



STEM Virtual Outreach

With the on-going current situation, we are offering a flexible approach to outreach, including virtual sessions to be delivered in school. This handy brochure pulls together all the current STEM sessions we are able to offer virtually to enhance your students' learning. We will be consistently updating this document, so please do keep checking back at what we are able to offer. If you would like to book a session or have any questions, please email us at outreach@ncl.ac.uk.

Key Stage 2

Ask Our Students



Info: Invite Newcastle University students from a range of subject areas to talk to your students and answer their questions. Useful for year 6 unsure of the difference between the types of science and who want to find out what a real scientist does.

Relevant school subjects: All STEM areas

School input: Facilitate discussion

Year groups: Year 6

Duration: 30-60 minutes

Chemistry in Your Shopping Basket



Info: A KS2 specific demonstration lecture with fascinating demonstrations and some audience participation, to show how chemistry is involved in our everyday lives - even going shopping!

Relevant school subjects: Chemistry

School input: Facilitate discussion

Year groups: Year 3, Year 4, Year 5, Year 6,

Duration: 30-40 minutes

Key Stage 3

Girls, in STEM



Info: This workshop, exclusively for girls uncovers the history of women in STEM and the reasons why the world needs more females in this field. The session ends with WISE's People Like Me quiz, allowing girls to identify their own strengths and see them mirrored in STEM professionals.

Relevant school subjects: All STEM subjects

School input: Sheets need printing, pen/pencil/ ruler provided

Year group: Year 8, Year 9

Duration: 60 minutes

24 Hours in A&E



Info: An interactive session introducing a career in Medicine and the rewards as well as challenges it entails. Students take on the role of a doctor in on a full day shift in hospital, meeting various patients and working through difficult medical scenarios.

Relevant school subjects: Biology, Chemistry, Mathematics, Physics

School input: Facilitate discussion

Year groups: Year 7, Year 8, Year 9

Duration: 30-60 minutes

Key Stage 3

Ask Our Students

Info: Invite Newcastle University students from a range of subject areas to talk to your students and answer their questions. Useful for finding out the options available at GCSE and where they can lead to plus ask about specific areas of science

Relevant school subjects: All STEM areas

School input: Facilitate discussion

Year groups: Year 7, Year 8, Year 9,



Chemistry in Your Shopping Basket

Info: A demonstration lecture with fascinating demonstrations and some audience participation, to show how chemistry is involved in our everyday lives - even going shopping!

Relevant school subjects: Chemistry

School input: Facilitate discussion

Year groups: Year 7, Year 8, Year 9

Duration: 30-40 minutes



Colourful Chemistry

Info: A demonstration lecture, originally written to celebrate the UNESCO International Year of Light, which shows how important light and colour is to our enjoyment of the modern world, with plenty of interesting chemistry demonstrations involving colour changes along the way.

Relevant school subjects: Chemistry

School input: Facilitate discussion

Year groups: Year 7, Year 8, Year 9,

Duration: 60 minutes



Key Stage 4-5

Ask Our Students



Info: Invite Newcastle University students from a range of subject areas to talk to your students and answer their questions. Useful for discussing what A levels lead to what degrees or which degrees you need for certain jobs. Plus discover more about what its like to be at university

Relevant school subjects: All STEM areas

School input: Facilitate discussion

Year groups: Year 6,

Duration: 30-60 minutes

A Future in Engineering



Info: Take an in-depth look at the range of different engineering disciplines and find out what it is like to study at university. This presentation will provide an insight into relevant career pathways and the exciting potential a future in engineering can hold

Relevant school subjects: Chemistry, Maths, Physics

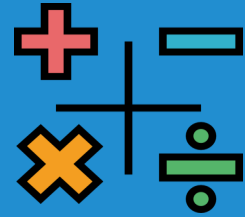
School input: Facilitate discussion

Year groups: Year 10, Year 11, Year 12, Year 13

Duration: 30-40 minutes

Key Stage 4-5

A Future in Maths



Info— This presentation will give students an insight into the doors that studying mathematics, statistics and physics can open. They will learn what it is like to study at university and find out more about their career options that will become available to them.

Relevant school subjects— Maths, Physics, Business

School input— Facilitate discussion

Year groups— Year 10, Year 11, Year 12, Year 13

Duration— 30-40 minutes

Applying to Medical Sciences Courses



Info: Presentation style talks on Biomedical Sciences/ Dentistry/Medicine/Pharmacy/Psychology/Sport and Exercise Science. Students gain an insight into applying to the relevant course including top tips on personal statements, the application process and choosing the right course.

Relevant school subjects: Biology, Chemistry, Psychology, Sport

School input: Presentation style talk, no input required

Year groups: Year 11, Year 12, Year 13

Duration: 30-60 minutes

Key Stage 4-5

Colourful Chemistry



Info: A demonstration lecture, originally written to celebrate the UNESCO International Year of Light, which shows how important light and colour is to our enjoyment of the modern world, with plenty of interesting chemistry demonstrations involving colour-changes along the way. GCSE and A level specific content

Relevant school subjects: Chemistry

School input: Facilitate discussion

Year groups: Year 10, Year 11, Year 12, Year 13

Duration: 60 minutes

Extraordinary Evolution



Info: Learn about the process of the building blocks of life from DNA to protein including transcription and translation. Take a look at our own evolutionary past with an activity looking at our ancestors skull evolution.

Relevant school subjects: Biology

School input: Print cards info sheets and skull exercise

Year groups: Year 10, Year 11, Year 12

Duration: 60 minutes

Key Stage 4-5

Medical Ethics



Info: An interactive session with students being introduced to the various concepts of medical ethics. Students work in groups to discuss how they would approach various difficult ethical scenarios in Biomedical Sciences, Dentistry, Medicine, Psychology and Pharmacy. Very useful for those preparing for Medicine/Dentistry interviews.

Relevant school subjects: Biology, Chemistry, Psychology, Sport

School input: Facilitate discussion

Year groups: Year 11, Year 12, Year 13

Duration: 60-90 minutes

Medical Science Careers



Info: Presentation style talk introducing degree programmes in Medical Sciences (Biomedical Sciences, Dietetics, Dentistry, Food and Human Nutrition, Medicine, Oral and Dental Health Sciences, Pharmacy, Psychology) and the careers they can lead into.

Relevant school subjects: Biology, Chemistry, Food Technology, Maths, Physics, Psychology, Sport

School input: Presentation style talk, no input required

Year groups: Year 11, Year 12, Year 13

Duration: 30-60 minutes

Key Stage 4-5

Routes Into STEM



Info: A presentation that introduces students to the exciting world of STEM, including studying STEM at university and future career opportunities with case studies from our graduates.

Relevant school subjects— Biology, Chemistry, Mathematics, Physics, Psychology, Sport, Geology, Geography

School input: Facilitate discussion

Year groups: Year 10, Year 11, Year 12, Year

Duration: 30-45 minutes

Speech and Language Therapy



Info: An interactive session, students are introduced to various concepts of Speech and Language therapy, as well as what a career in this field would entail. A great session for students considering a career in healthcare or working with people. Delivered in collaboration with HaSS Outreach Team.

Relevant school subjects: Biology, Chemistry, Modern Languages, Maths, Physics, Psychology, Sport

School input: Facilitate discussion

Year groups: Year 11, Year 12, Year 13

Duration: 60 minutes

Key Stage 4-5

STEM Pathways



Info: This informative session explores the options available to your students after GCSEs. With a particular focus on STEM subjects, we will explain the differences between A Levels, T Levels, BTECs, IB and apprenticeships as well as hearing from students who have first hand experience.

Relevant school subjects: All STEM areas

School input: Presentation style talk, no input required

Year groups: Year 10, Year 11

Duration: 30-60 minutes

Walk on The Wild Side



Info: The interactive session will cover some of the key techniques currently used to protect biodiversity and restore areas to a more natural state (Rewilding) whilst offering the chance for students to debate from the perspective of landowners, conservationists and local government, and learn about the issues surrounding management of outdoor spaces in the UK.

Relevant school subjects: Biology, Geography and Earth Science

School input: Print off resource booklets and provide pc/ laptop/ tablet for research activity

Year groups: Year 12, Year 13

Duration: 60-90 minutes

Key Stage 4-5

Where could your A levels take you?



Info: A walk through of our new resource that explores where your A Level subjects could take you from university and beyond. After a brief run through, students are free to use the resource as they please, whether it be to find a potential career path, speak to current students or discover different university courses.

Relevant school subjects: All subjects

School input: Computers/laptop/ tablet for students to research on

Year groups: Year 11, Year 12

Duration: 15min presentation then students can explore resources

Zoological Discoveries



Info: Discover what a Zoology degree involves and why it is important for us to study and protect animals. The workshop involves an interactive classification quiz, a sample of some behavioural studies and a conservation activity.

Relevant school subjects: Biology

School input: Print cards, require paper and pens

Year groups: Year 10, Year 11, Year 12, Year 13

Duration: 60 minutes