

ALICE WALKER

Occupation
Novelist and poet

Nationality
American

Famous Quote
"The more I wonder, the more I love."



Alice Walker is an American novelist. She is the first African American to win the Pulitzer Prize.

BIRTH

Alice Walker was born in Georgia, in the United States, in 1944.



"My mother was very strong. [She] taught me about women defending themselves."

-Alice Walker

EARLY LIFE

Alice Walker's parents were sharecroppers and she grew up in a rural farming town. She is African American. Alice Walker attended the only school available for black students in her town.



CIVIL RIGHTS MOVEMENT

In the early 1960s, Alice Walker met Martin Luther King who inspired her to become involved in the Civil Rights Movement. She took part in protest marches and volunteered to register black voters.



"Everything want to be loved. Us sing and dance and holler, just trying to be loved."

'The Color Purple', 1982

THE COLOR PURPLE (1982)

The Color Purple is Alice Walker's most famous work for which she won the Pulitzer Prize for fiction. It is about a poor, African American girl from Georgia, and her journey towards understanding.

WOMANISM

Alice Walker has spent her whole life working for women's rights. She coined the term 'womanism' to explain a form of feminism that applies to black women and their particular struggles.



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CENTURY

KATHERINE JOHNSON

Occupation
Mathematician

Nationality
American

Famous Quote
"Like what you do, and then you will do your best."

Katherine Johnson was an American mathematician for NASA, born in 1918. She was the first woman to attend important meetings and briefings in the institution and was most well known for calculating the trajectories of U.S. crewed space flights.

BIRTH

Katherine Johnson was born in 1918, in White Sulphur Springs, West Virginia.

EARLY LIFE

Johnson's skill with numbers was clear from an early age, so at age 10 she was enrolled in high school in Institute, West Virginia. Katherine Johnson lived in the area until she graduated with degrees in Maths and French.

'COMPUTERS WHO WORE SKIRTS'

In 1953, Johnson began working as a 'Computer' for NACA (soon to be known as NASA). The 'Computers who wore skirts' were a pool of women who performed mathematical calculations, before computers were available.



"You tell me when you want it and where you want it to land, and I'll do it backwards and tell you when to take off"

PROJECT MERCURY

Johnson was moved to 'Project Mercury', a NASA team planning the flight path of John Glenn, the first American to orbit the Earth. Glenn refused to fly until Johnson checked over the computer's calculations.

AEROSPACE TECHNOLOGIST

Katherine Johnson moved to the Spacecraft Controls Branch of NASA, where she provided calculations for the Apollo 11 and Apollo 13 moon missions. She later worked on the Space Shuttle Program.

LEGACY

Since her retirement in 1986, Johnson has been awarded the Presidential Medal of Freedom and a Congressional Gold Medal. She is considered to be a pioneer of African-American women in STEM.



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CENTURY

TU YOUYOU

Occupation
Pharmaceutical Chemist

Nationality
Chinese

Famous Quote
'Every scientist dreams of doing something that can help the world.'

Tu Youyou was a Chinese scientist born on the 30th of December 1930. She studied ancient Chinese medicine texts and discovered a chemical that could be used to treat Malaria, resulting in millions of lives being saved. She won a Nobel prize for her contribution to science.

PROJECT 523

During the Vietnam war, malaria was causing casualties amongst Vietnamese soldiers. In response China assembled a task force called project 523 to help find a treatment, and put Tu in charge. She travelled to rainforest areas of southern China to examine the devastating effects of the disease.

BIRTH

Tu Youyou was born in Ningbo, Zhejiang, China, on 30th of December 1930.

CHILDHOOD TUBERCULOSIS

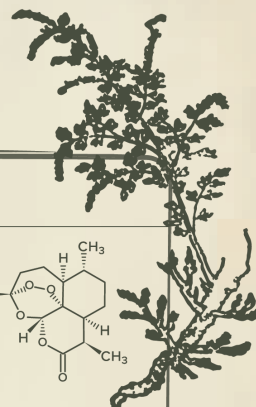
Tu contracted tuberculosis as a teenager. This sparked a strong interest in studying medicine to find cures for diseases like the one she suffered from.

ANCIENT CHINESE MEDICAL TEXTS

Tu and her research team turned to ancient Chinese medical texts. The team found reference to 'sweet wormwood' that was used in 400 AD to treat intermittent fever, a symptom of malaria.

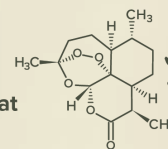


Tu Youyou



ISOLATES ARTEMISININ FROM SWEET WORMWOOD

Tu developed a new process that removed an active ingredient from the sweet wormwood that could be used to treat malaria. Tu and two colleagues tested the treatment on themselves before testing 21 patients. All of them recovered.



NOBEL PRIZE AWARDED IN 2015

In 2015, Tu was awarded a Nobel Prize in medicine for her discovery of the malaria treatment which saved millions. She was the first woman and first Chinese person to win the award. On top of this Tu had no doctorate, medical degree or training abroad.



"Artemisinin... is a true gift from old Chinese medicine. But this is not the only instance in which the wisdom of Chinese medicine has borne fruit."

Tu Youyou



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CENTURY

LISE MEITNER

Occupation
Physicist

Nationality
Austro-Hungarian

Famous Quote
*'Life need not be easy,
provided only that it is not empty'*



Lise Meitner is considered by some to be the most significant female physicist of the twentieth century.

FIRST WOMAN IN GERMANY TO RECEIVE DOCTORATE

When Lise Meitner was studying, Universities in Germany did not admit women. Despite this, she studied physics privately and became the second woman in the world to earn a doctorate degree, the first in Germany.



BIRTH

Lise Meitner was born on the 7th November 1878 in Vienna, Austria.

DISCOVERED PROTACTINIUM

Working with the chemist Otto Hahn, Meitner discovers the radioactive element protactinium and receives the Leibniz Medal from the Berlin Academy of Sciences.



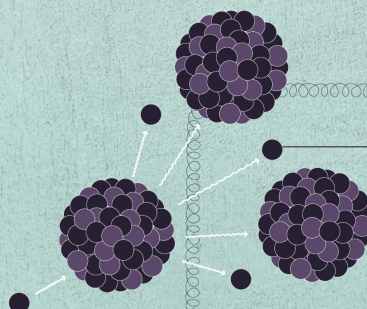
PROFESSOR OF PHYSICS

Becomes the first woman in Germany to hold a full professorship at the University of Berlin.



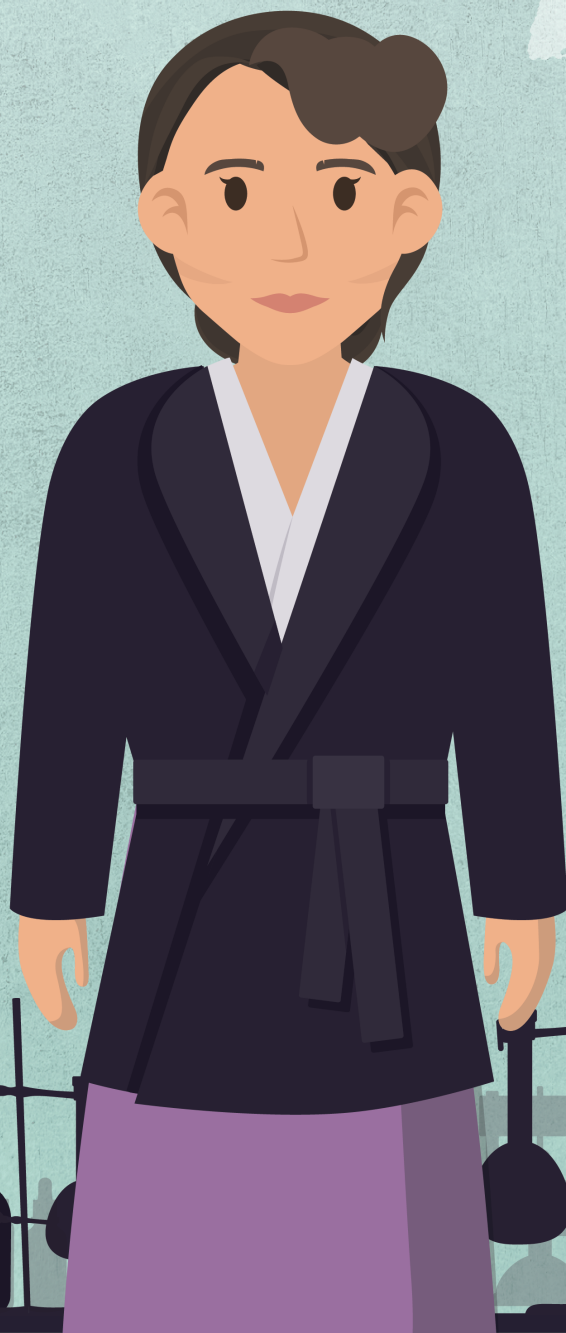
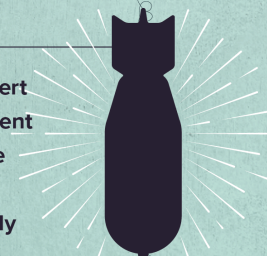
NUCLEAR FISSION RESEARCH

Worked on nuclear fission, but the research was interrupted due to the rise of the Nazi party in Germany. Meitner left in the summer of 1938 to settle in Sweden as she was Jewish.



ATOMIC BOMB

Meitner's research on fission inspired Albert Einstein and Leo Szilard to contact President Roosevelt. This led to the formation of the Manhattan Project and the creation of the nuclear atomic bomb. Meitner highly disapproved of the use of nuclear fission by the American military.



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MARIE MAYNARD DALY

Occupation
Chemist

Nationality
American

Famous Quote

'Courage is like — it's a habitus, a habit, a virtue: You get it by courageous acts. It's like you learn to swim by swimming. You learn courage by couraging.'

Marie Maynard Daly was the first African American Woman in the United States of America to earn a Ph.D. in Chemistry. During a time when the structure of DNA was not fully understood, Marie Maynard Daly made significant discoveries in how cholesterol affects the body and how proteins are made in cells.

BIRTH

Marie Maynard Daly was born on the 16th April 1921 in New York, USA.

EDUCATION

Daly attended a laboratory high school where she was encouraged to pursue chemistry and graduated in the top 2.5% of her class.

PH.D IN CHEMISTRY

In 1947, Marie Maynard Daly was the first African American woman to earn a Ph.D. in Chemistry.

RESEARCH USED TO UNDERSTAND DNA

Using Daly's research, Watson and Crick discovered the structure of DNA. Daly was not given recognition for her part in the discovery.

CHOLESTEROL RESEARCH

Daly discovered the relationship between high cholesterol and clogged arteries. Increasing the world's understanding of how diet affect health.

FOUND SCHOLARSHIP

In honour of her father, Daly sets up a scholarship to support minority students to study science at Queens College, New York.

LEGACY

In 1999, Daly was named amongst the 50 most influential women in science, engineering and technology. She died on October 28, 2003 and in 2016 a school in Queens was renamed 'The Dr. Marie M Daly Academy of Excellence'.



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