

Smashing Stereotypes 2024

Classroom resource



About this resource

This resource is designed to help educators, parents, and others interested in learning about STEM jobs, share the Smashing Stereotypes campaign with young people aged between 14 and 18. It can provide a starting point for discussions about careers and the variety of ways science is involved in people's jobs.

This deck includes some slides for each person profiled, briefly explaining what they do and a bit about their background.

For each profile, we ask readers some questions relating to the person's career path. The idea is to get young people thinking like the people featured in the campaign, putting them in their shoes and facing the tasks and challenges they did.

We hope you enjoy learning about the wonderful people #SmashingStereotypes, and that you find something inspiring to take into your own day-to-day life!

What is Smashing Stereotypes?

Smashing Stereotypes is a campaign that challenge your perception on what a scientist looks like or does.

We want to show you that scientists come in all shapes and sizes, doing super cool things you might not even connect to science!

We created some fun and exciting interviews and videos with talented individuals who work in science, to share their journeys! Their stories will surprise and inspire you!

You'll learn about a a race car expert, a cosmetic scientist, an app developer, a research scientist and more!



Why do we need to address stereotypes in STEM?


The Smashing Stereotypes campaign is on a mission to shatter perceptions of what it means to work in STEM.

- Working in STEM is so much more than just lab coats and computers — there are so many careers that you may not have even known exist!
- From the minds of video game developers and app innovators, to making fun new cosmetics – science is everywhere, in unexpected forms.
- By showcasing a spectrum of STEM professionals, we want to inspire you, the next generation, by showing you that scientists come in all shapes, sizes and backgrounds.



Scientists aren't all men, middle-aged and dressed in lab coats. Nor do they work on their own!


Introducing our 2024 profiles



#SMASHING STEREOTYPES
TUMI SIWOKU
Cosmetic scientist



#SMASHING STEREOTYPES
NILE HENRY
Motorsports industry skills provider




#SMASHING STEREOTYPES
ZHEY GRUDOV
Assistive tech inventor



#SMASHING STEREOTYPES
HAWA MANSARAY
Tech rental service founder



#SMASHING STEREOTYPES
ANDRE SKEPPLE
Education app developer



#SMASHING STEREOTYPES
JESS WADE
Storyteller and scientist



#SMASHING STEREOTYPES
SHAKILA BIK
Personal care product formulator

Nile Henry

Nile Henry is the driving force behind The Blair Project, an organisation that helps more young people learn about motorsports, and hopefully consider career paths related to driving and engineering.

At The Blair Project, Nile and his team challenge students to convert petrol go karts into fully electric e-karts, testing their energy efficiency and speed!



Nile Henry

Nile is a self-starter - he used to be the kid in the playground selling sweets.

Now, he is the Chief Executive Officer of his own organisation. He started The Blair Project because he saw how difficult it was for his brother (Blair) to break into motorsport racing.

If you could start your own company or organisation, what would it be and why?



<https://www.youtube.com/watch?v=EABmxEggJfQ&t=6s&pp=ygUKbmlsZSBoZW5yeQ%3D%3D>

Hawa Mansaray

Hawa didn't start out by doing core sciences like chemistry and physics. Her degree is in psychology and at school she was more swayed towards English than STEM subjects.

In fact, when she was in sixth form, she wrote and published a children's book!



#SMASHING
STEREOTYPES

**HAWA
MANSARAY**

Tech rental
service founder

Hawa Mansaray

Now, Hawa runs a start-up that lets people rent tech equipment they might not be able to afford. She got the idea when her friends were telling her they couldn't afford to buy drones, cameras etc. for their side hustles or new business ideas.

What other challenges could you face if starting a new business?



<https://youtu.be/zJ-FwB99xrE?si=gsaTwHtTB4cVMn-E>

Zhey Grudov

Zhey Grudov, a tech innovator, started Feathertail, a company that makes tech accessible for *everyone*.

His journey began in IT, but when he started experiencing chronic hand pain, he set out to create a mouse that he and others could use without causing further harm to muscles, nerves and tendons.



Zhey Grudov

Zhey's product is available to buy and he's pleased to be able to help others experiencing the pain he did, as well as other disabilities. But the journey wasn't without challenges.

Inventing the product involved learning about software engineering, electronics and using maths! If you could invent a product to solve a problem, what would it be and how would you do it?



Tumi Siwoku

Tumi Siwoku is a cosmetic scientist who combines her love for beauty and her STEM skills in her role developing nail polishes.

During her career she has been involved in formulating a facial wash with special hydrating beads, and boosted a honey-based skincare to SPF 30.



Tumi Siwoku

Think about the cosmetics you use - shower gels, hair products, deodorant etc.

If you could create a new product to suit your needs or solve a problem, what would it be and why? What properties would the product need to have?



<https://youtu.be/tqztNhJmiDE?si=vZUSEBdXDwS9iDF8>

Shakila Bik

Like Tumi, Shakila Bik uses her science skills in the beauty industry. She is the Scientific and Regulatory Affairs Director at L'Oréal.

She works on awesome formulations for the shampoos and lip glosses you might use.

Shakila knows beauty boosts confidence and helps shape who we are – her role is to make sure the beauty products you use are safe.



André Skepple

André Skepple founded a company called FullSpektrum, which uses artificial intelligence to understand how neurodivergent people learn.

The team at FullSpektrum identify learning difficulties someone may be experiencing. This then helps teachers and healthcare professionals to find ways to support students, for example with learning plans tailored to them.



André Skepple

André has dyslexia and dyspraxia. His experiences throughout school and university have led him to becoming a tech company founder and CEO on a mission to make learning better for everyone.

What challenges have you gone through at school? What technologies could you create or develop to minimise the difficulties you experienced?



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ANDRÉ
SKEPPLE

Education
app developer

<https://youtu.be/PHVUfkYFdUM?si=e8vZOmzvDjhMQvka>

Jess Wade

Jess Wade is a materials scientist at Imperial College London. Her 'day job' is creating molecules to improve technologies used in activities like brain imaging.

This work earned her a L'Oréal and UNESCO UK Women in Science Engineering Fellowship, funding that helped her set up her own lab.



Jess Wade

Jess loves that her career as a scientist allows her to travel the world.

Jess also spends her time writing Wikipedia articles for women scientists or scientists of colour who haven't been recognised for their work.

How many scientists do you know of?
Are any who are women or non-White?
Think about in the 'Spot the STEM trailblazer' activity on the next slide.



<https://youtu.be/wNVYRkkvFQ4?si=bSjnijY3sZpJiG4q>

Krystal Arbery

Krystal is breaking barriers in cyber security.

She's the Threat Defence Operations Manager at Urenco, ensuring their digital systems stay safe.

Krystal tackles threats like ransomware and social engineering, working behind the scenes to keep your data secure.

She believes diversity and mentorship are key in STEM, paving the way for future tech stars like you!



Rameya Arulanantham

Rameya ensures nuclear safety as a Group Export Control Technical Expert at Urenco.

She's like a scientific detective, making sure everything is safe and sound in the nuclear world.

From chemistry enthusiast to forensic scientist to her current role, Rameya's journey shows that science can lead you anywhere.

Remember, science is for everyone – it's all about curiosity, problem-solving, and making the world a safer place!



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RAMEYA
ARULANANTHAM

Nuclear technology
safety expert

Activity: Spot the STEM trailblazer

Dive into the journeys of STEM trailblazers, unleash your research skills, and share their inspiring stories with your fellow classmates.

Your mission is to research someone who's breaking the mould in STEM.

1. Do your research

Research someone who challenges stereotypes and stands out in the world of STEM.

2. Create a profile

Put together a presentation that introduces your chosen trailblazer, their background, notable achievements, and how they are challenging stereotypes in the STEM field.

Make it visually engaging, and incorporate images, videos, impactful quotes and more.

3. Present your discoveries to your class

Get ready to showcase your findings!

Activity: Spot the STEM trailblazer

Here are some prompts to get you started:

Think about your hobbies, as they are likely to involve science! You don't have to pick someone who describes themselves as 'a scientist'.

For example, if you like sport, you could choose a STEM trailblazer who is a sports scientist or innovator of sporting equipment. If you're into music, what technology is important and who invented it?

Look around you for inspiration. Start asking the people in your life about their work and careers. You may find out something interesting and unexpected!

Your future role? If you have an idea about what career you would like to follow, why not use this opportunity to interview someone who does it?

Do you have aspirations to work in fashion? You could look up someone who works in manufacturing or design, and speak to them about what they do.

Explore the full campaign at
www.britishscienceweek.org/smashing-stereotypes

#SmashingStereotypes #BSW24

Share your feedback with us at bsw@britishscienceassociation.org



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