



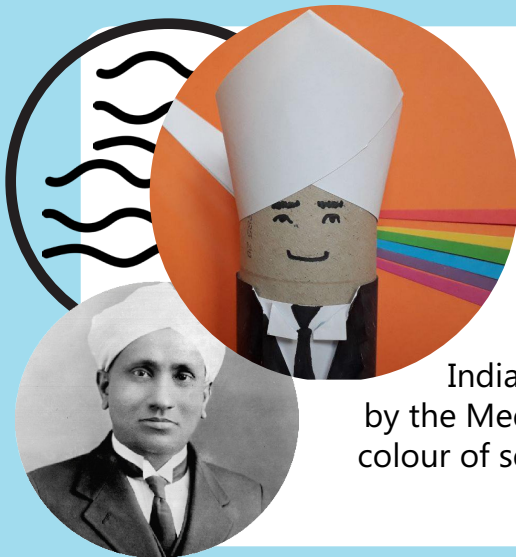
# LOOMINARIES

Have a go at making your favourite scientist, engineer or someone who inspires you using an empty toilet roll and items you can find around your house! Check out some of our favourites below...

## Mae Jemison

1956-present

Mae Jemison is an engineer, doctor and NASA astronaut. She became the first black woman to travel to space and was in space for nearly 8 days and orbited the Earth 127 times. She was involved in medical and biology related research whilst in space including looking at how tadpoles grow in zero gravity. After leaving NASA, she formed a non-profit education foundation.



## CV Raman

1888-1970

CV Raman was an Indian Physicist who made major contributions in the study of light and sound, and was the first Asian to receive a Nobel Prize in science. One of his interests was understanding the acoustics of string instruments and the Indian drums. During a voyage home from England, he was inspired by the Mediterranean sea and became the first person to explain the blue colour of seawater correctly. It was this phenomenon that he continued to study and led him to win the 1930 Nobel Prize in Physics.

## Hasan Ibn al-Haytham

965-1040 AD

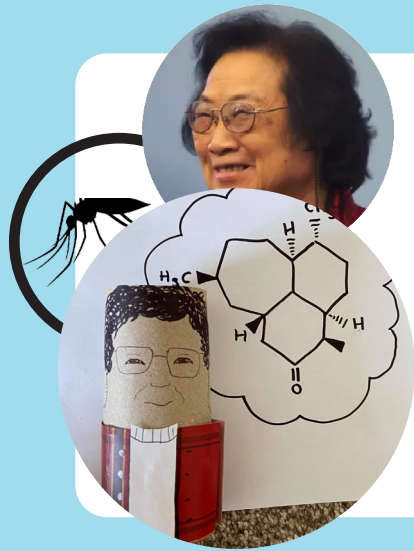
Hasan Ibn al-Haytham, also known as Alhazen, was an Arabic mathematician, astronomer and physicist of the Islamic Golden Age. He is regarded as the world's first physicist and the father of the modern scientific method. He was the first person to explain how we see, carrying out experiments on light and how eyes work. He also proved that light travels in straight lines with an experiment involving two lanterns. For his work in astronomy, an impact crater on the moon and an asteroid were named in his honour.



# Tu Youyou

1930-present

Tu Youyou is a Chinese chemist who discovered a treatment for malaria, saving the lives of millions. Inspired by traditional Chinese medicine, she identified artemisinin as a potential treatment, its chemical structure and the best way to extract it. She volunteered to be the first test subject and conducted the subsequent clinical trials. After years of little recognition, she was awarded a Nobel Prize in physiology or medicine in 2015 - the first women from China to win a Nobel Prize.



# George Washington Carver

1860s-1943

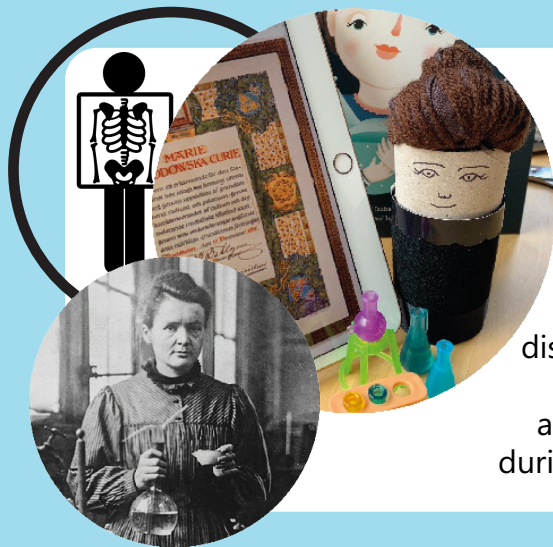
George Washington Carver was an American agricultural scientist. He worked to improve the lives of poor farmers, who at the time only grew cotton, by encouraging them to grow their own food. He promoted crop rotation and techniques to restore nutrients to the soil. He designed a mobile classroom to educate farmers on these techniques without them having to travel.



# Marie Curie

1867-1934

Marie Curie was a physicist and chemist who was the first woman to win a Nobel Prize and the first and only woman to win twice. She did pioneering research on radioactivity, discovering two elements: polonium and radium. Her research was crucial to the development of using X-rays in surgery, and she also helped to equip and drive ambulances with X-ray equipment during World War 1 to help to locate fractures, bullets and shrapnel.



# Jean-Jacques Muyembe-Tamfum

1942-present

Jean-Jacques Muyembe-Tamfum is a Congolese microbiologist. He took blood samples and liver biopsies from patients with a mysterious disease in central Congo at a huge risk to himself. He sent the samples to scientists who identified a new virus called Ebola. He identified the origin of the virus and developed an anti Ebola serum therapy. He fights for recognition for Congolese scientists and advocates for research into diseases originating in African countries which lack attention and funding.



# Who inspires you?

## Poster

Create your own poster, either digitally or by hand, on a scientist or engineer who inspires you. Don't forget to include the reasons why you have chosen them!

## LOOminary

Create a LOOminary - a scientist or engineer made from an empty loo roll. Don't forget to write down why you have chosen them!

## Looking for inspiration? Here are some other fantastic scientists...

**Janaki Ammal** (born 1897): A pioneering botanist who helped identify and conserve the biodiversity of India.

**Subrahmanyan Chandrasekhar** (born 1910): An Indian-American astrophysicist awarded the Nobel Prize in Physics for his work on the structure and evolution of stars.

**Chien Shiung-Wu** (born 1912): A Chinese experimental physicist whose experiments revolutionized our understanding of nuclear physics.

**Katherine Johnson** (born 1918): One of the first African-American women to work as a NASA mathematician, performing calculations that were critical to US crewed spaceflights.

**Rosalind Franklin** (born 1920): An English chemist whose work was key to understanding the structures of DNA, RNA, viruses, coal and graphite.

**Ted Fujita** (born 1920): A Japanese-American meteorologist who revolutionized our understanding of severe weather phenomena, including thunderstorms, hurricanes, and tornadoes.

**Xia Peisu** (born 1923): A Chinese computer scientist who led the design of China's first general-purpose computer. She is often referred to as the "Mother of Computer Science in China".

**Gladys West** (born 1930): An American mathematician who provided the precise mathematical calculations to model the shape of Earth, and whose work helped invent GPS.

**Charles K Kao** (born 1933): An electrical engineer and physicist who developed fibre optics for use in telecommunications, laying the foundations for the evolution of the Internet.

**Ada Yonath** (born 1939): An Israeli chemist who determined the high-resolution structure of the ribosome. She was first woman from the Middle East to win a Nobel Prize in the sciences.

Find even more brilliant examples at: <https://dougan.leeds.ac.uk/contact/loominaries/>



# Plot your scientist

On the map, mark where your favourite scientists or engineers were born.



## Wordsearch

Can you find these words related to our LOOminaries?

- Curie
- X-Ray
- Radioactivity
- Muyembe
- Ebola
- Jemison
- Alhazen
- Carver
- Raman
- Nobel Prize
- Youyou
- Artemisinin

R	M	A	R	O	R	N	J	E	M	I	S	O	N
A	A	E	J	R	Z	B	O	C	A	R	V	E	R
R	A	D	I	O	A	C	T	I	V	I	T	Y	I
A	O	I	N	O	B	E	L	P	R	I	Z	E	N
L	Z	A	T	M	U	Y	E	M	B	E	N	A	T
O	T	Z	A	N	U	Z	E	M	I	Y	E	Y	H
B	I	R	I	T	A	L	H	A	Z	E	N	A	E
E	R	T	N	L	Y	T	Y	L	M	J	S	R	B
E	V	Y	M	E	M	I	E	O	E	B	Y	X	R
C	D	Y	C	C	A	X	E	A	U	M	R	A	Y
E	A	A	N	U	T	N	Y	U	T	Y	N	I	T
M	Y	R	Y	N	R	A	M	R	Z	O	O	R	U
S	A	R	T	E	M	I	S	I	N	I	N	U	R
H	N	N	A	M	A	R	E	N	Z	L	C	E	A