

KATHERINE JOHNSON

There wasn't a calculation too complicated for the extraordinarily talented mathematician Katherine Johnson. She was a **BRIGHT STAR** but because of segregation Katherine had to fight to **SHINE**. (Segregation laws in the USA at that time stopped black people from having the same opportunities as white people.)

In the 1950s, Katherine got a job as a 'computer' at NASA. Computers as we know them today hadn't been developed yet so NASA employed lots of women to help male scientists with the maths needed to fly spacecraft. Women were rarely considered for these top jobs - especially black women like Katherine.

Nobody expected Katherine to play a vital part in the **THE SPACE RACE**, but they hadn't done their maths properly!

"The idea of going into SPACE was NEW and DARING. There were no textbooks so we had to write them."

*THE SPACE RACE:

During the 1950s and 60s, the USA and the Soviet Union (now Russia) competed to be the first to explore space.

FOLLOW THE ARROWS TO SEE HOW KATHERINE HELPED PLOT NASA'S JOURNEY TO THE STARS ...

Lots of the way things worked at NASA didn't add up to Katherine, like not being allowed to attend important meetings just because she was a woman ...



By 1960, Katherine became one of the first women at NASA to have her work and name credited on a research report.

In 1961, Katherine's calculations helped to successfully send the first American into space on the **Freedom 7 Mission**.

If We LAUNCH here, we'll LAND here.



In 1962, astronaut John Glenn trusted Katherine over new computer technology to check the numbers that would allow him to launch and land safely on his mission to orbit the Earth.

The Computing machines got it **RIGHT**. Let's send **JOHN** into **ORBIT**!

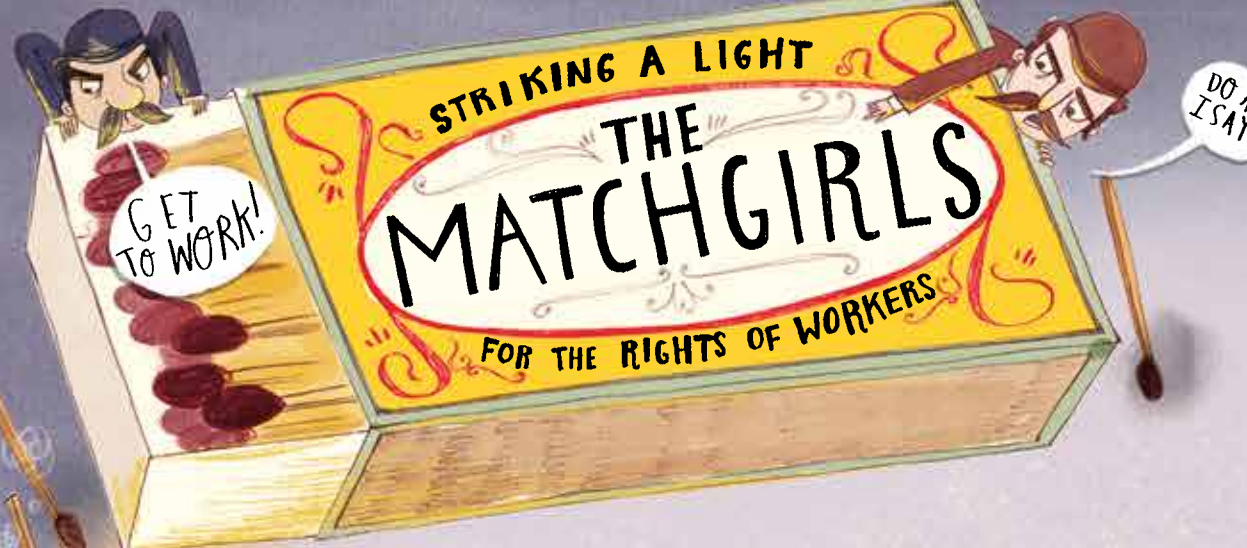
KATHERINE says the numbers are **GOOD**!



I trust Katherine's maths. LET'S GO!

During her **33**-year career at NASA, Katherine continued to work on many high profile space missions. The course she set made **shining** careers in maths and science possible for countless other women.





In London, UK, during the 1880s, very poor women and girls worked at the Bryant and May match factory. They were trapped working in dreadful conditions for very little money, while all the factory owners earned huge profits.

A group of the matchgirls risked their jobs by BRAVELY speaking to women's rights campaigner, Annie Besant, about what it was really like to work in the factory. In JUNE 1888, Annie printed their shocking stories.



I have PHOSSY JAW! An illness caused by working so closely with a DANGEROUS chemical called white Phosphorus.

We work 14-hour days, standing the whole time!

We are FORCED to pay fines for going to the toilet or being UNTIDY.

The public were HORRIFIED. Factory owners thought that if they denied everything nobody would listen to the matchgirls. This plan BACKFIRED!

DO AS I SAY!



In 1882 factory bosses even unveiled this statue of the prime minister to try to make themselves look generous!



ANNIE BESANT

GASP!

THE MATCHGIRLS WALKED OUT ON STRIKE!



Perhaps something should be done!

Hmm...

It ain't fair!

We WON'T work until things change.

After two weeks the factory realised they had no choice but to admit they had been unfair and to promise to change their ways.

VICTORY!

Follow me and we'll make change happen!

The strike made headlines ...



The public are behind us!

Thanks to donations we won't starve.

People stopped buying BRYANT and MAY! matches!

During the strike the matchgirls boldly marched to the Houses of Parliament to discuss their plight.

We'll show 'em!

UNION OF WOMEN MATCHWORKERS
To ensure that the factory owners stuck to this, the matchgirls formed the largest union of women workers in the country at that time.

The matchgirls were considered so poor and unimportant that nobody recorded the names of the women who led the strike. Their brave actions BLAZED a trail for the right of all workers to work in safety and to be shown RESPECT and FAIRNESS.

