

Contemporary Black Pioneers in Technology and Science Careers

Source: <http://mashable.com/2013/02/03/black-innovators/#RQ7Pu119uPqT>

1) Frank Greene

Considered [one of the first black technologists](#), Frank Greene developed high-speed computer systems in the 1960s. He also founded the software companies Technology Development Corp. and ZeroOne Systems, Inc. Greene died in 2009.

2) Roy Clay Sr.

[Roy Clay](#) is a Silicon Valley pioneer, having worked as the research and development director of Hewlett-Packard (HP)'s computer division, working on the design and construction of the company's first computers in the 1960s. He later founded Rod-L Electronics, which tests for safety in electrical equipment.

3) Mark Dean

Mark Dean helped develop the once-ubiquitous IBM PC, holding three of IBM's nine original patents. [In 1999](#), he sought to create a voice-activated tablet, and [wrote in 2011](#) that he uses a tablet as his primary computer. Dean is now the CTO for IBM Middle East and Africa.

4) Guion Bluford Jr.

[Guion Bluford Jr.](#) was the first black man to travel in space in 1983. Bluford is an engineer and was a colonel in the United States Air Force before participating in four space shuttle flights.

5) Mae Jemison

[Mae Jemison](#) the first black woman to travel in space in 1992. Jemison, a physician by trade, has received numerous awards and honorary doctorates.

6) James E. West

[James West](#) invented the first practical electret microphone, which uses a charged material instead of needing a polarizing power supply. It is commonly used in cellphones, cameras and digital recorders around the world. West won the [Benjamin Franklin Medal](#) in electrical engineering from the Franklin Institute in 2010.

7) Philip Emeagwali

During his doctoral fellowship at the University of Michigan in the 1980s, [Philip Emeagwali](#) researched how to simulate the detection of oil reservoirs through the use of computers. Originally from Nigeria, he knew more about oil drilling than many of his contemporaries, and he [used more than 65,000 microprocessors](#) instead of the proposed eight supercomputers, breaking computation speed records.

8) Kennedy Reed

[Kennedy Reed](#) is a theoretical physicist at the University of California's Lawrence Livermore National Lab. He received the [Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring](#) in 2009.

9) Al Zollar

[Al Zollar](#) worked for IBM for over 30 years before retiring, most recently working as general manager of IBM Tivoli Software, where he was in charge of strategy and profit and loss management. He has a degree in applied mathematics from the University of California at San Diego, where he was recently named one of 50 distinguished alumni.

10) John Thompson

When John Thompson was chairman and CEO of computer security software company Symantec, he was the [only African American](#) to hold such a position at a major tech company. He is now the CEO of Virtual Instruments and is the only black man on [Microsoft](#)'s board of directors.

11) Emmit J. McHenry

[Emmitt McHenry](#) co-founded Network Solutions, Inc., one of the early leading Internet domain services providers. In 1995, he founded NetCom Solutions International, a telecommunications and engineering company that has won awards from IBM and NASA, among other places.

12) Gerald Lawson

In the 1970s, [Gerald Lawson](#) created the first video game console with interchangeable cartridges at [Fairchild Semiconductor](#), paving the way for the future of gaming. He died in 2011.

13) Wanda Austin

[Wanda Austin](#) is the president and CEO of the Aerospace Corporation, a non-profit that assists and contributes to national space programs. When she was senior vice president of the Engineering and Technology Group in the early 2000s, she led a staff of 1,000 engineers and scientists.

14) Lester Lyles

[Lester Lyles](#) is the chair of the National Academies Committee on the rationale and goals of the U.S. civil space program. He holds degrees in mechanical and nuclear engineering. He formerly served as the Air Force's vice chief of staff and as the commander of the Air Force Materiel Command at Wright-Patterson Air Force Base in Ohio. He was also appointed to President Obama's Intelligence Advisory Board.

15) Dixie Garr

[Dixie Garr](#) served as Cisco Systems' vice president of customer success engineering for seven years. She drove change throughout the company's engineering processes and business practices to better help the needs of customers around the world. She has been awarded several honors, including the 1997 Black Engineer of the Year Award.

16) Lori Perine

[Lori Perine](#) is currently the managing principle at InterpreTech, where she once worked as president and CEO. Companies consult InterpreTech in economic innovation, science, energy and technology. Perine also served as deputy to the associate director of the White House Office of Science and Tech Policy until 2001.

17) Herman Chinery-Hesse

Herman Chinery-Hesse was born in Ireland, studied in the United States and worked in England, but decided to return to his roots in Ghana to start a software company called SOFTtribe. He has been called "[Africa's father of technology](#)" and is often [likened to Bill Gates](#).

18) Chad Womack

Chad Womack is the director of STEM education initiatives and the fellowship program at the [United Negro College Fund \(UNCF\)](#). He is also a biotechnology scientist and he serves on the board of directors of the National Biotechnology and Pharmaceutical Association.

19) Robin Petgrave

Robin Petgrave is the founder and executive director of [Tomorrow's Aeronautical Museum](#), where at-risk youths are introduced to aviation, math and science. His students have broken several aviation world records.

20) Kimberly Bryant

In 2011, [Kimberly Bryant](#) launched [Black Girls Code](#), an organization devoted to teaching young girls of color computer coding and programming languages, such as Scratch and Ruby on Rails. Through classes and programs, Bryant and the rest of the Black Girls Code team hope to grow the number of black women in technology and give underprivileged girls better opportunities.

Black Pioneers in Arts, Theatre, Journalism, and Music Careers

21) Matt Barker

Matt Baker is often considered the first known successful African-American artist in the comic-book industry.

22) Nina Simone

Nina Simone was one of the foremost singer/songwriters and Civil Right activists of her generation, revolutionizing the music genre.

23) Sam Lacy

Sam Lacy was a pioneer in the field of sports reporting, giving a voice to the hopes, thoughts and dreams of many.

24) Marian Anderson

Marian Anderson was one of the greatest singers of the 20th Century, but it was her dignity in the face of racial prejudice, which confirmed her legacy in the United States.

25) Wendell Smith

Wendell Smith was a pioneer in the field of sports writing, **acting as the voice of Black America** in fighting against segregation in Major League Baseball. He covered Jackie Robinson's integration.

26) Langston Hughes

Langston Hughes was one of the most celebrated and respected writers/poets of the Harlem Renaissance and was a fore bearer of great authors of the Black Experience.

Black Pioneers in Sports Careers

27) Charlie Sifford

Charlie Sifford was a pioneer in the world of golf, helping to dismantle the “Caucasian-only clause” and opened the game...

28) Willie O’Rae

Willie O’Ree is honored by many as the “Jackie Robinson” of hockey.

29) Johnny Bright

Johnny Bright was one of the greatest offensive players in college football and Canadian Football League history, but he is most widely remembered for being a victim of one of the worst racially motivated dirty plays in collegiate sports and the impact that it made on the game.

30) Wendell Scott

Wendell Scott was a pioneer in the sport of auto racing as the first Black full-time driver on the NASCAR circuit.

31) Satchel Paige

Satchel Paige is remembered with fondness as one of the greatest pitchers to ever play the game of Baseball. He was forced to play his prime in the Negro League, and he played with Jackie Robinson. At age 42, he did play in the MLB.

32) Larry Doby

Larry Doby is forever viewed as number two, the second Black player and the second Black manager in modern Major League Baseball but this should not obscure his Hall of Fame career nor the struggles he endured.

Black Pioneers in Civil Rights, Politics, Law, and Business

33) Bayard Rustin

Bayard Rustin spent years in the background of the shadows of the great civil rights leader of the 1960’s.

34) Ralph Johnson Bunche

Dr. Ralph Johnson Bunche, the first African-American to receive the 1950 Nobel Peace Prize, earned it for his mediation efforts in Palestine during the 1940s. He also built the United Nations.

35) Macon Bolling Allen

Macon Bolling Allen was the first black-American Justice of the Peace (1848) and the first African-American to pass the bar and practice law in the United States (1845). He is believed to be the first black to ever hold a judiciary position in the United States, despite not being considered a citizen throughout most of his pursuit.

36) Jane Bolin

Jane Bolin was the first black woman to become judge in the United States (1932). She was also the first black woman to earn a law degree from Yale, the first black woman to pass the New York State bar exam.

37) Jean Baptiste Point du Sable

Jean Baptiste Point du Sable was Chicago's first recorded resident, founder, and curator. Although Chicago had been established before his colonization, his residence was recorded as it's first.

38) Bass Reeves

Bass Reeves is a legend of the west, one of the first Black lawmen in the region and one of the first Black heroes of the era. Bass Reeves is surrounded by so much legend that it is hard to determine what is fact and what is fiction.

39) Christopher Gardner

Christopher Gardner, former member of the Navy was determined to find a lucrative means of employment for his new family, so he became a stock broker. His story is so remarkable, Wil Smith played him in the "Pursuit of Happyness."

40) William Hastie

William Hastie had one of the most distinguished careers as an earlier Black political pioneer but today remains unknown to most Americans.

Black Pioneers in Exploration, Flight, and Space

41) Matthew Henson

Though ignored at the time, history has discovered the true contributions of Mathew Henson, the co-discoverer of the North Pole.

42) Bessie Coleman

Bessie Coleman was a pioneer and innovator in the field of aviation.

43) Benjamin O. Davis, Jr.

Benjamin O. Davis, Jr. is remembered for many things: Being the first Black Air Force General, leading the Tuskegee Airmen.

Black Pioneers in Sciences and Inventions

44) Percy Julian

Percy Julian should be a name known to all of society for the contributions he made to the field of science. His research and development of synthetic compounds made him one of the most significant contributors to science and health care in the 20th century.

45) Elijah McCoy

Elijah McCoy may be a mystery to most people, the scale of his ingenuity and the quality of his creations have created a level of distinction which bears his name, "the Real McCoy."

46) Jan Matzeliger

Jan Matzeliger made it possible for ordinary people to purchase shoes, the shoe laster, a machine that attached the tops of shoes to the soles.

47) Lewis Latimer

Lewis Latimer may be a mystery to most people, the scale of his ingenuity and the quality of his creations have created a level of distinction which bears his name, "the Real McCoy."

48) Fred Jones

Fred McKinley Jones is certainly one of the most significant Black inventors ever based on the sheer number of inventions he developed as well as their variety.

49) Lloyd Hall

Lloyd Hall made significant contributions to society by developing new methods of food preservation and sterilization which eliminated spoilage.

50) Charles Drew

Charles Drew was one of those exceptional individuals who seemed to excel at everything he did and would go on to become great pioneer in the field of medicine.

Notable Black Events, Places, and Things

Many of these topics can be found at
www.blackpast.org

51) Atlanta Race Riot of 1906

The first race riot to take place in Atlanta, was caused by increased racial tensions over jobs, voting rights, and a desire for civil rights. White government expanded Jim Crow laws and segregated neighborhoods.

52) Redlining

Redlining was common when the first middle class African Americans were wanting to buy homes. They would apply for a bank loan, and the banks coordinated efforts to only loan to Blacks within the red lines drawn on maps of cities. This forced the loans to be in lower quality neighborhoods. The effects of redlining are still felt today. The concept of generational wealth is a related topic.

53) School-to-Prison Pipeline

Idea that there is a disproportionate number of children and teens who are Black and Latino, suspended and expelled from public schooling. This leaves them uneducated, funneling them into mass incarceration. Zero Tolerance policies in schools and increasing numbers of School Resources Officers within the school have led to a criminalization of behaviors that used to be normal, school house behaviors.

54) Tuskegee Airmen

Black pilots flying in World War II in a segregated unit of soldiers. They were fighter and bomber pilots. They painted the noses and tails of their aircraft red, earning the nickname "Red Tails."

55) Tuskegee University

HBCU in Tuskegee Alabama, established by Booker T. Washington.

56) Howard University

HBCU founded in 1867 in Washington, D.C. One of the top ranked HBCUs today. Began as a teacher and preacher college open to both men and women.

57) Morehouse College

HBCU in Atlanta, Georgia as an all male institution of higher learning. Martin Luther King, Jr. is one notable alumnus. Morehouse is part of the Atlanta University Center.

58) Spellman College

HBCU for women only, located in Atlanta, GA. Nationally ranked as a top liberal arts college.

Spelman is part of the Atlanta University Center.

Montgomery Bus Boycot

This is the event that made Rosa Parks famous.

There is a lot of history and other people involved in this Boycot. Rosa was not the first person to take a seat in the front of the bus, 15 year-old Claudette Colvin was.

59) Port Chicago 50

Beginning with enormous munitions explosion at Port Chicago in California killing 320 sailors and civilians and injuring 390 more. 238 men refused to work, 50 of the surviving Black sailors and civilians refused to return to work. Because WWII was going on, their strike was classified as mutiny, and they were all jailed. The fallout from these incarcerations was to integrate the Navy, the first of the U.S. branches to integrate. Thurgood Marshall watched the military proceedings and held a series of press conferences, formulating an appeal that eventually won releases for most of the 50.

60) Buffalo Soldiers

In 1866, the first U.S. Army Cavalry Regiment made up of African Americans raised during the Civil War as part of the Union Army. Although the term is loosely used to describe every unit made up of African Americans, called the "United States Colored Troops" with black soldiers and Native American soldiers. Officers in command were black and white officers.

61) Central Park Five (Central Park Jogger Case, 1989)

Five Black and Latino teenagers from Harlem, NY were wrongly accused and convicted of raping a white woman in Central Park, New York City, NY. One of the boys served 13 years in prison, and the other four boys spent 7 years each. The case was eventually overturned when evidence of a serial rapist was found during a DNA analysis.

62) Underground Railroad

The most famous conductor was Harriet Tubman, but the Underground Railroad has a lot of history and maps and stories.

63) HBCUs (Historically Black Colleges and Universities)

Redlining was common when the first middle class

64) Red Summer 1919

Summer and Autumn 1919 had hundreds of deaths and injuries from multiple race riots in over 26 cities. In most cases white people attacked black people. The destruction of Black Wall Street was one of the famous riots where whites were jealous of economically successful blacks.

65) Forty acres and a mule

William Tecumseh Sherman promised formerly enslaved farmers their own 40 acres and a mule, but this never happened. This term is one of many used in discussion of reparations.

66) Atlanta Compromise

African American leaders including Booker T. Washington and white leaders that southern black people would submit to white rule, not seek the vote, and not riot, in exchange for education and due process. The term “Atlanta Compromise” was a negative term, coined by W.E.B.Du Bois and William Monroe Trotter because they believed African-Americans should fight for their rights.

67) The Talented Tenth

Designates the leadership class of African Americans in the early 20th Century. Northern religious people, wanting to start a missionary society that educated the brightest and most intellectual African Americans.

68) Haitian Revolution

Former French colony, Haitian slaves revolted, forming the first black state with no slavery, ruled by non-whites, and former slaves.

69) Brooklyn, Illinois (ca.

1823 -) Now Lovejoy, IL.

First black town in the USA.

70) Sundown Towns

All white cities that practiced a form of segregation using policy, laws, intimidation, and physical violence to force African Americans to leave town. Travelling was difficult, especially in Jim Crow south but really all over the USA. There were few hotels and restaurants serving African American people. Sundown towns would post signs on the outskirts of their town stating that “colored people” had to leave town by sundown. The Negro Motorist Green Book listed safe places to lodge and eat.

71) Haitian Revolution

Former French colony, Haitian slaves revolted, forming the first black state with no slavery, ruled by non-whites, and former slaves.

72) Harlem Renaissance

Period of time when African-Americans celebrated heritage, racial pride, creative expression, intellectualism. Out of the Harlem Renaissance came many significant figures including writers and musicians.

73) Juneteenth (June 19, 1865)

Federal troops landed in Galveston, Texas, officially freeing slaves in Texas. President Lincoln issued the Emancipation Proclamation freeing slaves as of January 1, 1863, but Texas slaveholders kept news of the freedom from their “property” until 1865.

74) 1926 Black History Week, now Black History Month

Carter G. Woodson wrote “The Mis-Education of the Negro” in 1933. He also established Black History Week in 1926, which is now Black History Month.

Discovery Students

Your Computer Lab Assignment has two parts. The subject matter is Black History Month Research. The Computer Lab part is to create a TED-like presentation, in PowerPoint using a method called “PechaKucha.” In order to accomplish this presentation, you will need to do a fair amount of research in limited time. You will concurrently cultivate your images.

“PechaKucha.” Presentations are 20 images scrolling for 20 seconds each, for a five minute forty second presentation where you and your voice carry the show. This is too long for this age, generally. The ironies are that the longer (more slides) you speak, the less you have to know about your topic; The slower you speak the more the audience pays attention; and the more compelling images might be related, tangential, or directly on-point. For example, 20 images of a person’s face, is not going to hold an audience’s attention. You will have to find images of their ideas, their accomplishments, maps, pictures of the time period they are in, etc.

A. First, you are to **research an African American event, place, idea, of significance, or a Black person that doesn't typically get discussed during black history month. You choose your person, place, or event. For this project, you cannot choose: Martin Luther King, Jr., Rosa Parks, Barak or Michelle Obama, Oprah, Beyonce, Hank Aaron, Michael Jackson, or Jackie Robinson, or ANY person you have already done a report on in another grade or class.**

I will help you narrow, broaden, or redirect your research, IF you ask for help.

You MUST pick a person, place, thing, or idea to research by the end of this class period, **and** write that TOPIC next to YOUR Name, on the class roster.

B. Second, you are to **create and present “PechaKucha” PowerPoint.** Read up on the concept of “PechaKucha” PowerPoint, with a google search.

- a. In a nutshell, in real PechaKucha” you would create 20 PowerPoint slides on your given topic, talk about each slide for 20 seconds (live in front of the class) for 6:40 of presentation time. This MIGHT BE TOO MUCH for most of you.
- b. At the allotted time, the slide automatically clicks forward, because you set it to do so.
- c. You may choose the number of slides and the seconds you have to speak. Practice and think about yourself – Do you prefer more/fewer slides/time? Pick what is BEST FOR YOU!
 - a. 20 slides for 20 seconds = 6:40
 - b. 10 slides for 15 seconds = 5:00
 - c. 20 slides for 10 seconds = 3:20
 - d. 10 slides for 20 seconds = 3:20
 - e. 10 slides for 15 seconds = 2:30
 - f. **10 slides for 10 seconds = 1:40**
 - g. 5 slides for 20 seconds = 1:40

Tips on how to beat this assignment!

- a. Pick a person you are interested learning about. You will be spending 2-3 weeks with this person.
- b. Research well, and deep.
 - a. To Cite – Copy the website URL you used for the picture. Add the link to the image in the speaker notes.
 - b. Copy the pictures you find that are interesting, and relevant.
 - c. READ to know WHY this picture is Important. You ARE NOT Memorizing!
- c. Cover the IMPORTANT or INTERESTING THINGS about the person AND what was going on in the world at the time they lived.
- d. Your words in the live presentation are prompted by your “compelling” slides.
- e. Not all slides have to be OF your person, but they MUST RELATE and BE COMPELLING.
- f. Use the best images to FOCUS your talking.
- g. Practice talking about a picture as you add it.

Tips on How to Beat PowerPont

- a. Sign in using your student LOGIN. If you have computer access at home, you can work there.
- b. Keep your PowerPoint background simple!
- c. Limit your colors to template colors.
- d. Make your pictures BIG, BRIGHT, BOLD, and if possible, COLORFUL, and in FOCUS.
- e. Limit the words on the slide
 - a. 0 – 7 words = Good
 - b. 0 – 5 words = Better
 - c. 0 – 3 words = Best
- f. DO NOT Use slow or distracting Animations or Transitions, unless it is for purposeful effect.
- g. Use the Timer on the “Transitions” Tab in PowerPoint.