



STRENGTH AT DEPTH

EDUCATION OF GEOTHERMAL ENERGY

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25/02/21

INTRODUCTION

- GeoScience Ltd Geothermal department
- Delivery partner and Project Manager of the United Downs Deep Geothermal Power (UDDGP) project until May 2020
- Women In Geothermal (WING) UK Committee



OVERVIEW

- Education for the energy transition
- Filling in the gaps
- Associated challenges
- Proposed action
- Next steps



EDUCATION FOR THE ENERGY TRANSITION

- Decarbonisation of heat in UK
- Geothermal provides low carbon heat
- Establishing a new industry
- Educating and inspiring the next generation
- Geothermal is not currently represented in the national curriculum

FILLING IN THE GAPS

- Currently students are not educated on key concepts related to the energy transition prior to choosing GCSE subjects
- Geothermal is not currently represented within the GCSE Geography programme. No exposure to geothermal prior to making A Level choices.
- No exposure to geothermal, various aspects of the industry, or career opportunities
- Lack of opportunity for gaining practical experience
- No support and guidance for university students in the transition from university to industry

ASSOCIATED CHALLENGES

- Unfamiliarity with new technologies and concepts (e.g. geothermal) can cause concern
- Next generation will be lacking knowledge and expertise critical to the energy transition
- Students unaware of career opportunities within this green, sustainable industry, and its role in the energy transition
- Graduates not being supported to pursue a career in this industry
- Graduates not prepared for a role within the industry

PROPOSED ACTION

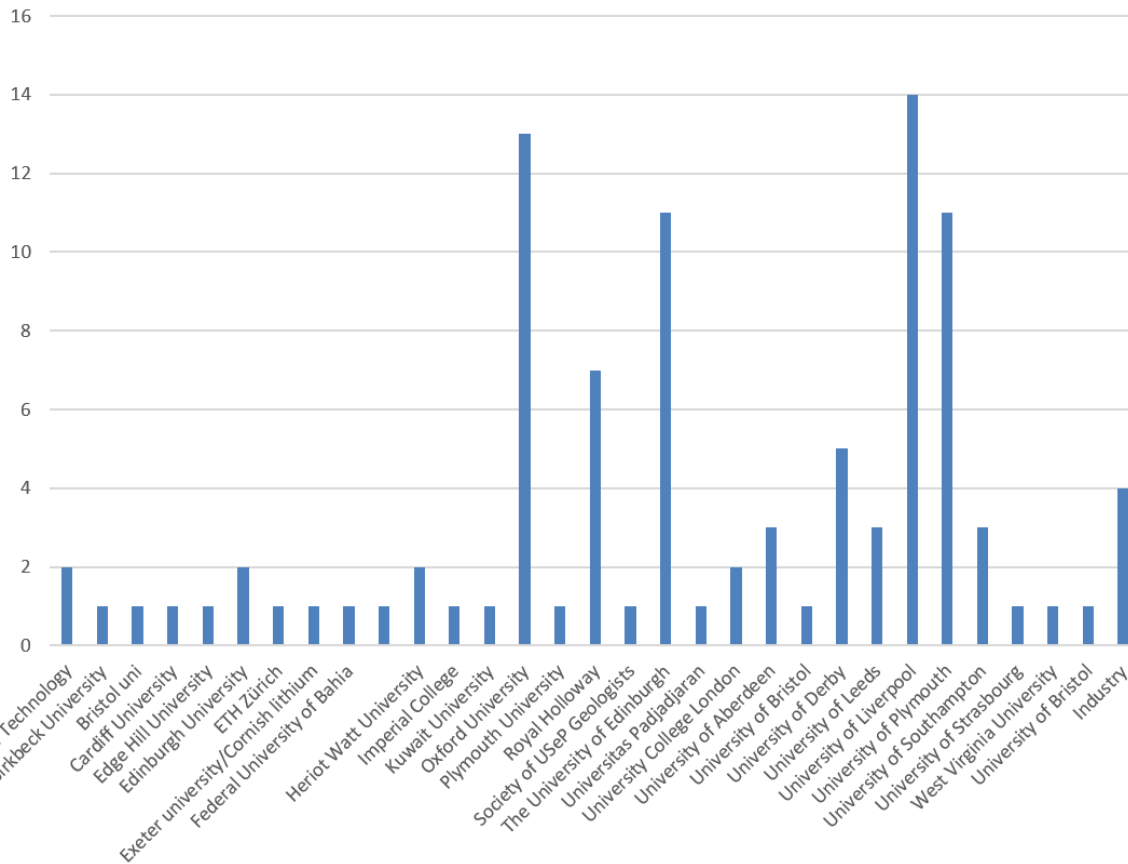
- **WING UK**
 - Mentorship programme
 - Student Ambassador role
 - Links with UK university's earth science departments
 - Careers panel event 2020
 - Wednesdays with WING 'skill sessions'
 - 'A day in the life of'




PROPOSED ACTION

- WING UK

Careers panel event 2020













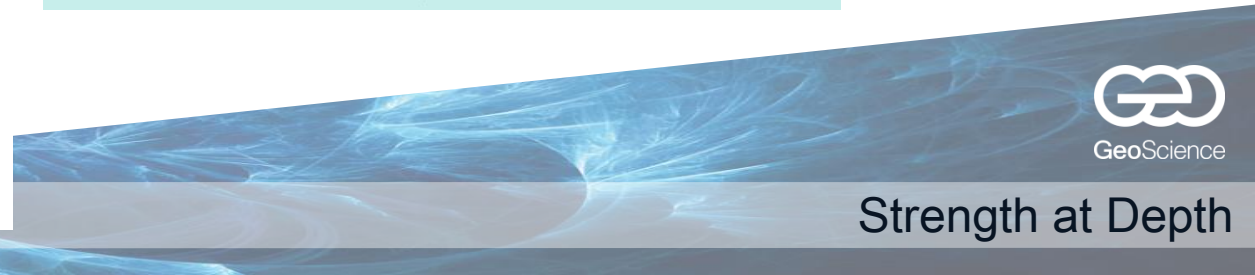


WING UK: Career in Geothermal
 Wed, Jun 10, 2020 4:00 PM - 5:00 PM BST

Join us on Wednesday 10th June at 16:00 for an online careers panel discussion, aimed at current students and recent graduates.

What top 3 questions would you like to ask the panel?
 Submit your questions upon registration.

  Lucy Crane Exploration Geologist - Cornish Lithium Lucy works as an Exploration Geologist exploring for lithium in geothermal waters in Cornwall.	  Dr. Chris Rochelle Senior Geochemist - BGS Senior Geochemist at the British Geological Survey with over 30 years research experience into various aspects of the geochemistry of fluid-rock interactions, including many lab-based studies.	  Iain Stewart Professor of Geoscience Communication - University of Plymouth - Director Sustainable Earth Institute Iain's research focuses on communicating geoscience to non-specialist audiences and in applying geoscience thinking to sustainable development challenges.	  Joseph Fitzpatrick Ireland QUADRAT Doctoral Training Programme PhD Student QUADRAT Doctoral Training Programme PhD Student investigating the efficiency of Geothermal doublet well systems in shallow aquifers (<150m).	  Lucy Cotton Project geologist at GeoScience Ltd Deep geothermal group project geologist, deep geothermal energy exploration.
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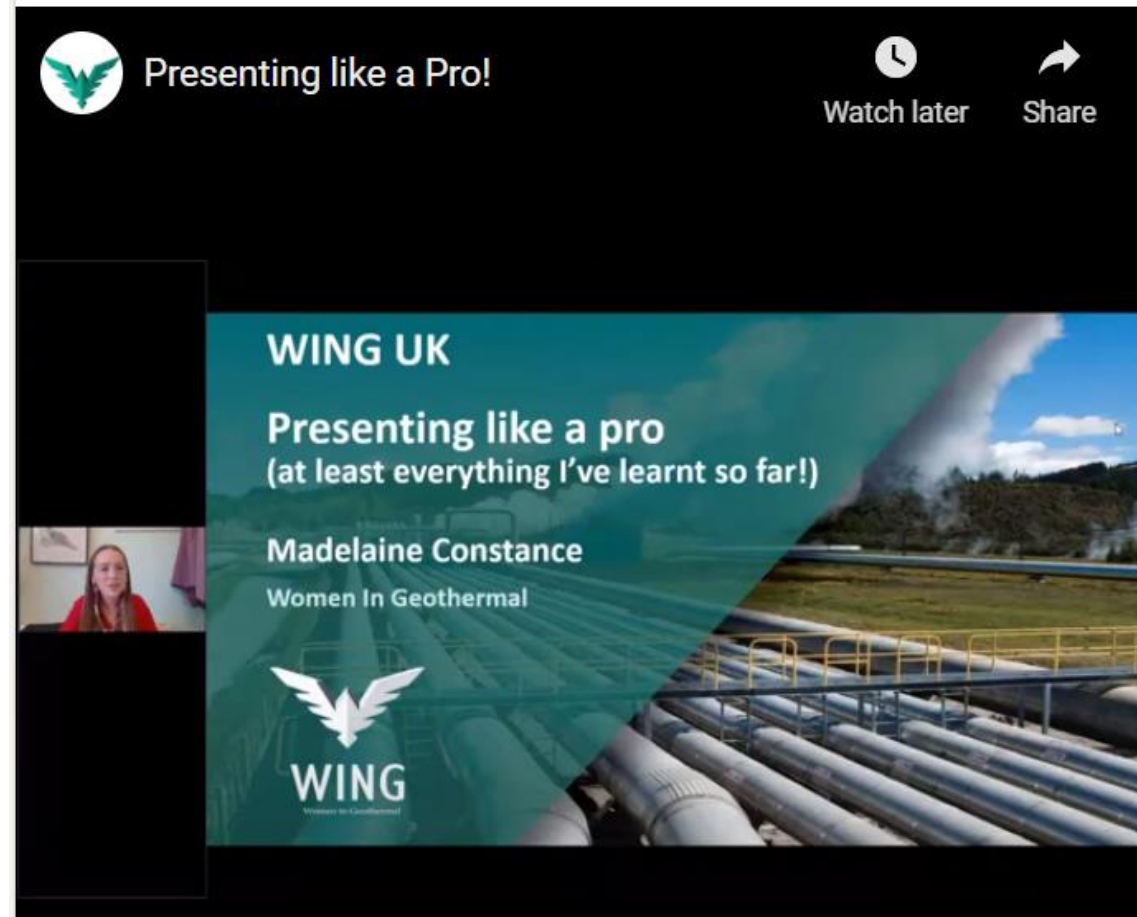
Strength at Depth

PROPOSED ACTION

- WING UK

Wednesday's with WING

- Presentations
- Skills sessions



PROPOSED ACTION

- WING UK

Mentorship programme



PROPOSED ACTION

- **United Downs Deep Geothermal Power (UDDGP) project Education programme**

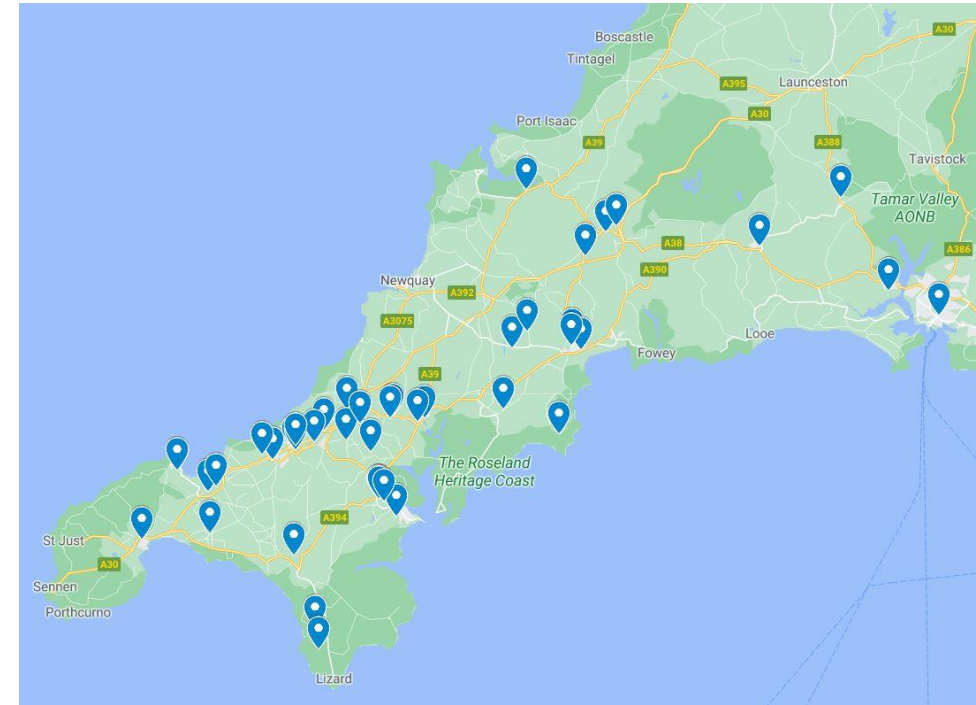
- Students between the ages of 7-21, split into specific age groups according to the English education system:

KS2 (7-11 years)

KS3 (11-14 years)

KS4 (14 years +)

Higher/further education

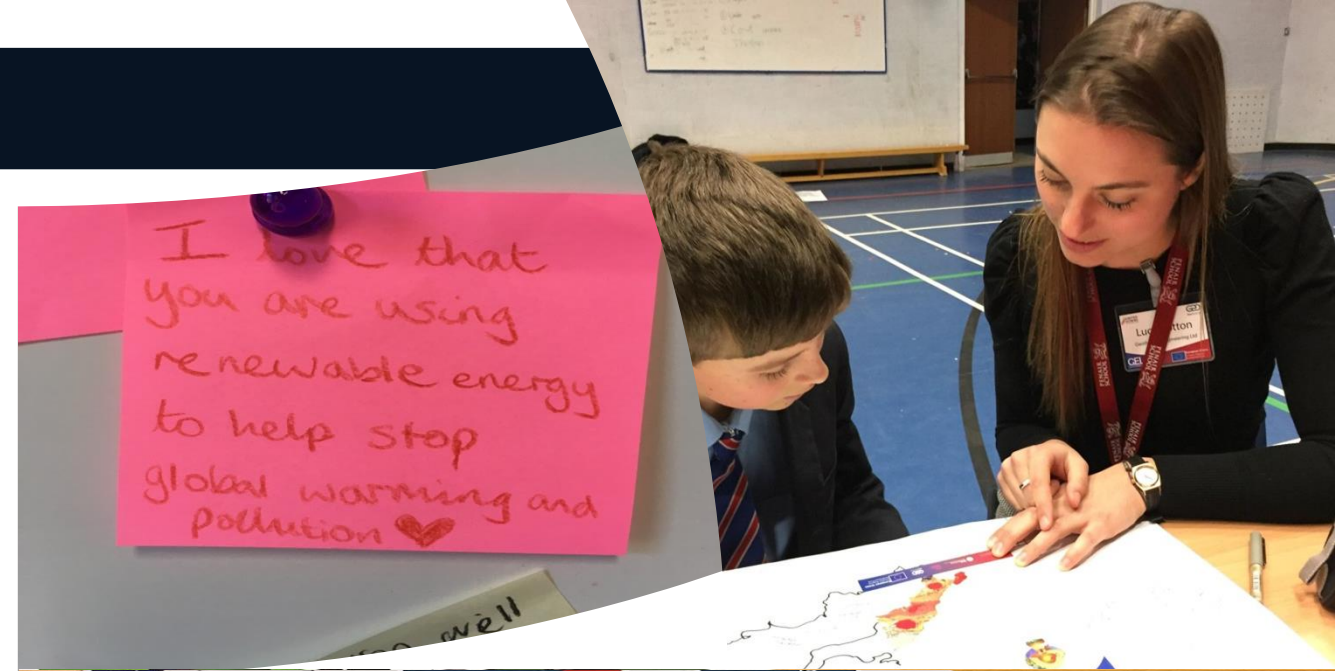


PROPOSED ACTION

- United Downs Deep Geothermal Power (UDDGP) project Education programme

KS2 and KS3

- School visits and assemblies
- Lesson plans
- Animation videos
- Classroom resources
- STEM days
- Site visits



PROPOSED ACTION

- United Downs Deep Geothermal Power (UDDGP) project Education programme

KS4 (14 years +)

- Raspberry Shake Programme
- Site visits (subject specific)
- Careers events
- Year group assemblies
- Girls into geoscience
- Work experience students

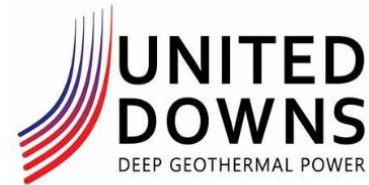


PROPOSED ACTION

- **United Downs Deep Geothermal Power (UDDGP) project Education programme**

Higher/further education

- Site visits
- Presentations
- Career events
- Summer internship programme



NEXT STEPS

- Lobbying government to recognise importance for incorporation of new green technologies into the curriculum for the energy transition
- Collaborating with GSHPA to promote the education of GSHP and geothermal
- Creating educational resources to be used by schools
- Exposure to the geothermal industry from an early age