

2021-2022



IMPACT REPORT

STEMAZING

Empowering women in STEM to shine as visible role models and inspire the next generation.



About Stemazing

Stemazing is a not-for-profit social enterprise dedicated to inspiration and inclusion in STEM.

We are creating a new movement to disrupt the status quo and build a stronger, more diverse and inclusive STEM workforce.

Why is this so important?

We face many global challenges as a society. From pollution to poverty to pandemics. One of the fundamental enablers of a better, brighter future is STEM - the combination of Science, Technology, Engineering & Maths.

We need a bigger, stronger, more diverse and inclusive STEM workforce to truly tackle the challenges ahead. Diversity breeds innovation, but with only 24% of the STEM workforce being women compared to 51% of the working population - this is not enough! We need more young people to pursue STEM and become our future innovators and problem-solvers, especially girls. And we also need to empower and retain female talent in STEM fields whilst removing barriers to progression to ensure more women become our next STEM leaders.



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Note from Founder

Alex is a Chartered Engineer, Fellow of the Institution of Mechanical Engineers, Fellow of the Women's Engineering Society, a Visiting Professor with the Royal Academy of Engineering, and a STEM Ambassador. She is an International Speaker and appeared on TV shows on Channel 5, Curiosity Stream and Prime.

I'm so proud of what we have achieved in Stemazing in such a short space of time! This would not have been possible without the support of everyone that has joined our mission, taken part in our initiatives, supported our work with both time and financial resources, and helped us spread the word about what we are doing. **A huge thank you to you all!**

I founded Stemazing in 2019 because I needed an additional outlet for my passions around championing diversity and inclusion in STEM and wanted to link this to inspiration in STEM. I subsequently left my corporate job in 2020 and launched the Inspiration Academy in 2021. This Impact Report is a summary of the last 2 years that our Stemazing community has grown and collectively made an amazing (STEMAZING) impact!

The results speak for themselves:

- **>250 women in STEM** from many different backgrounds and areas of STEM empowered to be more visible role models.
- **>40,000 STEMAZINGKids** activities delivered in schools with high % of free-school-meals.
- **International reach** with women in the UK, Europe, USA and Africa taking part, and STEMAZINGKids sessions delivered as far as remote rural parts of Kenya!



Alex Knight “

I am truly humbled when the StemazingWomen in our community tell me that Stemazing helped them build their confidence and have greater impact as a visible role model. This is what we need more of - empowered women in STEM championing themselves and each other and inspiring our future innovators and problem-solvers.

What we do

"You can't be what you can't see"

Through our award-winning Inspiration Academy programme and online StemazingWomen membership, we empower women in STEM with the confidence and tools to shine as role models and inspire young children. They develop their public engagement skills and portfolio of sensational STEM sessions they can deliver with ease.

We are particularly focussed on raising the profiles of women in STEM as currently only 24% of the STEM workforce are women.

Research shows that there are huge diversity and inclusion benefits of giving both young boys and young girls female STEM role models (1).

For our StemazingKids activities we target Primary School children as gender stereotypes start early (2). We want to break the bias and sew the seeds of STEM while they are young, which has proven to have more impact (3).

We prioritise our focus on schools with a high percentage of families on free-school-meals or pupil premium so we can reach those that need the opportunities the most.

All our StemazingKids activities are practical, hands-on and interactive experiments where children can practice being curious, creative and courageous, make their own STEM masterpiece, link STEM to the real-world and have fun in the process!



1. Shifting STEM Stereotypes? Considering the Role of Peer and Teacher Gender. Reigle-Crumb et al. 2016.
2. Judgements and reasoning about exclusion from counter-stereotypic STEM career choices in early childhood, Mulvey & Irvin, 2018.
3. STEM gender stereotypes from early childhood through adolescence at informal science centres. McGuire et al. 2020.

The numbers



43,788

STEMAZINGKids experiments led by STEMAZINGWomen role models



7,298

Children participated in the Inspiration Academy over the past 2 years



255

Women in STEM taken part in the Inspiration Academy (105 in 2021, 150 in 2022)



146

Schools participated in the UK so far (in England, NI, Wales and Scotland)



60

British Science Language (BSL) STEMAZINGKids experiments led by a deaf engineer



900

STEMAZINGKids experiments completed by children in Kenya & Ghana during our pilot



88%

women said their public engagement skills improved 'significantly' or 'a lot'



98%

women said their confidence increased 'significantly' or 'a lot'



61%

schools taking part had >20% families on free-school-meals



100%

schools were 'extremely' and 'very satisfied' with the STEMAZINGKids activities calling them "engaging", "enjoyable" and "educational".



Stemazing Women Role Models

Women in STEM take part in a 2 month online training programme before delivering 6 weeks of STEMAZINGKids activities.

THANK YOU to all of you for inspiring our future STEM Superheroes!!

Stemazing Inspiration Academy Role Models



INSPIRATION ACADEMY ROLE MODELS

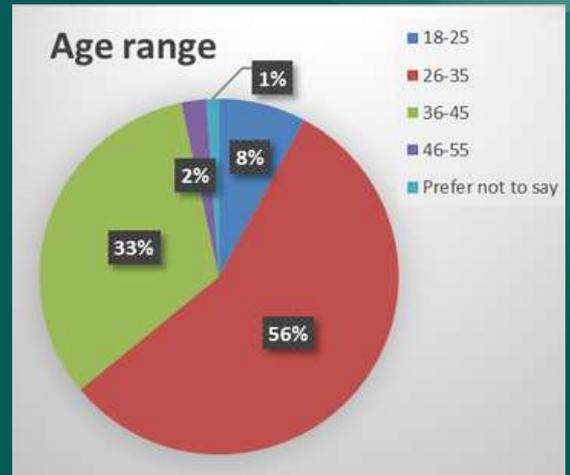
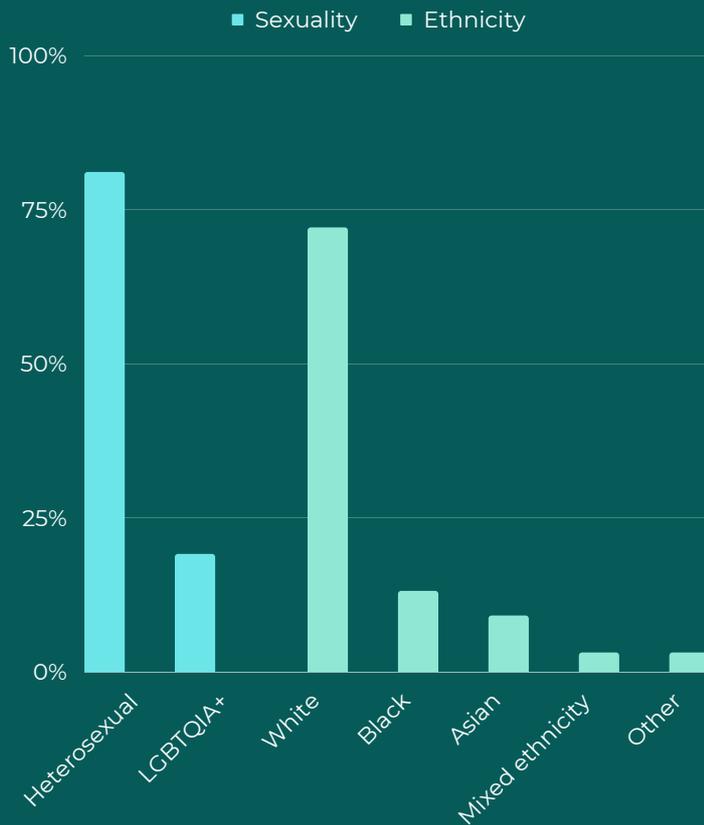


Stemazing



Diversity

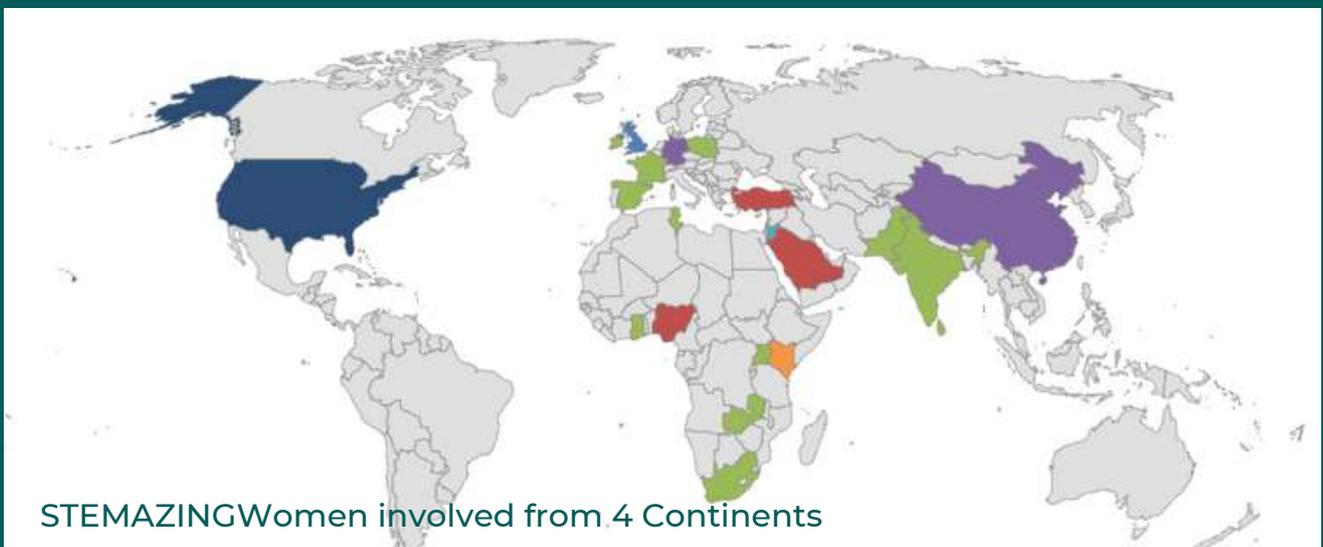
We are proud to celebrate the diversity of our women in STEM role models, and are pleased that our values of Inclusion are reflected in our community.



28% of women classified as Black, Asian, Mixed or Other ethnicities

19% of women identified as homosexual, bisexual or pansexual

5% of women reported having a disability



Hear from StemazingWomen



Swati Nair

"It is a great stepping stone for anyone looking for an opportunity to get involved with STEM without making the whole experience seem daunting."



Nicole Lee

"The STEMazing Inspiration Academy has massively improved my confidence and helped me to champion myself as a STEM role model."



Bridget Kogo

"I recommend Stemazing anytime any day. I have learnt a great deal from joining the program. The trainings were transformational, timely, effective and relatable."



Lisa-Jayne Cook

"STEMazing, to put it simply, is a game-changer. It has gifted me the skills, confidence and resources to run hands-on STEM classes with primary school that are appealing, educational and most importantly of all, fun!"



Stephanie Phipps

"The experience of being part of STEMazing women resulted in me being promoted to a business partner because I had the confidence and inspiration to progress to the next level in my career."



Anne Okafor

The Stemazing programme has been a catalyst to my success this last year, and has assisted with me making great strides in personal and professional development including expanding my network!



Rosie Mulligan (Engineering Grad and IMechE Young Member)

"Every school session I have run with Stemazing reminds me about why I love being an engineer. I've also found it has aided my professional development towards chartership with the MPDS scheme. The program has built my confidence to create a STEM outreach group in my workplace and sparked a passion to do more."

StemazingKids

All of our StemazingKids activities are hands-on practical experiments that the children do themselves led by a woman in STEM role model via Zoom. We have focussed on schools in the UK that have a high percentage of families on free-school-meals , and some women in different countries have also run local sessions in their communities.



Hear from schools

P3/4 CDPS @misss... · 08/02/2022

Discovering density! Today we had to think scientifically and hypothesise about what would happen before testing. We then created a lava lamp effect through a chemical reaction. This was our favourite @STEMAZING1 session so far @MilitelloAsp. 🍷🍷 #STEM #Stemazing



Sacred Heart Primary School @SHPS_Fenham

STEMazing club. Tonight the children were learning all about kinetic energy. We made potential energy poppers and had lots of fun seeing what we could propel the highest, the flumps and skittles seemed to be the winners. @STEMAZING1 @_YoungEngineers#engineers of the future



Auchenlodment Primary... · 18/11/2022

Yesterday P4/3 and P5 started their @STEMAZING1 session with the help of STEMazing ambassador Titi Oliyide, a Chemical engineer. Like all good engineers they didn't give up when their boosters didn't work, they adapted their designs and tried again. @STEM_Ren #positive



P5/4S @MPSP54S · 4d

Today for STEMazing kids we learned about aerodynamics and made some spinners. Then we had fun throwing them off the balcony and watching them spin. @RAiSE_falkirk #FalkirkSTEMpire @STEMAZING1



St Bernard's Primary @StBernardsPS

Primary 4 enjoyed taking part in their first @STEMazing1 workshop making straw rockets and learning about forces 🚀 #STEMamazing



Sandwood Primary @Sandwood120

P6b really enjoyed being STEMazing Kids over the last 6 weeks! Thank you Lucia @STEMAZING1 for the fantastic online lessons! You have helped create lasting memories and inspired our future STEM Superheros 🚀



Ysgol y Ddraig @ysgolyddraig · 5d

What a @STEMAZING1 journey we have been on this term. Thank you so much @nicjanerichards for our fantastic #STEM sessions - we've learnt so much and are truly inspired for the future #curious #creative #courageous #yr4



Mr Coupland Year 4/5 @maeyear45

We are #STEMazing A fantastic practical session exploring cylindrical and triangular structures today, discovering why certain shapes are stronger than others. Thank you @STEMAZING1 #ambitious_capable_learners #enterprising_creative_contributors @HEADMPS



Condorrat PS & NC @Condorratschool

Another @STEMAZING1 session in P4/5 & P4/5G 🚀 Today was all about energy poppers to explore energy transfer ✨ We'll be finding jelly bears and pom-poms in the class till Xmas now 😊 The children absolutely loved this, thank you @fridge_girl 🙌



StemazingKids Pilot in Kenya & Ghana

In 2022 children at 2 schools in rural Kenya and 1 in Ghana have completed a series of StemazingKids experiments. Additional funding from a crowdfunding campaign allowed us to provide all the STEM resources required including an electronic device for the teachers to watch the training videos, solar battery charger and printer. Thank you to everyone that contributed!



Chumba “

These activities have promoted self esteem, motivation, creativity and curiosity.



Looking Forward

By 2025 we want to empower 1,000 women in STEM to deliver 250,000 STEMAZINGKids experiments around the World.



We are excited about 2023 and beyond when we plan to grow our StemazingWomen community by empowering many more women in STEM to shine as visible role models and magnify the positive impact of the last 2 years.

We are continually improving our StemazingKids offering thanks to feedback from teachers and StemazingWomen. In 2023 we plan to enhance this further and reach more schools both in the UK and Internationally.

We also have new initiatives planned involving Apprentices and Allies as well as launching our first Stemazing conference and Inclusive Innovation Lab.

We would love for you to be involved and join our Stemazing Movement!

Visit www.stemazingltd.com to find out more and subscribe to our newsletter for updates.

For 2023 we are welcoming organisations to Partner with us. If you are interested in becoming a STEMAZING Partner please contact info@stemazing.co.uk.

A final thanks to Mallak Mostafa, Jesha Soni and Beverley Yakuba in the Stemazing Team behind the scenes making the magic happen!

STEMAZING



Empowering women in STEM
to shine as visible role models.

Inspiring our next generation of
innovators and problem-solvers.

Be curious, creative and courageous.
Be STEMAZING!

#stemforall

#inspirethefuture

#breakthebias

#bethechange

Follow us @STEMAZING

