

News Release

Date

STEM teaching project offers new opportunities for lockdown learning

A science education programme is turning social distancing into an opportunity for school pupils and teachers to spend their summer learning online.

The University of Glasgow-led Summer STEM Academy, now in its third year of operation, is making 25 workshops on a wide variety of science and engineering topics available online for free from today (Monday 15 June).

All but one of the workshops involve a video introduction from an expert to a unique project which can be done at home and an explanation of the science behind it. Each of the workshops offer a worksheet to guide learners through activities and experiments such as designing racing cars and measuring the speed of sound.

Volunteers from the Universities of Glasgow, Edinburgh, Edinburgh Napier, Heriot Watt and Strathclyde have crafted workshop activities on topics including robotics, biodiversity and space colonisation.

Representatives from organisations including the SS Explorer, BioCity UK, Heart of Midlothian F.C., the Royal Society of Chemistry and the Royal Academy of Engineering have also contributed their expertise on aeronautical engineering, life sciences, sports science, climate change and the science of sound.

Teachers and students will also have the opportunity to brush up on new science teaching skills with a workshop provided by the Royal Academy of Engineering's Connecting STEM Teachers initiative. They'll also have the chance to design their own science teaching resources during a workshop provided by Timstar UK and the WF Education group.

The Summer STEM Academy was launched in 2018 and brought high school pupils from 13 local authorities to locations in and around Glasgow, along with registered and probationer primary and secondary teachers.

Over the course of two days, they had the opportunity to visit universities to get a preview of student life, participate in classes to see how science is taught at

Communications and Public Affairs Office
Rm 243 Gilbert Scott Building
University of Glasgow, Glasgow G12 8QQ
Tel: +44 (0)141 330 3535
Fax: +44 (0)141 330 5643
Email: media@glasgow.ac.uk
www.glasgow.ac.uk



university level, and visit the BioCity Scotland campus to see how fundamental science is applied in industry.

Pupils and teachers also had the chance to build their own learning activities based on what they'd experienced during their visit, with input from industry partners.

Followup interviews with participants found that both pupils and teachers were significantly more engaged with science, and a reduction in anxiety about both learning and teaching STEM subjects.

Dr Margaret Ritchie, of the University of Glasgow's School of Chemistry, has organised each of the Summer STEM Academy events and led the effort to put this year's projects online.

Dr Ritchie said: "The Summer STEM Academy programme was built from the ground up to create quality partnerships between universities, schools and businesses and find new ways for them to benefit from working together.

"It gives students the chance to see academia and industry up close, student teachers the chance to learn new methods of teaching, and academics and industry professionals the chance to reach out to younger people and shape their understanding of how science and business intersect.

"The coronavirus turned our plans for the third year of the Summer STEM Academy upside-down, but it's also given us the opportunity to open up our workshops and reach a much bigger audience by putting them online. We also hope that it will keep participants engaged and interested in science while schools remain closed, and ensure they're motivated to learn when schools reopen.

"Our content comes from volunteers across a broad spectrum of backgrounds, from an undergraduate student through academics to industry veterans. They've given us a lot of great content for school pupils and student teachers alike, and we're really excited to make it available for them to explore over the summer."

The Summer STEM Academy launches today and is available at www.stemacademyscotland.org The Summer STEM Academy is a collaboration between the University of Glasgow and Edinburgh Napier University and is supported by the Royal Society of Chemistry.

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Email: media@glasgow.ac.uk
www.glasgow.ac.uk



University
of Glasgow

For more information contact Ross Barker in the University of Glasgow Communications and Public Affairs Office on 0141 330 3535 or email ross.barker@glasgow.ac.uk

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University of Glasgow, Glasgow G12 8QQ

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Fax: +44 (0)141 330 5643

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