

VOLUME 3: S.T.E.A.M.



BLACK HISTORY FLASHCARDS

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Imhotep

27th Century BCE

Science, Technology, Engineering, Mathematics

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- Chief architect of the world's first monumental building, the Step Pyramid.
- Architect, Astrologist, Chief Minister to Djoser, Physician, considered an Egyptian Polymath, which is an individual who is an expert in many areas of learning.
- Developed medical texts describing 100 diseases and 48 injuries. Is still considered highly influential by other physicians.
- Treated diseases such as gout and appendicitis.
- Believed diseases occurred naturally and were not punishments or curses from the Gods or Spirits.
- Today, many physicians feel he is the real father of medicine. Sir William Osler, one of the four founding professors of Johns Hopkins Hospital, said he is the "first figure of a physician to clearly stand out from the mists of antiquity."
- Became deified in 525 BCE as the God of wisdom and medicine.

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Alexandre Dumas

July 24, 1802 – December 5, 1870

Arts

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- Author and Playwright.
- Dumas is best known for his works of *The Three Musketeers*, which was published in 1844, *The Count of Monte Cristo*, published in 1844, and *La Tulipe Noire*, which was published in 1850.
- He is one of the most well-known and advanced writers of the 19th century, with many of his works considered classics today.
- Dumas also wrote what is considered to be the earliest wolf-theme novel, titled *The Wolf Leader*.
- Several of Dumas' works have been published in over 100 languages and several movies have been made from his works.
- In the 1980s, Dumas' last novel, *Le Chevalier de Sainte-Hermine (The Last Cavalier)* was finally found and then published in 2005.



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George Crum

July 15, 1824 – July 22, 1914

Science

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- Inventor, Chef.
- Accidentally invented the potato chip in 1853 while he was working as a chef at the Cary Moon's Lake House in Lake Saratoga, New York. The story says that a diner complained that the fries were too thick so Crum made thinner fries, the diner still complained. Crum then sliced the potato so thin they could not be picked up with a fork, to frustrate the diner, but he loved them and the rest is history!
- Crum's invention started to become known as Crum's Saratoga Chips when other locals began to ask for them.
- After his invention, George opened his own restaurant called Crum's House, near Saratoga Lake, which would have a basket of potato chips on every table.
- Even though George never patented his invention or sold it outside of his restaurant, it created thousands of jobs once the potato chip was to be sold in bags.



Benjamin Bradley

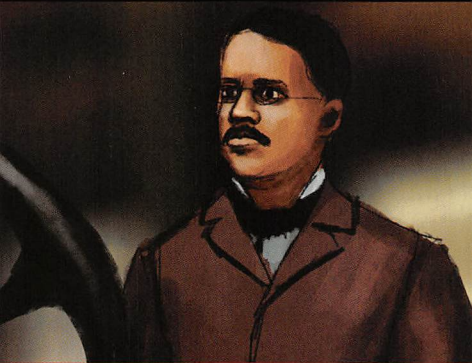
c.1830 – c. 1897

Engineering

UrbanIntellectuals.com



- Inventor.
- At the age of 16, Bradley worked at a printing office.
- While he was still technically enslaved, he worked at the U.S. Naval Academy to help set up experiments for the teachers. Benjamin was able to keep \$5 of his salary a month, the rest went to the plantation owner.
- Bradley began to experiment with scrap metal and built steam engines, which could run a small boat.
- Bradley continued to build on his steam engines and in 1856, created the first United States steam engine big enough to power a war ship.
- With the money he earned for his steam engines, Bradley was able to purchase his own freedom.



Lewis Latimer

September 4, 1848 – December 11, 1928

Science, Technology, Engineering

UrbanIntellectuals.com



- Engineer and Inventor.
- Enlisted in the American Civil War at the age of 16 after lying about his age. He was given an honorable discharge.
- While working at a patent law office, he taught himself mechanical drawing and drafting through observing the work of others.
- Lewis helped draft the telephone patent for Alexander Graham Bell.
- Worked for Thomas Edison and Hiram Maxim on the development of incandescent lighting, he also created and patented a filament which produced a longer lasting light bulb.
- Many believe Edison stole Latimer's and other's ideas when inventing the lightbulb.
- Lewis helped install the first electric plants in New York City, Philadelphia, and Montreal.
- Received eight patents throughout his life, with his first one being in 1874 when he improved the water closets on passenger train cars.

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Jan Ernst Matzeliger

September 15, 1852 – August 24, 1889

Technology, Engineering

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- Inventor.
- After immigrating to America, Jan became an apprentice in the shoe making business.
- When he noticed all the problems shoes had, he invented the “lasting machine” which would stitch the sole of the shoe and make the shoe making process much faster.
- In March of 1883, Jan received a patent for his invention.
- The “lasting machine” could make around 700 pairs of shoes in a day, which was about 10 times the amount a person could do.
- Because of his invention, Jan became a founder of the Consolidated Lasting Machine Company.



Sarah E. Goode

c.1855 – April 8, 1905

Technology, Engineering

UrbanIntellectuals.com



- Inventor.
- First African American woman to receive a United States patent and trademark office.
- Sarah received a patent for her cabinet folding bed in 1885; today, the bed is now known as a hide-away bed.
- The invention was created so it could fit in small spaces and when it was not being used as a bed, it could easily be used as a desk.
- Goode mainly created the bed in order to better serve her customers, many of which lived in small apartments and did not have room for a bed and other furniture.
- Along with her husband, Goode owned a furniture store.



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Daniel Hale Williams

January 18, 1856 – August 4, 1931

Science

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- Surgeon.
- Opened Provident Hospital in 1891, which became the first interracial staff hospital with a nurse training program.
- Became one of the first physicians to successfully perform open-heart surgery without modern surgical tools or a blood transfusion.
- Through studying germ transmission and prevention, his office practiced better sterilization procedures.
- Became Chief Surgeon of Freedmen's Hospital in 1894, which had a reputation of a high mortality rate and had fallen into disrepair. Dr. Williams quickly changed the hospital around with better medical practices and training.
- Co-founded the National Medical Association in 1895, a professional medical association for African Americans, who were not allowed to join the American Medical Association.

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Granville T. Woods

April 23, 1856 – January 30, 1910

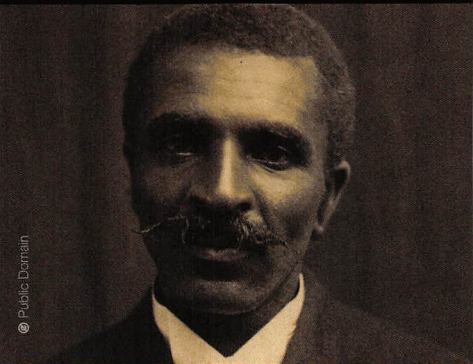
Technology, Engineering

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- Electrical Engineer and Inventor.
- Woods is also known as one of the greatest inventors of all time.
- In his early 20s, Woods enrolled in a technical college.
- Throughout his life, he created over 50 patents with over a dozen focusing on bettering the railroad system.
- Woods created a device in 1887 which would allow the communication between train depots and trains called the Synchronous Multiplex Railway Telegraph.
- During the 1880s, Woods set up his own company, which later became known as the Woods Electric Company.
- In 1889, Woods received his first patent for the improved steam-boiler furnace.

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A black and white portrait of George Washington Carver, an African American man with a mustache, wearing a suit and tie. The portrait is centered in the upper half of the card.

George Washington Carver

c.1861 – January 5, 1943

Science

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- Inventor, Scientist.
- During his time, Carver was one of the most prominent inventors and scientists.
- Using the peanut, Carver discovered over 300 products, which included plastics, gasoline, and dyes.
- As a great plant biologist, Carver made many groundbreaking discoveries, focusing on certain crops such as sweet potatoes, peanuts, pecans, and soybeans.
- In 1916, Carver was given a rare honor for any American by becoming a member of the British Royal Society of the Arts.
- He became the first African American to have a national monument dedicated to him.
- Carver's laboratory was located at Tuskegee Institute in Alabama.



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Sissieretta Jones

January 5, 1869 – June 24, 1933

Arts

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- Soprano Singer.
- Widely considered one of the greatest singing voices of her time.
- During the late 1800s, Jones performed in many places including the White House, Boston's Music Hall, Madison Square Garden, and the World's Columbian Exposition.
- In 1888, Jones became the first African American to sing at Wallack's Theater on Broadway.
- Formed the Black Patti's Troubadours in the 1890s, which became a very popular group of the time and launched the careers of several African American performers.
- Jones became the first African American to perform at Carnegie Hall in New York City in 1892.



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Garrett Morgan

March 4, 1877 – July 27, 1963

Technology, Engineering

UrbanIntellectuals.com



- Publisher and Inventor.
- With only an elementary education, Morgan learned how the sewing machine worked and went on to invent and patent a new and improved sewing machine.
- He was the first African American to own a vehicle in Cleveland, Ohio.
- One of Morgan's most notable inventions is the three-way traffic signal, which included a warning light.
- In 1914, Morgan invented the breathing mask, which made breathing better in a smoky environment.
- The gas mask was put to use when Morgan and his brother went to save several workers who were in a tunnel during an explosion and the firemen could not reach them due to the smoke and fumes.
- Created a hair product for African Americans, which allowed him to start his own company called the G.A. Morgan Hair Refining Company.

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Frederick McKinley Jones

May 17, 1893 – February 21, 1961

Technology, Engineering

UrbanIntellectuals.com



- Inventor.
- Throughout his life, Jones held 60 patents with around 40 of them concerning refrigeration.
- Jones created several inventions for his local area in Hallock, Minnesota, including a radio transmitter, portable X-ray machine, and a snow machine to help doctors get around town easier.
- In the 1920s, Jones started working with motion pictures, using scrap metal to convert silent movie projectors into talking projectors.
- Formed a partnership with Numero, the head of Ultraphone Sound Systems, to create the U.S. Thermo Control Company, where he developed a refrigeration system called the Thermo King.
- Through the Thermo King, Jones helped create the transportation of frozen foods and made U.S. Thermo Control Company a multimillion dollar company.



Alice H. Parker

c. 1895 - Unknown

Technology, Engineering

UrbanIntellectuals.com



- Inventor.
- Attended Howard University.
- Filed for a patent in 1919 for her heating system invention which used natural gas.
- Her central heating system had air ducts and a multiple burner system, which was much safer than burning firewood.
- Her invention helped lay the groundwork for keeping millions of homes and businesses warm.
- While very little is known about Alice, but she is considered one of the most groundbreaking and influential African American inventors, opening the doors for not only African American but all women.



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Charles R. Drew

June 3, 1904 – April 1, 1950

Science

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- Surgeon, Educator.
- Discovered methods on the processing and storing of blood plasma, which is blood without its cells.
- In 1940, became the first African American to attain a Ph.D. from Columbia University.
- During World War II, Drew managed two different blood banks; however, he became frustrated with the military after they wanted the blood segregated.
- Became chief surgeon at the Freedmen's Hospital.
- He joined the American Board of Surgery in 1941, becoming its first African American examiner.
- Was awarded the National Association for the Advancement of Colored People's 1943 Spingarn Medal for the highest achievement by an African American.

Credit: Photographer, Carl Van Vechten.
Institution, Library of Congress



Richard Wright

September 4, 1908 – November 28, 1960

Arts

UrbanIntellectuals.com



- Author, Journalist, and Poet.
- Wright is best known for his work *Native Son*, which was published in 1940.
- He is considered a pioneer for African American writers.
- Through his novel *Native Son*, Wright became the first African American author to protest the treatment of Whites against Blacks.
- Wright's novel *Native Son* was selected by the Book of the Month Club as its first book by an African American author.
- Other notable works by Wright include his story, *Black Boy*, which was published in 1945, *The Outsider* published in 1953, and *Black Power*, which was published in 1954.

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Katherine Dunham

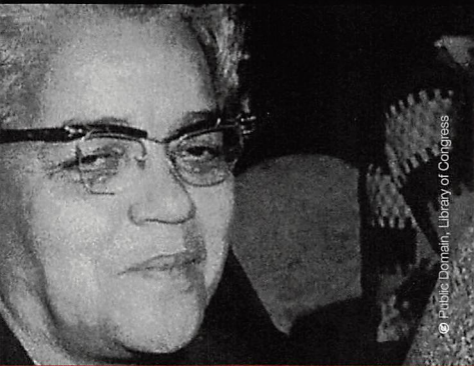
June 22, 1909 – May 21, 2006

Arts

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- Journalist, Activist, Anthropologist, and Dancer.
- At the age of 12, Dunham's short story, *Come Back to Arizona* was published in *The Brownies' Book, Volume 2*, which was edited by W. E. B. Du Bois.
- Dunham is best known for her ethnic and ritualistic dances.
- In 1934, Dunham performed at the Chicago World's Fair.
- From 1934 until 1936, she performed with the Chicago Civic Opera company.
- Composed a ballet for the Federal Theater Project in Chicago in 1938.
- In 1940, Dunham created an all African American dance company, within a few years they began touring all over the United States.



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Dorothy Vaughan

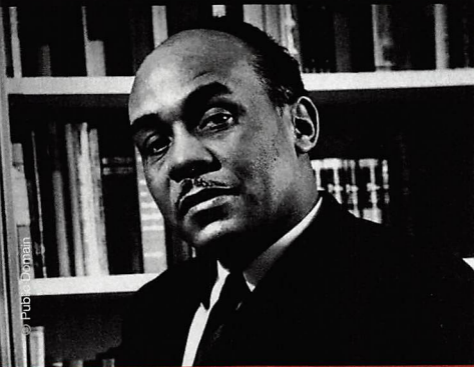
September 20, 1910 – November 10, 2008

Mathematics

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- Mathematician.
- Was able to attend Wilberforce University due to a full college scholarship.
- Hired by NASA (then called NACA) in 1943 as a human computer, a position she thought was temporary.
- In 1949, Dorothy was appointed supervisor of the West Area Computing Unit, making her the first African American woman promoted in the organization.
- Because of her promotion, Dorothy became the first African American supervisor in NASA.
- Helped NASA with flight calculations for Apollo 11 and Project Mercury alongside Katherine Jackson and Mary Jackson.
- Was part of the Scout Launch Vehicle Program.
- In 2016 the story of Dorothy, Katherine Johnson and Mary Jackson was told in the box office smash *Hidden Figures*.



Ralph Ellison

March 1, 1914 – April 16, 1994

Arts

UrbanIntellectuals.com



- Educator and Author.
- Ellison is best known for his novel, *The Invisible Man*, which was published in 1952 and his work *Juneteenth* was published after his death in 1999.
- In the late 1930s, Ellison began to work on *The Negro Quarterly* as the managing editor while he also began to publish his own works.
- In 1953, *The Invisible Man* won the National Book Award for Fiction.
- Throughout his career, Ellison continued to write and began teaching at colleges, such as New York University.
- Today, Ellison's *The Invisible Man* remains an influence for several authors and is a much loved book sure to influence future authors for generations to come.



Marjorie Lee Browne

September 9, 1914 – October 19, 1979

Mathematics

- Mathematician and Educator.
- Browne became the third African American woman to earn a Ph.D. in mathematics in 1949.
- Two years after graduating, Browne was selected to be chair of the mathematics department at North Carolina College (now North Carolina Central University). A position she held until 1970.
- Browne received an IBM \$60,000 grant in 1960, which was the first for a minority college.
- Through the grant, Browne was able to set up a digital computer center.
- Browne was given the first W.W. Rankin Memorial Award for Excellence in Mathematics Education from the North Carolina Council of Teachers of Mathematics in 1975.
- During her career, Browne became the first African American woman to serve as a member of the advisory council to the National Science Foundation.



The Nicholas Brothers **Fayard Antonio & Harold Lloyd**

October 20, 1914 – January 24, 2006;
March 27, 1921 – July 3, 2000

Arts

UrbanIntellectuals.com



- Tap-dancers.
- The Nicholas Brothers are known as pioneers who broke down barriers in show business during the 1930s and 1940s.
- Their appearances in films include 1934's *Kid Millions* and 1936's *The Big Broadcast*.
- The brothers developed a type of dance which combined jazz, ballet, and tap dancing and became known as classical tap.
- During their careers, they toured and performed on Broadway, nightclubs, television, and films.
- During the 1950s and 1960s, they would tour with Sammy Davis Jr. and starred in programs such as *The Colgate Comedy Hour* in 1952 and from 1966-1967, *The Bell Telephone Hour*.



Bessie Blount Griffin

November 24, 1914 – December 30, 2009

Technology, Engineering

UrbanIntellectuals.com



- Inventor, Physical Therapist, and Forensic Scientist.
- Attended a nursing program at Community Kennedy Memorial Hospital in Newark, New Jersey, which was a hospital run for African Americans by African Americans.
- Became not only the first African American but also the first woman to be featured on the WCAU Philadelphia television show *The Big Idea* in 1953.
- During World War II, she worked as a physical therapist for injured soldiers.
- In 1951, Bessie invented an electronic feeding device, which was controlled by the bite of the individual. Once the person bit down on the tube, the device would deliver a mouthful of food.
- Patented and invented a device that was able to help a person with one arm hold something close to their face, called the portable receptacle support.
- Became Portsmouth Police Department's chief document examiner in the 1970s.

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Katherine Johnson

August 26, 1918 – Present

Mathematics

UrbanIntellectuals.com



- Mathematician.
- Graduated from college at the age of 18, double majoring in Mathematics and French.
- Started working for the National Advisory Committee for Aeronautics (NACA) in 1953 when she learned they were hiring African American women to be their “computers.”
- After NACA became NASA, Katherine was selected to be one of the people to try to figure out how to get humans into space and worked backwards in order to make sure the calculations would work.
- Worked on the calculation to help get the Apollo astronauts home from the moon.
- In 2015, then President Barack Obama honored Katherine with the Presidential Medal of Freedom, which is the highest honor for United States civilians.
- In 2016 the story of Katherine, Dorothy Vaughan and Mary Jackson was told in the box office smash *Hidden Figures*.



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David Blackwell

April 24, 1919 – July 8, 2010

Mathematics

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- Mathematician and Professor.
- Blackwell graduated high school and went off to college at the age of 16, graduating with his Ph.D. in his early 20s.
- Blackwell began teaching as a professor in 1942, teaching at Southern University in Baton Rouge, Clark College in Atlanta, and Howard University in Washington, D.C., where he became department head.
- In 1954, he went to work at the University of California in Berkeley, becoming president of the Institute of Mathematics in 1955.
- He became the University of California in Berkeley's first African American professor to receive tenure.
- In 1965, Blackwell became the first African American elected to the National Academy of Sciences.



Otis Boykin

August 29, 1920 – March 13, 1982

Technology, Engineering

UrbanIntellectuals.com



- Inventor.
- After having to leave college due to lack of funds, Boykin went to work creating his own inventions.
- In 1959, he received a patent for his wire precision resistor, which would be used in radios and televisions.
- In the early 1960s, Boykin furthered his resistor invention by creating one which could handle temperature changes.
- Boykin also invented the control unit for the pacemaker, which used electrical impulses that would stimulate the heart to help create a steady heartbeat.
- By the time Otis passed away in 1982, he had 26 patents to his name.



Mary Jackson

April 9, 1921 – February 11, 2005

Mathematics

UrbanIntellectuals.com



- Mathematician.
- Hired by NACA (NASA) in 1951 as a human-computer in the West Computers area.
- Moved to the Compressibility Research Division of NACA in 1953.
- Considered resigning due to separate and unequal lodging. A supervisor heard her complaints and invited her to work for him and to take engineering classes. She was eventually promoted to aeronautical engineer, historically making her NASA's first African American engineer.
- Co-authored a report at NASA titled, *Effects of Nose Angle and Mach Number on Transition on Cones at Supersonic Speeds* in 1958.
- In the 1970s, Jackson began focusing on helping other minorities and women advance in their careers as the Federal Women's Program Manager in the Office of Equal Opportunity Programs.
- In 2016 the story of Mary, Katherine Johnson and Dorothy Vaughan was told in the box office smash *Hidden Figures*.



Chike Obi

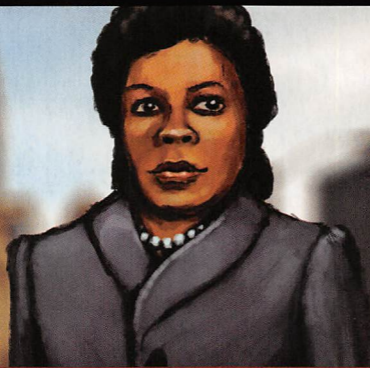
April 17, 1921 – March 13, 2008

Mathematics

UrbanIntellectuals.com



- Mathematician, Professor, and Nigerian Politician.
- First Nigerian to receive a Ph.D. in mathematics.
- Considered a pioneer of mathematics in Nigeria because of his work in mathematical research.
- While working as a politician, he helped establish the political party named the Dynamic Party of Nigeria.
- As a professor, he established the Nanna Institute for Scientific Studies, where he spent time working on mathematical formulas.
- During his research at the Nanna Institute for Scientific Studies, he compiled a report where he showed his proof of Fermat's Last Theorem, one of the few mathematicians to be able to do so.



Marie Van Brittan Brown

October 30, 1922 – February 2, 1999

Technology, Engineering

UrbanIntellectuals.com



- Nurse, Inventor.
- In order to feel safer in her home, Marie created the first home security system in 1969, which consisted of peepholes, monitors, a camera, two-way microphone, and an alarm button.
- Through her home security system, Marie is also credited with helping to develop the first closed circuit television.
- Due to her invention, the National Scientists Committee honored her with an award.
- More than a dozen inventors cited Marie's patent for her security system for their own systems in 2013.
- *New Scientist* reported in 2016 that 100 million concealed closed circuit cameras were in operation because of Marie's invention.

Credit: Photographer Dan Dry, under the Creative Commons Share Alike 3.0 Unported license

Jesse Ernest Wilkins, Jr

November 27, 1923 – May 1, 2011

Science, Mathematics

UrbanIntellectuals.com



- Scientist and mathematician.
- At the age of 13, Wilkins became the youngest student at the University of Chicago and graduated with his Ph.D. at the age of 19.
- Contributed to the Manhattan Project, which produced the first nuclear weapons.
- After the devastating effects of the atomic bomb at Hiroshima and Nagasaki, Wilkins became and continues to be an opponent against nuclear weapons.
- Designed and tested optical techniques for telescopes and microscopes when working at the American Optical Company in Buffalo, New York.
- Became Harvard University's Distinguished Professor of Applied Mathematical Physics in 1970.
- Served as president of the American Nuclear Society from 1974 until 1975.
- In 1976, Wilkins received one of the highest honors for an engineer when he became the second African American elected to the National Academy of Engineering.

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Evelyn Boyd Granville

May 1, 1924 – Present

Mathematics

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- Professor and Mathematician.
- In 1949, Evelyn became the second African American woman to earn a Ph.D. in mathematics, which she received from Yale University.
- Went to work at IBM in the 1950s and when they merged with NASA, worked on Project Mercury and Project Vanguard where she developed computer software that analyzed satellite orbits.
- She became a research specialist at North American Aviation Space and Information Systems Division in 1962.
- When she received a teaching job at California State University in Los Angeles, she became aware of the lack of education surrounding mathematics for students and focused on bettering the educational system.
- Evelyn began to teach elementary students mathematics in trying to prepare them for college and life.



Meredith Gourdine

September 26, 1929 – November 20, 1998

Science, Engineering

UrbanIntellectuals.com



- Engineer and Physicist.
- During college, he went to the Olympics in 1952 and won the silver medal for long jump.
- Professionally, Meredith worked his way up from an employee to becoming the head of two companies, working in electrogasdynamics and developing commercial uses for the technology.
- In 1964, he founded Gourdine Systems, a research laboratory and in 1973, he founded Energy Innovation, which produced direct energy conversion devices.
- Throughout his career, he received 30 patents for inventions such as converting natural gas to electricity and creating circuit breakers.
- His most well-known invention was the Incineraid System, which helped clean the air of a smoky building or even fog on an airport runway.

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"Portrait of Alvin Ailey, Library of Congress.



Alvin Ailey

January 5, 1931 – December 1, 1989

Arts

UrbanIntellectuals.com



- Dancer.
- Known as one of the leading modern dancers of the 20th century, he made his Broadway debut in Truman Capote's *House of Flowers* in 1954.
- In 1958, Ailey founded his own dance company, the Alvin Ailey American Dance Theater.
- Ailey's company went on to produce works such as *Revelations* and eventually began touring around the world.
- In the 1960s, Ailey stopped performing but did continue to produce works, such as *Masakela Language*, which emphasized the Black experience in South Africa.
- In 1974, Ailey expanded his dance company by establishing the Alvin Ailey Repertory Ensemble.
- Throughout his career, Ailey produced around 80 ballets.



James Edward West

February 10, 1931 – Present

Science, Technology, Engineering

UrbanIntellectuals.com



- Inventor and Scientist.
- In 1962, while obtaining his doctorate degree, West helped construct the electret microphone, this technology does not require the use of batteries.
- His invention could be used in several devices, such as hearing aids and space technology.
- Throughout his career at Bell Technologies, West achieved 250 patents on several discoveries, along with the microphone.
- In 1999, West became the fourth African American selected to join the National Inventors Hall of Fame.
- By 2011, electret microphone technology was present in around 90% of microphones.
- During his career at Bell Technologies, West worked to encourage African Americans to take a larger role in the sciences through programs such as Black Laboratories Employees (ABLE).



Credit: Photographer, Carl Van Vechten,
Institution, Library of Congress

Arthur Mitchell

March 27, 1934 – Present

Arts

UrbanIntellectuals.com



- Dancer.
- After high school, Mitchell received a full scholarship to go to the School of American Ballet.
- The New York City Ballet made Mitchell their first African American member in 1955.
- By 1962, Mitchell was promoted to principal dancer and performed in *A Midsummer Night's Dream* that same year and *Agon* in 1967.
- Inspired by Martin Luther King Jr. and the Civil Rights Movement, Mitchell turned to help teach other Harlem kids how to dance.
- Mitchell, along with the help of others, was able to open up the Dance Theatre of Harlem, which is also America's first African American ballet company, in 1969.



Henry Sampson

April 22, 1934 – June 4, 2015

Science, Technology, Engineering, Arts

UrbanIntellectuals.com



- Inventor.
- While he did not invent the cell phone, Sampson is a co-inventor of a technology which is used in cell phones, called the Gamma-Electric cell, which converts high radiation energy (gamma rays) to electricity.
- Became the first African American in the United States to earn a Ph.D. in Nuclear Engineering from the University of Illinois in 1967.
- Wrote a book about overlooked African American filmmakers in the first half of the 1900s, titled *Blacks in Black and White: A Source Book on Black Films*.
- Holds several United States patents, most of which are related to solid rocket motors.



Gloria Conyers Hewitt

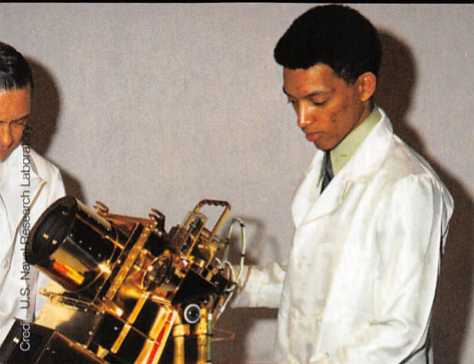
October 26, 1935 – Present

Mathematics

UrbanIntellectuals.com



- Mathematician and Professor.
- Became the fourth African American woman to hold a Ph.D. in mathematics in 1962.
- Before she graduated with her Ph.D., she received a faculty position at the University of Montana, where she worked her way up to full professorship and chair of the Mathematical Sciences Department.
- During the 1970s, Gloria served on the executive council for the Pi Mu Epsilon, a mathematical honor society.
- Served as chair for the board that writes Graduate Records Examination questions in the 1980s.
- When Gloria retired from the University of Montana in 1999, she held the title Professor Emeritus.



Credit: U.S. Naval Research Laboratory

George R. Carruthers

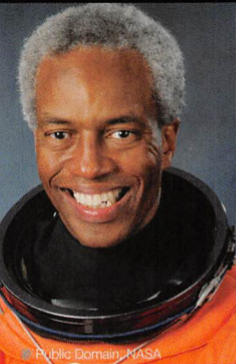
October 1, 1939 – Present

Science, Technology, Engineering

UrbanIntellectuals.com



- Scientist, Inventor, Physicist.
- At the age of 10, he built his first telescope.
- One of his most well-known inventions was the ultraviolet camera, also known as the spectrograph. It was used in the 1972 Apollo 16 NASA space flight.
- A second version of his ultraviolet camera was used in 1974 to observe comets, including Halley's Comet.
- Helped develop a program which allows high school students to work at the Naval Research Laboratory called The Science and Engineers Apprentice Program.
- Because of his dedication to sciences and engineering, he was inducted into the National Inventors Hall of Fame in 2003.
- Has received numerous other awards and honors, such as the distinguished lecturer from the Office of Naval Research and the Exceptional Scientific Achievement Award from NASA.



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Guion Bluford Jr. & Mae Jemison

November 22, 1942 – Present;
October 17, 1956 – Present

Science

UrbanIntellectuals.com



- Guion Bluford was the first African American to travel into space in 1983 on the Challenger.
- Through his career, he made 4 trips into space.
- Guion was inducted into the International Space Hall of Fame in 1997 and the United States Astronaut Hall of fame in 2010.
- Mae Jemison was the first female African American astronaut, she first took flight in 1992 on the Endeavour.
- Mae was the first female African American to be admitted into the astronaut training program.
- She established the Jemison Group, which is a company that seeks to develop, market, and research advanced technologies.
- Both Guion and Mae are also scientists, along with being astronauts.

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Valerie Thomas

February 1943 – Present

Science, Technology

UrbanIntellectuals.com



- Scientist and Astronomer.
- When Valerie received her Physics degree from Morgan State University, she was one of only two women in the program.
- Holds a patent for her invention of the illusion transmitter.
- While working for NASA, Valerie helped create computer program designs which supported research on the ozone layer, satellite technology, and Halley's Comet.
- Through her work at NASA, she received several achievements and awards, such as the Goddard Space Flight Center Award of Merit and the NASA Equal Opportunity Medal.
- In the 1970s, Valerie helped managed the creation of Landsat, an image processing system, which was the first satellite to send images to Earth from space.



Shirley A. Jackson

August 5, 1946 – Present

Science, Technology, Engineering

- Physicist, Inventor.
- The first African American woman to not only obtain a Ph.D. in physics from the Massachusetts Institute of Technology (M.I.T) but also obtain any Ph.D.
- During her career, Jackson became a leading developer for many inventions, such as caller I.D., call waiting, fiber-optic cables, the portable fax machine, solar cells, and the touch tone telephone.
- She was not only the first woman but also the first African American to chair the U.S. Nuclear Regulatory Commission, being appointed by then President Bill Clinton in 1995.
- Jackson first became President of the American Association for the Advancement of Science before becoming chairman.
- The National Women's Hall of Fame inducted Jackson in 1998.

Credit: John F. Williams, Office of Naval Research, under Creative Commons 2.0 Generic license.



Lonnie G. Johnson

October 6, 1949 – Present

Science, Technology, Engineering

UrbanIntellectuals.com



- Inventor and Engineer.
- As a child, Johnson was told not to aspire to be anything more than a technician; however, he became inspired by inventor George Washington Carver and continued his dream of becoming an inventor.
- In 1968, Johnson was the only African American to take part in a science fair where he won first prize for a compressed-air-powered robot, called the Linex.
- Helped create the stealth bomber program while part of the United States Air Force.
- During the 1980s, Johnson invented the Super Soaker water gun, which hit \$200 million in sales by 1991.
- Founded Johnson Research & Development, where he patented and invented items such as hair rollers that set without heat.



Carrie Mae Weems

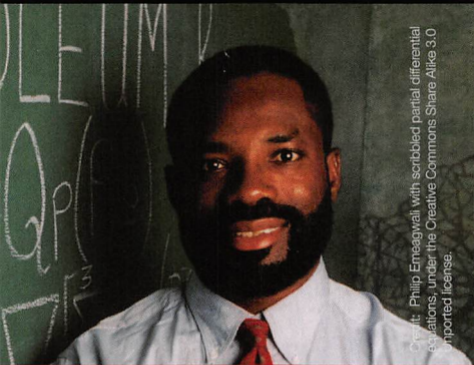
April 20, 1953 – Present

Arts

UrbanIntellectuals.com



- American Artist and Photographer.
- Carrie's work often combined audio, photography, and text to show the daily life of Americans, eventually turning to the racism that African Americans face.
- Some of her most famous work is her 1990 *Kitchen Table Series*.
- Weems often uses her work to question the role of African Americans, specifically African American women, in popular culture.
- Weems' work has been displayed in over 50 art exhibitions in the United States and overseas.
- Throughout her career, Weems has received several honors and visiting professorships, including Harvard University.
- In 2013, Weems received the MacArthur Foundation Fellowship and in 2015 received the the W. E. B. Du Bois Medal and was named a Ford Foundation Art of Change Fellow.



Credit: Philip Emeagwali with scribbled partial differential equations, under the Creative Commons Share Alike 3.0 unported license.

Dr. Philip Emeagwali

August 23, 1954 – Present

Science, Technology, Mathematics

UrbanIntellectuals.com



- Inventor and computer scientist.
- Has become known as the “Bill Gates of Africa.”
- After leaving school at 14 years old, he was homeschooled by his father and could perform about 100 math problems in an hour.
- Through his study on how bees work with honeycomb, Emeagwali determined that computers could follow the same process.
- Taking 65,000 processors, Emeagwali invented the world’s fastest computer, at the time in 1989. It could perform around 3.1 billion calculations per second.
- Helped scientists understand how oil flows underground through computer simulations.
- Has won over 100 awards, including the Institute of Electronics and Electrical Engineers’ Gordon Bell Prize in 1989.



Marc Hannah

October 13, 1956 – Present

Science, Engineering

UrbanIntellectuals.com



- Computer Graphics Designer and Electrical Engineer.
- Received his Ph.D. from Stanford in 1985.
- Co-founded Silicon Graphics, Inc. (SGI), a computer graphics technology company, in 1982 with 6 other individuals.
- In 1986, Hannah was given the title of principal scientist due to the computer programs he created, such as Indigo, Indigo2, and Indy graphics which helped create effects in films like *Beauty and the Beast* and Michael Jackson's music video, *Black and White*.
- Hannah's company also helped create the early architecture for Nintendo 64 gaming console.
- Hannah is a specialist in three-dimensional graphics.
- He is also partial owner of a construction company in Oakland, California, called Rondeau Bay.



Credit: Picture of Janet Emerson Bashen, used under the Creative Commons Share Alike 3.0 Unported license.

Janet Emerson Bashen

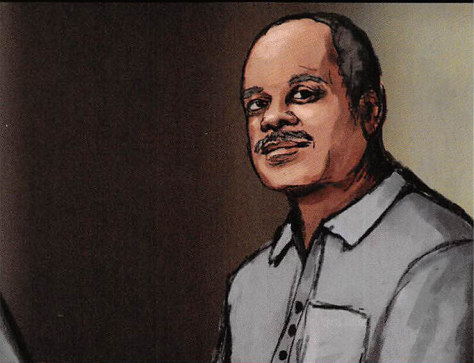
February 12, 1957 – Present

Technology

UrbanIntellectuals.com



- Founder and C.E.O of a private consulting group which investigates Equal Employment Opportunity complaints under the 1964 Civil Rights Act, Title VIII called the Bashen Corporation.
- Through the Bashen Corporation, Janet has developed many software programs, such as 1-800Intake, AAPLink Affirmative Action.
- LinkLine is a software program developed by Janet and her cousin, Donny Moore, which can securely store information about the cases she took over through the Bashen Corporation.
- In 2002, Inc. Magazine named the Bashen Corporation one of America's entrepreneurial growth leaders.
- In 2004, the National Association of Negro Women in Business awarded Janet with their Crystal award.
- In 2006, Janet became the first African American woman in the United States to obtain a software program patent.



Mark Dean

March 2, 1957 – Present

Technology, Engineering

UrbanIntellectuals.com



- Inventor and computer programmer.
- While in high school, Mark built his own radio, amplifier, and computer.
- Helped create several technologies for the company IBM, such as the color PC monitor and the gigahertz chip, which is a piece of technology that can do a billion calculations per second.
- He has more than 20 patents which are associated with his name. Three of these patents are through the company IBM.
- In 1996, Mark became the first African American to receive the IBM fellow honor.
- In 1997, Mark was inducted into the National Inventors Hall of Fame and honored with the Black Engineer of the Year President's award.

Credit: Scott Penner, under Creative Commons 2.0
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Prince

June 7, 1958 – April 21, 2016

Arts



UrbanIntellectuals.com



- Sold over 100 million records throughout his career, with many going platinum, including the soundtrack for *Purple Rain* which went platinum 13 times.
- In 1978, at the age of 19, he became the youngest record producer in Warner Bros history.
- In July of 1984, he simultaneously held the number one spots for album, single, and film in one week.
- Released 39 studio albums during his career.
- Established a charity called Love4OneAnother, which supported dozens of other charities and individuals.
- Helped establish the #YesWeCode organization in order to help African Americans in the technology industry.



Credit: Michael Jackson performing song "Jam", under Creative Commons Share Alike 3.0 Unported license.

Michael Jackson

August 29, 1958 – June 25, 2009

Arts

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- Michael shared lead vocals at age 7 in the family band, the Jackson 5.
- They were the first group to debut with four consecutive number one hits on the *Hot 100* with the songs *I Want You Back*, *ABC*, *The Love You Save*, and *I'll Be There*.
- His album *Off the Wall* sold over 11 million copies in 1979.
- His album *Thriller* sold 27 million copies worldwide and is still considered one of the greatest records of all time, becoming 30 times multi-platinum.
- Widely known as the “King of Pop,” Jackson has sold over 750 million records and won 13 Grammys.
- Recognized by the Guinness World Records for over 100 million albums sold outside the USA and donating to the most charities in a year.
- Had 13 number one hits during his career.
- Supported dozens of charities, including USA for Africa, Elizabeth Taylor AIDS Foundation, and the United Negro College Fund.

Credit: Joi Ma, under Creative Commons 2.0 Generic license.

John Henry Thompson

1959 – Present

Technology

UrbanIntellectuals.com



- Inventor and Computer Programmer.
- Through working at a New York research facility, Thompson was able to teach himself several computer program languages.
- Thompson wanted to learn as many computer program languages as possible, so he could one day create his own computer language.
- While working at Macromedia as a chief scientist, Thompson developed the Lingo Program, a scripting language that helps render visuals in computer programs.
- Through his Lingo program, he was able to develop several other products, such as Flash and Shockwave.
- Thompson also helped develop several other programs, such as MediaMaker, Actions, VideoWorks Accelerator, and Video Works II.



Jean-Michel Basquiat

December 22, 1960 – August 12, 1988

Arts

UrbanIntellectuals.com



- Self taught Artist and Painter.
- First began to receive attention as an artist under the name SAMO for his graffiti in New York City.
- His work often showed a fusion of words, symbols, stick figures, and animals.
- After a few years of struggling, Basquiat started to sell his paintings for \$50,000.
- After his death, one of his paintings sold for \$110.5 million, which is the highest priced work by an American artist.
- Became the youngest artist ever to showcase about 60 pieces of his work at the Kestner-Gesellschaft Gallery in Hanover, Germany.
- Before his death, he collaborated with artist Andy Warhol, which ended up with a combination of their work in versions of cartoon characters and corporate logos.



Tammera L. Holmes

July 29th, 1978 – Present

Technology, Engineering

UrbanIntellectuals.com



- President & CEO of AeroStar Consulting Corporation, Founder of AeroStar Avion Institute NFP.
- Mission is to enhance, promote and support the global impact of aviation and aeronautical career path opportunities for youth and young adults, particularly female, minority, underprivileged and at-risk.
- AeroStar started in 2008, served over 2000 students, and partnered with Boeing, United Airlines, and NASA.
- Holmes has been a TEDx Speaker, inducted into the Illinois Aviation Hall of Fame, an Obama Foundation Summit Invitee, Bessie Coleman Aviation Award winner and STEM Entrepreneur of the Year by Egretta Foundation.
- Graduated SIUC with BS in Aviation Management and is an Aviation & STEM Education Expert and international speaker.
- Advice: Have faith. It is more effective than being fearful.



Gwen Jimmere

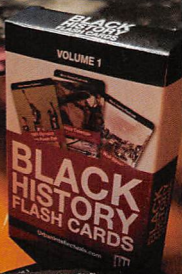
June 7, 1982 – Present

Science

UrbanIntellectuals.com



- Founder & CEO of Naturalicious, an international beauty company found in over 2500 stores worldwide.
- Founder of Pitch Proof, where she trains business owners on how to get funding for their businesses without going into debt or giving up equity.
- First African American woman in history to hold a patent for a natural hair care product, the Moroccan Rhassoul 5-in-1 Clay Treatment.
- Her popular Hello Gorgeous Hair Care System does the work of 12 products in only 3 steps, taking you from wash to style in 80% less time.
- Named one of the 100 Most Influential African Americans in the U.S.
- Only natural hair care line invited to participate in the VIP gift bags for President Obama's Inaugural Ball in 2012.
- Named one of the 25 Most Powerful Women in Business.
- Graduated valedictorian from her high school; and summa cum laude from college and graduate school.



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Dr. Martin Luther King Jr.

January 15, 1929 – April 4, 1968

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- Dr. King was a pastor from Atlanta, Georgia who became the most celebrated figure of the Civil Rights movement.
- In late 1955, he accepted the NAACP led leadership of the bus boycott to protest segregation. The boycott lasted 382 days and on December 21, 1956 the Supreme Court of the United States finally declared unconstitutional the laws requiring segregation on buses.
- He was subjected to arrest, having his home bombed and abuse and was eventually assassinated.
- Drawing from his Christian beliefs and Ghandi inspired non-violent ideas he led the Civil Rights movement traveling over six million miles and speaking over twenty-five hundred times between 1957 and 1968.
- At 35-years-old he became the youngest person to win the Nobel Peace Prize.
- His Washington, D.C. address, of "I Have a Dream", given in front of 250,000 people is seen as one of the defining moments of modern history.

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