



Encouraging girls to be seen and heard across STEM subjects is important at Burgess Hill Girls School

PHOTO: BURGESS HILL GIRLS SCHOOL

## STEAM AHEAD WITH STEM

Meet the schools where female students are firmly engaged with science, technology, engineering and maths

**WORDS:** Kelly Rose Bradford

Research suggests female students' interest in STEM subjects peaks around the age of 11 but declines sharply by 16, so it's no surprise that many schools are implementing innovative pathways to keep girls engaged with STEM throughout their education.

Emily Quinn is head of science at Burgess Hills Girls School. She says her department is driven by a passion to 'inspire and empower' more girls to explore and engage with STEM subjects, and to produce confident, capable learners across all the subjects. 'We aim to equip them with the skills

necessary to become tomorrow's researchers, engineers, designers, and developers,' she explains.

Along with the school's head of maths and computer science, Rob Stanway, Emily is determined to give the girls every opportunity to expand their knowledge and share their thoughts and ideas across the subjects.

'We firmly believe that the world thrives when diverse voices lead innovation,' she says, 'and we encourage our young scientists to take ownership of their learning from an early stage.'

The girls are introduced to what Emily calls the 'dynamic process of scientific

inquiry' from Year 7. 'Science is not merely a subject here; it is a way of thinking that fosters curiosity, perseverance, and visionary ambition,' she explains.

'Our curriculum spans biology, chemistry, and physics, and we consistently create opportunities for students to develop their problem-solving and engineering skills through hands-on, collaborative projects.'

This is put into practice at the school not just during lesson time, but through creative experimental design and extra-curricular opportunities such as science clubs, MedSoc, and the astronomy club.

## REAL WORLD OPPORTUNITIES

Projects have included the Year 8 Fatberg Challenge where students came up with creative solutions to tackling clogged sewers, and Year 9's Burgess Hill Girls Renewable Energy Challenge, which deepens the pupils' understanding of renewable energy.

Encouraging the girls to be seen and heard across STEM subjects is also woven into the fabric of the school. In Year 7, students give a presentation about their female STEM role models, that not only showcases female achievements, but helps to develop public speaking and presentation skills.

Year 8s participate in the Key Stage 3 Science Fair where they undertake independent research projects and present their findings to the school community and their parents.

And for Year 10 students who want to pursue a career in science, a visit to the University of Sussex gives them the opportunity to meet with researchers and lecturers in the biology, chemistry and physics departments, to gain insight into university-level science.

'Parents often express surprise at how much their daughters enjoy science, noting the enthusiasm that seems to emerge from nowhere,' Emily says.

'It is immensely gratifying to see our students return home excited and confident, eager to share their discoveries with their families. This palpable enthusiasm is a testament to the positive impact we are having on the next generation of scientists.'

## DEVELOPING A LOVE OF SCIENCE

'The world needs more women in STEM,' says Kaylan Price, head of science Brambletye School, where priority is given to creating an inclusive environment where both boys and girls can experience and develop a love for science, technology, engineering and mathematics.

'Our approach recognises the unique strengths girls bring to scientific disciplines while encouraging all children to develop critical thinking and collaborative skills,' Kaylan explains.

She believes that 'early engagement' is key to keeping female students motivated and interested in the subject.

'By introducing girls to hands-on scientific experiences from a young age, we ignite a natural passion for discovery. Our youngest learners have wonderful opportunities to conduct exciting experiments, participate in interactive demonstrations and listen to science-themed stories.'

She adds that research shows that girls particularly shine in interdisciplinary STEM fields combining scientific insight and social impact, something that was 'brilliantly demonstrated' by students at a recent lower school event. 'Our Inventor's Workshop was a



PHOTO: BRAMBLETYE SCHOOL

Early engagement is the key to keeping female students motivated in STEM



PHOTO: SEAFORD COLLEGE

Seaford College has five female science teachers encouraging its female students in STEM

challenge for pupils to use materials and their imaginations to solve real world problems,' Kaylan explains.

'The girls demonstrated great teamwork, leveraging their communication skills to drive their team's creative solutions – from model bird feeders to innovative baby distractors.'

Life science and environmental sciences are also very appealing to female students in Kaylan's experience, with her Year 6 girls having 'relished' the opportunity to dissect hearts, lungs and eyes in their lessons. This, she says, proves 'scientific exploration knows no gender boundaries.'

Inclusivity is also the order of the day at Seaford College, where director of innovation Chris Hawley says to encourage girls and young women to stay interested in STEM topics, it is imperative to provide a broad and inclusive curriculum with links to real world applications. 'We are lucky to have five

female science teachers in the senior school,' he says, 'and we have many female students taking all sciences/maths subjects at A-level. Last year all our Year 13 chemists were girls. 'And for the past two years we've had female students receive Oxbridge offers for science degrees.'

The school also offers STEM-focused enrichment opportunities that provide opportunities to be involved in fun tech projects outside of the classroom.

'This year we started a STEM club just for girls,' Chris says. 'And next year we are determined to enter an all-girls' team in our on-track project where students build and race go karts.' ●

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[burgesshillgirls.com](http://burgesshillgirls.com)  
**Brambletye school,** [brambletye.co.uk](http://brambletye.co.uk)  
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