

## Celebrate

# BLACK HISTORY MONTH

We believe science creates opportunities and shapes our world.

Countless scientific and technological accomplishments influence our lives and form the framework for our modern society, and most are led by individuals whose stories often go untold. As we honor Black History Month, we are pleased to highlight people whose groundbreaking accomplishments contributed to scientific understanding, broke barriers in medicine and aviation, and helped improve lives of countless individuals and families through education, mentorship, and support. We encourage you to seek out the outstanding individuals of today who are living and working right here in Buffalo and around the world.

#### DR. CHARLES R. DREW 1904-1950 MEDICINE



"It is fundamentally wrong for any great nation to willfully discriminate against such a large group of its people.... One can say quite truthfully that on the battlefields nobody is very interested in where the plasma comes from when they are hurt."

Dr. Charles R. Drew was an American surgeon and medical researcher whose work saved thousands of lives during World War II. As a child and young man he was a star athlete, lettering in four sports and attending Amherst College on an athletic scholarship. His interest in medicine came later, after the death of his sister from tuberculosis and influenza and his own hospitalization from a football injury.

Drew trained and mentored a

Drew's work revolutionized how blood could be donated, stored and transported. His bloodmobiles allowed for a centralized location for donors to give blood and eventually developed into the American Red Cross Blood Bank.

During this time, blood was segregated between races. Drew protested this practice, arguing that there was no science supporting it. His advocacy led to eventual policy changes.

generation of medical students and surgical residents at Howard University Medical School. He also campaigned against the exclusion of Black physicians from medical societies and medical specialty organizations, including the American Medical Association.



#### DR. JUNE BACON-BERCEY 1929 - 2019 METEOROLOGY



"When I chose my major, my adviser advised me to go into home economics ... I got a D in home economics and an A in thermodynamics."

June Bacon-Bercey is best known for her time as a television meteorologist during the 1970s right here in Buffalo, NY.

She was the first woman and first African-American to be awarded the American Meteorological Society's Seal of Approval for her broadcast forecasting. During her career, she also worked for the National Weather Service (NWS) and the National Oceanic and Atmospheric show "The \$128,000 Question" to establish the June Bacon-Bercey Scholarship in Atmospheric Sciences for Women through the American Geophysical Union. In 2022 the American Meteorological Society will rename the Award for Broadcast Meteorology in honor of Dr. Bacon-Bercey.



#### Administration (NOAA).

She was a staunch advocate for STEM education for women and minorities, setting up the American Meteorological Society's Board on Women and Minorities. She used winnings from the TV game

#### ZORA NEALE HURSTON 1891-1960 ANTHROPOLOGY



"Sometimes, I feel discriminated against, but it does not make me angry. It merely astonishes me. How can any deny themselves the pleasure of my company? It's beyond me."

Zora Neale Hurston was a celebrated author during the Harlem Renaissance, whose works include the classic novel "Their Eyes Were Watching God." She also did extensive work in the field of anthropology, publishing documentation of her research on rituals in Jamaica and Haiti, as well as two books of folklore.

At the age of 34, she began studying anthropology at Barnard College. Her research focus was in African-American folklore and hoodoo in the see her own culture. As a native anthropologist studying her own culture, Hurston was a pioneer in interpretive anthropology. Her work helped to understand the African diaspora, showing the underlying connections that existed between Black communities, even though they were scattered across the globe.



US South and the Caribbean, work that was partly funded through the Works Progress Administration, the Guggenheim Foundation, and sustained through the assistance of philanthropic patrons.

Anthropology gave Hurston a new lens through which she could

### DR. ERNEST EVERETT JUST 1883-1941 ZOOLOGY



"[L]ife is the harmonious organization of events, the resultant of a communion of structures and reactions."

Ernest Everett Just, an African-American zoologist, biologist and teacher, was best known for his work in developmental physiology, including how radiation can impact growing and dividing cells.

After graduating from Dartmouth University in 1909, he began teaching at Howard University. During the summers, he also worked at the Marine Biological Laboratory in Woods Hole, MA, where he would gain renown as an expert on marine animal embryology. He later went on to do research throughout Europe and received much greater recognition and acclaim there than in America. Just believed that the conditions in laboratory experiments should reflect the conditions found in nature. He emphasized that the functions of structures and processes found within a cell are equally as important as the genetics in the cell nucleus. This work laid the foundation of ecological and developmental biology.



#### DR. WARREN M. WASHINGTON 1936-PRESENT CLIMATOLOGY



"My suggestion to young people is that not only should they read about the history of science and engineering, but that they should read about the lives of those that have made contributions to these field."

Dr. Warren M. Washington is an internationally renowned atmospheric scientist that has devoted his life to creating precise and accurate computer models of Earth's climate. Using the physics of the atmosphere, his models are used to help scientists understand climate change and its impacts in the 21st century.

Because of his expertise, he has served on many national commissions about global climate change. He has published almost 200 papers in scientific journals and was an advisor to four US Presidents. climate models to understand climate and explain the role of human activities and natural processes in the Earth's climate system and for his work to support a diverse science and engineering workforce."



In 2010, he received the National Medal of Science "for his development and use of global

#### **BESSIE COLEMAN 1892-1926** AVIATION



"I thought it my duty to risk my life to learn aviation and to encourage flying among men and women of our race, who are so far behind the white race in this modern study."

American aviator Bessie Coleman was the first woman of African-American and Native American (Tsalagi) descent to become a professional pilot. She paved the way for women of color in the aviation industry.

At this time, American flying schools would not allow her into their programs because she was an African American as well as a woman. So, she taught herself French and headed across the Atlantic to study in France. Seven months later, on June 15, 1921 she was a licensed pilot. She refused to speak anywhere that was segregated or that discriminated against African Americans, and turned down a movie role because she was asked to perform an offensive African American trope. Tragically, at age 34, she died when the plane she was riding in crashed, but her legacy has lived on.



Coleman was primarily a stunt pilot, traveling and performing around the world while promoting aviation and speaking out against racism.

#### DR. MARGARET S. COLLINS 1922-1996 ENTOMOLOGY



"A lot of people opposed our civil rights efforts. I had to do what I thought was the most important thing. That's all there was to it."

Margaret S. Collins started college at West Virginia State University at the age of fourteen. She would go on to earn her PhD in zoology from the University of Chicago, teach at Howard University and Florida A&M University, and serve as the chair of the Biology department at FAMU.

Her focus was termites in the Caribbean, including their adaptations, behaviors, and taxonomy. She was part of a team that identified a new species of termite - *Neotermes luykxi*. the Question of Human Equality," which looked at racism in the sciences.

In 1996, she died doing what she loved - doing field research in the Cayman Islands.



Collins was also a civil rights advocate. She volunteered during bus boycotts and like many antiracist activists she was monitored by the FBI. She also published "Science and

#### KATHERINE JOHNSON 1918-2019 MATHEMATICS



"We will always have STEM with us. Some things will drop out of the public eye and will go away, but there will always be science, engineering, and technology. And there will always, always

#### be mathematics."

Katherine Johnson, born in West Virginia in 1918, always had a love for mathematics. Her family drove 120 miles for her to be able to continue her education through high school. When she was 18, she graduated college and began teaching high school. As the Space Race heated up in the 1950's, Johnson got a job as a computer at NASA.

During her time at NASA, she proved extremely good at that she personally check the figures before his orbit around Earth. Following her success with Mercury, she worked on the Apollo missions, including calculating the flight path for the first manned mission to the moon.



calculating flight paths. She was pulled into working on the 1961 Mercury mission, successfully calculating the launch window. These calculations had to be perfect to keep the astronauts safe. Astronaut John Glenn requested

#### GEORGE WASHINGTON CARVER 1864-1943 BOTANY



*"When you do the common things in life in an uncommon way, you will command the attention of the world."* 

George Washington Carver was an accomplished botanist and educator who invented new uses for a variety of crops, including peanuts, sweet potatoes, and soybeans. He is credited with the discovery of over 300 uses for the peanut plant. Contrary to popular belief, he did not invent peanut butter.

Carver studied botany at Iowa State University, where he became the first black faculty member. He went on to teach botany at the Tuskegee Institute, where his leadership in the Institute's agricultural department elevated its reputation nationally and internationally. He did this through a series of free, simply-written brochures that included information on crops, cultivation techniques, and recipes for nutritious meals. World leaders sought Carver's expertise on nutrition and agriculture, including President Theodore Roosevelt and Indian leader Mahatma Gandhi.



Carver was dedicated to improving the lives of poor farmers, whose soil quality was damaged by repeated plantings of cotton.

### **GERALD "JERRY" LAWSON** 1940-2011 TECHNOLOGY



"I've had people look at me with total shock. Particularly if they hear my voice, because they think that all Black people have a voice that sounds a certain way, and they know it. And I sit there and go, 'Oh yeah? Well, sorry, I don't." [On being one of the few Black engineers in the videogame industry.]"

Electrical engineer Jerry Lawson's invention revolutionized video gaming worldwide. He led the development of the Fairchild Channel F home gaming system, which was released in 1976 and was the first interchangeable cartridgebased game console. Cartridge-based games allowed gamers to purchase single games and to build their own libraries. Within a year, Larson's technology was in use by video game giant Atari.

him an industry pioneer. Lawson's contributions to the gaming industry are on permanent display at The World Video Game Hall of Fame at The Strong National Museum of Play in Rochester, New York.



Lawson's invention pushed the gaming industry out of arcades and into houses around the world, changing the face of entertainment. In 2011, the International Game **Developers Association named**