# Girls into Geoscience Virtual Programme 2021

## Q and A Panels
## Workshops
## Virtual fieldtrips
## And Speakers

## Q and A Panels

**Careers in Geoscience - Speakers Q and A**
You've seen their inspiring videos charting their careers and the different industries that they work in, now is the chance to ask our speakers about their inspirations, career highlights and challenges. Our speakers will also talk about career progression, job applications and interviews after university.

**Dealing with change, challenges and opportunities Q and A**
Our planet is constantly changing and so are we – are you ready for change? Many geoscientists face changes in their careers from working for different companies, relocating from one city or country to another, perhaps even changing field. Adaptability and resilience are crucial for a successful career and will help you navigate the demands of university. In this panel, our panellists will answer questions on their approaches to managing change, strategies to cope with and thrive in times of uncertainty.

**University life Q and A**
What is life at university really like? From, lectures and practical's, to fieldtrips and nightlife, this Q and A panel will give you the chance to ask staff and students about their experiences, and just about anything else you want to know about University life.

**Fieldwork in the geosciences Q and A**
There are lots of questions when it comes to doing field work in the Geosciences. What is it like to go into the field? What are the range of locations and cultures that you can encounter while doing field work? How do you prepare for trips? What is it like being a woman in the field? In this Q & A session you are free to ask any questions you may have regarding field work, with our expert panel who have experience from across the globe.

# Workshops

**Volcanoes, landslides, tsunamis, why look at one? Let's do them all! (Dr Irene Manzella, University of Plymouth)**
An insight on how we can model tsunamis caused by pyroclastic density currents and landslides in volcanic environments. With this workshop we will look at the main factors that influences these events, in particular how big the tsunami wave can be and how far it can go. At the same time we will have an insight on how geoscientists use numerical modelling to assess hazards and therefore reduce risks in rather dangerous environments.

**Peruvian glaciers and water resources (Dr Caroline Clason and Dr Sally Rangecroft, University of Plymouth)**
This workshop, , will explore environmental change in the Peruvian Andes, including the themes of glacier loss and water resources, and discuss what the implications are for local people under a changing climate and increased pressures on land use. You will explore the area in Google Earth and be given questions to think about and try to answer ahead of the workshop. During the workshop we will have a web chat to discuss these questions and your thoughts on the challenges that this region faces. We will also have a short Q&A about what it's like to conduct fieldwork in glaciated/mountainous regions as female scientists, and what it's like to be a female researcher in this field.

**Forensic Geoscience: Using geoscience to solve crimes! (Elspeth Wallace, iCRAG)**
What do police work and geoscience have in common? They're both crucially important to solving crimes! Join us in this workshop to discover what forensic geoscience is, how it works and to put your skills to the test to solve a murder mystery.

**Microfossils as windows to past climates (Dr Tracy Aze, University of Leeds)**
Marine microfossils are one of the most important groups for investigating and reconstructing past climate change. In this workshop you will learn how to identify key trends in species diversity and body size that will allow us to identify where our samples came from and what the climatic conditions were when they were deposited.

**Telling the time with sand grains (Dr Rachel Smedley, University of Liverpool)**
Ever heard of luminescence dating? It's an amazing technique that can tell when grains of sand were last exposed to sunlight before they are buried. It provides timeframes for past environmental change, from the recent past, up to hundreds of thousands of years ago. In this workshop, we will explore how we use luminescence dating in many interesting environments, from the large ice sheets and river systems of Patagonia, to huge dust deposits of central Europe and working closer to home on UK coastal systems. Come along and learn about something completely new that continually pushes the frontiers of science!

**Adventures on Mars (Divya M Persaud, University College London and NASA Jet Propulsion Laboratory)**
The images currently arriving from Mars show that we have a lot in common with our nearest planetary neighbour. In this workshop you will get the chance to use your geography and geology skills to examine several Martian outcrops and features and work out what environmental processes are at play.

# Virtual Fieldtrips

**Ancient landscapes and life! How did the Yorkshire coast change 170 million years ago? (Dr Amanda Owen, University of Glasgow)**
In this virtual field trip you will learn how Geoscientists interpret what our planet looked like millions of years ago. We will transport you to a number of sites around the Yorkshire coastline using fossils and rocks to help us determine the different environments and landscapes that were present, how they changed and why they changed. We will then discuss how your observations will inform our predictions of what will happen in the future as a result of climate change.

**Hidden glaciers on Earth & Mars**
**(Dr Katie Miles & Adam Hepburn, Aberystwyth University)**
When we think of glaciers, we usually imagine pristine, white masses of ice carving our landscape. However, many glaciers are hidden from view by a surface layer of rocks and dirt… On both Earth and Mars, these glaciers are incredibly important for future water resource supplies. On this fieldtrip, you will explore these hidden glaciers, unearth their distinct characteristics, and discover just why they are so significant.

**Devil's Tower – Wyoming, U.S.A**
**(Dr Tracy Aze and Dr Jacqui Houghton, University of Leeds)**
This trip will take you to the heart of an ancient volcano, where we will investigate this magnificent 872-foot igneous butte using drone footage, augmented reality, 3D virtual models of the out crop and pictures of rock specimens.

**500 million year history of the Isle of Skye**
**(Dr Anna Bird, University of Hull)**
This virtual field course is designed to enable you to explore igneous and metamorphic rocks in the field. We will be introducing you to the classic and internationally famous geology on the Isle of Skye, NW Scotland. You will get to examine a range of igneous and metamorphic rock types developed over a long period of geological time, Pre-Cambrian to present day (over 500 million years)! We will examine thick Cambrian meta-sedimentary successions and igneous rocks, which relate to the opening of the Atlantic! You will use virtual outcrops to deduce the long geological history of part of the Isle of Skye.

## Speakers

**Prof Anjali Goswami, Natural History Museum**
***Roam if you want to: wanderlust and the life of a palaeontologist***
Here are the things I love: animals, travelling, meeting interesting people, and generally asking why things are the way they are. I didn't know those were things I could do for a career. I did not even know that there were real palaeontologists until I was at university. I'll talk about the crooked and fairly unplanned path that took me from growing up the child of recent immigrants in the Detroit suburbs to being a University Professor of Palaeobiology, Research Leader in Life Sciences, and Dean of Postgraduate Education at the Natural History Museum, a tale that involves years of living in a tiger reserve, several scary encounters with polar bears, and a lot of fun (plus science).

**Dr Natasha Dowey, Sheffield Hallam University**
***Finding a sustainable future in Geoscience***
We need to study our planet to save it. In this talk, I'll explain what sustainable geoscience is, and how my passion for it has shaped my winding and unexpected career turns. From clambering on volcanoes, to modelling Earth's environments millions of years ago, to highlighting inequality and promoting why geoscience really matters!

**Dr Marie Cowan, Director of the Geological Survey of Northern Ireland, BGS Belfast**
***Humble beginnings, hard work, building confidence, breaking barriers in geoscience and raising a family***
In this talk I will discuss how my love of the natural world has translated into an incredible geoscience career, alongside some of the barriers and opportunities on route to becoming the first female director of a geological survey in the UK and Ireland. I will chart my career from my undergraduate degree and PhD at Queen's University of Belfast, a few years working as a consultant, joining the British Geological Survey at their Belfast Office, and how I became its director 10 years later. Everything is possible if you work hard and visualise your dreams.

**Dr Rehemat Bhatia, Natural Environment Research Council**
*Unexpected geo-adventures*
My career path has taken a lot of twists and turns. I'm still discovering what I'm good at and what I'm not so good at, and figuring out what kind of geoscientist I want to be. But the experiences I have had so far are ones which I don't think I could have predicted having when I was at school. In my talk, I hope to show you that negative experiences early on in your career don't have to predict your future, and that sometimes even opportunities can come back to you when you once thought they were lost.

**Please make your choices of Q and A panels, workshops and virtual fieldtrips on the online booking form**

**English:** https://gck.fm/whukp
**Welsh:** https://gck.fm/qzgnw