



## Katherine Johnson

### The Hidden Figure Who Helped Put a Man on the Moon

Katherine Johnson was an American mathematician who lived during the 20th century. Her passion for numbers and dreams of exploring the mysteries of space led her to play a key role in early space exploration.



One of Johnson's biggest achievements was her work with NASA. She was part of a team of mathematicians who calculated the path for the first American space trip. She was known as a "human computer" for her abilities to make calculations with little technology. Thanks to her, the first American orbited the Earth safely.

Katherine Johnson's legacy reminds us that anyone can reach for the stars and achieve incredible things with determination and hard work.

### **FUN FACT**

Did you know that Katherine Johnson's story was featured in a movie about the space race called *Hidden Figures*?

### **THINK**

How do you think NASA and astronauts use mathematics?

## John von Neumann

### The Mathematician and Genius Behind Modern Computing

John von Neumann was a mathematician and scientist who lived in the 20th century. He was born in Hungary and showed his extraordinary talent for mathematics and other subjects from a very young age.



One of von Neumann's biggest accomplishments was his work in developing computers and game theory. He helped create the modern computer, which we use today for everything from playing games to sending emails. His ideas helped make computers faster and more powerful. Von Neumann also made important contributions to physics, economics, and even the study of how people make decisions.

John von Neumann was admired for his contributions and brainpower. Many people think he's one of the greatest mathematicians and scientists of the 20th century.

### **FUN FACT**

Did you know that John von Neumann believed that a lot of his best ideas came to him while he was sleeping?

### **THINK**

How do you think mathematics is used in computer games?

## Valerie Thomas

### A Mathematician and Data Scientist Who Invented an Imaging Device

Valerie Thomas is a data scientist and inventor from the USA. She began working for NASA in the 1960s and worked there for more than thirty years. She helped with a program that used satellites to take millions of pictures of Earth from space.



Thomas is famous for her invention called the Illusion Transmitter. It uses mirrors and lights to make pictures look three-dimensional. NASA uses her invention to send three-dimensional images of the Earth.

Valerie Thomas worked hard and used her creativity to make a big impact in the world of science and technology.

### FUN FACT

Did you know that when Valerie Thomas started working at NASA she had never seen a computer in real life, only in science fiction movies?

### THINK

How is a two-dimensional shape different from a three-dimensional shape?

## Mary Jackson

### A Mathematician and Engineer Who Helped NASA Take Flight

Mary Jackson was an American mathematician and engineer born in the 1920s. In the 1950s, Jackson was asked to join the National Advisory Committee for Aeronautics, which later became NASA. She started as a research mathematician, or “human computer,” at their research center. Later, she was promoted and became an aerospace engineer.



Jackson is best known for her work on Project Mercury during the Space Race. She also worked on studying wind tunnels to learn about air flow and make American planes better.

Mary Jackson is remembered today as an important and inspirational figure in the history of mathematics and space flight in America. Her work inspired others to chase their dreams in mathematics and science.

### FUN FACT

Did you know that Mary Jackson was a Girl Scout Troop Leader for more than 30 years?

### THINK

How do you think understanding mathematics helps improve designs?

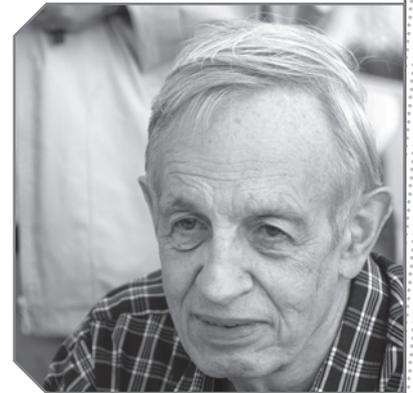
## John Nash

### A Mathematical Genius Who Redefined Decision Making

John Nash was an American mathematician born in the 1920s. His talent for mathematics was recognized early on, and he eventually made important contributions to the field.

Nash's most famous contribution was the development of the Nash Equilibrium. This idea is important in game theory, which explores how people make decisions. Nash's idea helped people understand everything from how businesses make choices to how countries interact with each other. He was later given the Nobel Prize in Economics for his contributions. The Nash Equilibrium continues to shape our understanding of decision-making methods.

John Nash often looked for and solved the toughest and most important problems he could find. He inspired generations of mathematicians, economists, and scientists with his fearless approach to learning.



#### **FUN FACT**

Did you know that John Nash's life and work were celebrated in the movie *A Beautiful Mind*?

#### **THINK**

Where do you use numbers when buying and selling things?