. Knopf, New York

*North American Butterflies*

*North American Insects and Spiders*

*North American Trees*

*North American Birds, (Eastern and Western)*

*North American Mammals*

*North American Reptiles and Amphibians*

*North American Wildflowers*

*Audubon Society Pocket Guides*, Alfred A. Knopf, Inc., New York

*Familiar Flowers of North America, Eastern Region*

*Familiar Birds of North America, Eastern Region*

*Familiar Reptiles and Amphibians of North America*

Cornell, Joseph, *Sharing Nature with Children*, Dawn Publications, Nevada City, 1979.

Cadufo, Michael J. and Bruchac, Joseph, *Keepers of the Earth*, Fulcrum Inc., Golden, 1989.

Denison, Edgar, *Missouri Wildflowers*, Missouri Department of Conservation, Jefferson City, 1989.

Forey, Pamela and Fitzsimmons, Cecilia, *An Instant Guide to Insects*, Bonanza Books, New York, 1987. (Bonanza Books publishes a series of Instant Guide Books.)



#### NATURE BOOKS AND FIELD GUIDES (continued):

- Golden Field Guides* (a series of field guides for plants, animals and minerals), Golden Press, New York.
- Johnson, Mary Louise, *Favorite Prairie Wild Flowers and Grasses*, Smokey Hills Audubon Society, Salina, 1988.
- Johnson, Tom R., *The Amphibians and Reptiles of Missouri*, Missouri Department of Conservation, Jefferson City, 1987.
- Mitchell, Andrew, *The Young Naturalist*, Usborne Publishing, Ltd., London WC2E, 1982.
- Newcombe, Lawrence, *Wildflower Guide*, Little, Brown and Co. (Inc.), Boston, 1977.
- Pacioni, Giovanni, *Guide to Mushrooms*, Simon and Schuster, Inc., New York, 1981.
- Peterson Field Guide Series* (a series of field guides for wildlife, rocks, minerals, stars and planets), Houghton Mifflin Co., Boston.
- Richard, J. and Heitzman, Joan E., *Butterflies and Moths of Missouri*, Missouri Department of Conservation, Jefferson City, 1987.
- Steyermark, Julian A., *Flora of Missouri*, Iowa State University Press, 1981.
- Stokes, Donald and Lillian, *Enjoying Wildflowers*, Little, Brown and Co. Ltd., Boston, 1984.

#### FILM LOAN PROGRAM

To borrow any of the four films described in the curriculum, write George Washington Carver National Monument, P.O. Box 38, Diamond, Missouri 64840, or call 417-325-4151, between 8:30 a.m. and 5:00 p.m. The films are available on 1/2" video tape. We ask that films be returned to us within two weeks. As the park receives numerous requests for films during February, Black History Month, please reserve your film 2 to 4 weeks in advance for use in February. During the rest of the year, 3 to 4 days notice is usually adequate.

#### FILMS:

- "The Boyhood of George Washington Carver", 12 minutes, captioned. This film depicts Carver's life on the Moses Carver farm. Many children identify with this film because it shows Carver as a child.
- "Carver, Man of Vision", 30 minutes. This film provides a comprehensive overview of Carver's life and achievements, with emphasis on his artistic and spiritual qualities as well as his scientific achievements.
- "Remembering George Washington Carver: Personal Perspectives", 30 minutes. Produced in 1989, the film provides insight into the character and legacy of Dr. Carver through the stories told by people who knew Dr. Carver personally.
- "George Washington Carver", Kaw Valley Films, 30 minutes. This film is the orientation film shown by Tuskegee National Historic Site. It provides a comprehensive overview of Dr. Carver's life, with emphasis on his scientific achievements and his time at Tuskegee.



## **TEACHER EVALUATION**

Your comments would be appreciated. Please mail to:

George Washington Carver National Monument

P.O. Box 38

Diamond, Missouri 64840

### **SECTION I - TEACHER BACKGROUND**

1. How would you improve this section?
2. Was the material appropriate for your needs? If not, what can we do to improve the material?

### **SECTION II - CLASSROOM - PRE-VISIT ACTIVITIES**

1. How could we improve these activities?
2. Were the activities appropriate for your needs? If not, how can we change them to suit your needs?
3. Please suggest additional activities and ideas we could include in this curriculum.

### **SECTION III - GEORGE WASHINGTON CARVER NATIONAL MONUMENT - ON-SITE ACTIVITIES**

1. How could we improve the quality of your visit to the monument?
2. Evaluate the usefulness of the preparatory material included in this section for your site visit. Please suggest any additional information you would like to see to help plan your site visit.
3. Evaluate the services you received at the monument. Was the staff helpful, the facilities adequate?

### **SECTION IV - CLASSROOM - POST-VISIT ACTIVITIES**

1. How can we improve these activities?
2. Were the activities appropriate for your needs? If not, how can we change them to suit your needs?
3. Please suggest additional activities or ideas to include in this curriculum.





**CARVER BIRTHPLACE DISTRICT ASSOCIATION  
SALES LIST**







## DATE DUE

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