## Inventor and mathematician. Created first clock ever built Benjamin Banneker in US: expert in astronomy; developed an almanac, worked on surveying and layout of new city of Washington D.C. Norbert Rillieux Revolutionized sugar industry; drainage and sewer systems (mother was slave, father was white engineer) Elijah McCoy Invented many useful items from the automatic lubrication system for Railroad and machinery to the lawn sprinkler. Granville T. Woods Telegraph systems, automatic brakes, third rail (called "The Black Edison") First African American physician in NY; activist Susan McKinney Steward John Parker Began own foundry; bought his own freedom George Peake Invented Stone mill to grind quality corn meal Bertram Fraser-Reid Internationally known chemist- worked on compounds involved in pest control, disease prevention and cure, etc. John Moon Computers, data disks Gloria Wilder Brathwaite Award-winning pediatrician; started CORE Health Shirley Jackson Physicist; first African American to earn PhD at MIT; chairwoman of the Nuclear Regulatory Commission Andrew Beard Invented "jenny coupler", and automatic train coupler Major inventor in electric lighting Lewis Latimer Invented gas mask; first automatic traffic signal, many Garrett Morgan others George Washington Carver Made major improvements in agriculture and invented hundreds of uses of agricultural products (peanuts, sweet potatoes, corn etc.) **Daniel Hale Williams** Surgical pioneer; first heart surgery; founded first black voluntary hospital Charles Drew Medical pioneer; first blood plasma bank Internationally acclaimed research scientist (marine Ernest Everett Just biology, cell structure, diseases) Research scientist; chief chemist for Glidden Co.-Percy Julian developed paints, other products, including fire retardant paints Frederick McKinley Jones Invented refrigeration for trucks (also designed & built racecars; snow machine, portable x-ray, portable refrigeration units for war-time air drops, etc. Valerie Thomas Worked in NASA to produce "illusion transmitter", computer programs to research comets etc. James Forten Owned company that made sails, invented and improved on sails, became very successful Invented "lasting machine" which revolutionized making Jan Matzeliger of shoes Ronald McNair Physicist who studied lasers and their applications, astronaut aboard Challenger (died in Challenger explosion)

## AFRICAN AMERICANS IN THE STEM FIELDS

Jane Cooke Wright	Cancer research specialist, developed new techniques in chemotherapy and its delivery, studied effectiveness of drugs
Madam C. J. Walker	Began hair products/cosmetics company with \$2.00; became internationally known millionaire- lived in the Hudson Valley
Mae Jemison	Scientist, Astronaut
Fred Jones	Inventor, called "The Man with a Million ideas"
Matthew Henson	Explorer best known as the co-discoverer of the North Pole with Robert Edwin Peary in 1909
Ronald McNair	Scientist, astronaut
Garrett Morgan	Blazed a trail for African-American inventors with his patents, including those for a hair-straightening product, a breathing device, a revamped sewing machine and an improved traffic signal
Mamie Phipps Clark	PHD Identity development; racial self-consciousness; racism and segregation; psychological and educational testing; counseling psychology.
Marie Maynard Daly	Conducted important studies on cholesterol, sugars, and proteins. Committed to developing programs to increase the enrollment of minority students in medical and graduate science programs.
Katherine Johnson	Best know for refining calculations that helped synch Project Apollo's Lunar Lander with the moon-orbiting Command and Service Module. Worked on the Space Shuttle and the Earth Resources Satellite, and authored or coauthored 26 research reports. (movie Hidden Figures based on her work)
Benjamin Bradley	Born a slave. Engineer and inventor. First person to develop a working model of a steam engine for a war ship.
Benjamin Carson	Pediatric neurosurgeon and medical researcher who was the first surgeon to successfully separate Siamese twins who had been conjoined at the head;
Stephanie Hill	Vice president and general manager of Lockheed Martin's Information Systems & Global Solutions Civil business, has been named the 2014 Black Engineer of the Year.

## AFRICAN AMERICANS IN THE STEM FIELDS