@women_in_chem @sas_ie @stewart_malcolm

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ROYAL SOCIETY OF CHEMISTRY

MAKING the DIFFERENCE

Women in Chemistry: Making the Difference

Tackling life's big challenges through the chemical sciences

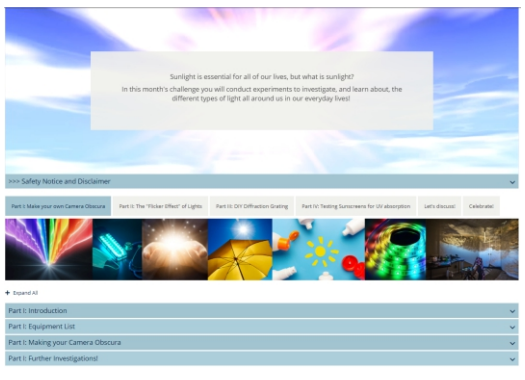
https://bit.ly/womeninchem

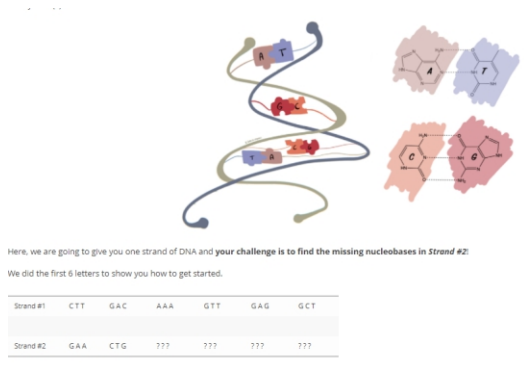
Background: Research into the impact of outreach and access initiatives and science capital suggests that sustained contact at a younger age has the potential to influence aspirations and career choices[1]. Female representation in the chemical sciences is improving (although much remains to be done at higher grades both in academia and industry), yet year-on-year UCAS figures show a shortfall of girls applying to study chemistry, preferring to select medicine related degrees[2].

[1] Archer, L., Moote, J., MacLeod, E., Francis, B., & DeWitt, J. (2020). ASPIRES 2: Young people's science and career aspirations, age 10-19. London: UCL Institute of Education, Reiss, M., Mujtaba, T., & Sheldrake, R. (2020). Chemistry for All: Reducing inequalities in chemistry aspirations and attitudes. London UCL Institute of Education. [2] UCAS Undergraduate Statistics and Reports, https://www.ucas.com/undergraduate-statistics-and-reports

Objectives:

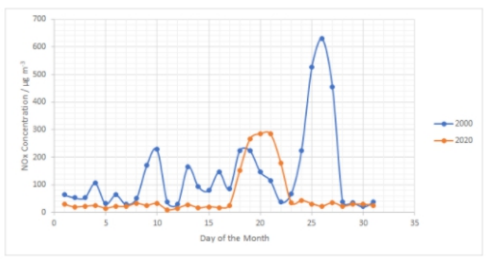
1.Develop monthly practical challenges suitable for girls aged approx. 10-14 years old.

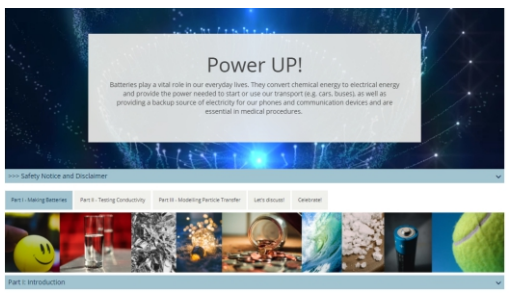




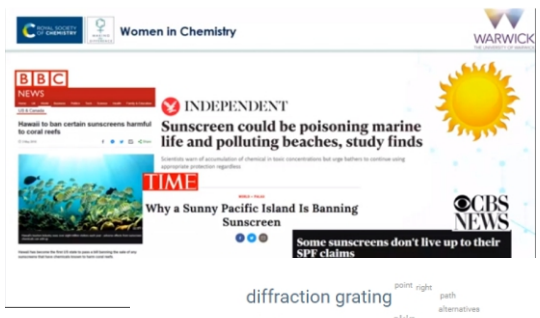
Challenges included:

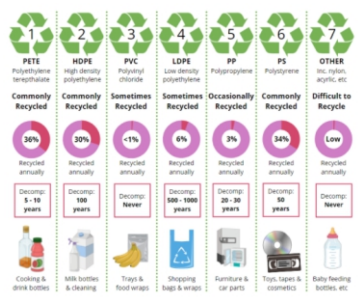
* Making batteries, investigating electrolytes and modelling solid-state batteries
* Comparing the degradation of different carrier bags
* Making a Camera Obscura, viewing light diffraction, observing LED flickering, and investigating the protection of sunscreens
* Making alginate gels and model drug delivery systems
* Cracking codes, extracting DNA, denaturing proteins and research software to visualise proteins
* Spotting trends in data, analysing large data sets and presenting findings

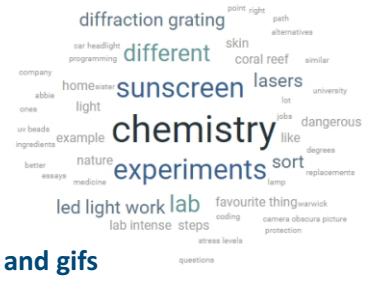




2.Construct suitable accompanying resources which highlight relevant research



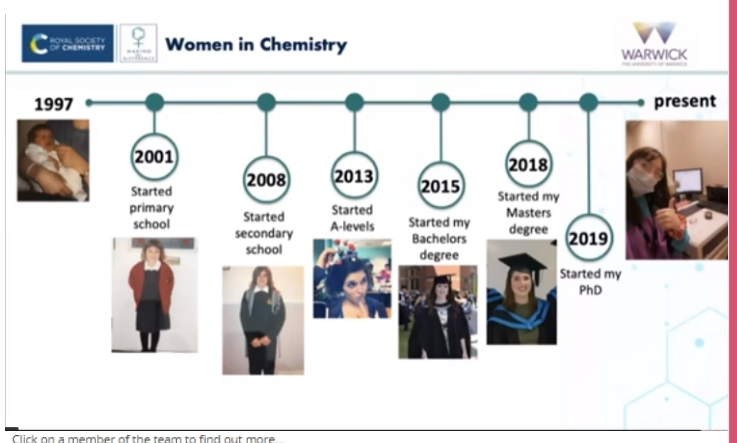




Research resources:

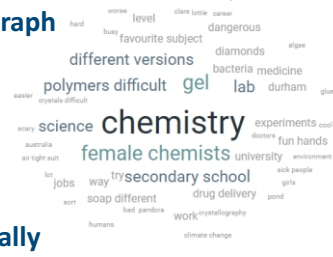
* Simple explanations
* Laboratory tours
* Glossaries
* References
* Diagrams, figures, videos and gifs
* Research covered in profile videos

3.Create career profiles for the females at the Higher Education Institutions supporting each challenge.



Career profiles included:

* Short videos of career and research journeys
* Quick fire facts about the person
* Photograph



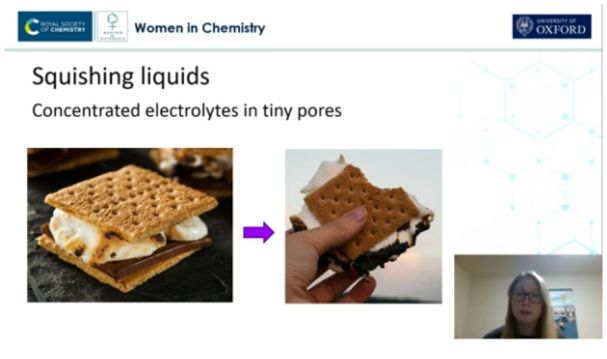
Additionally

* A wall of faces of other chemists

4.Host online Q&A meetings throughout each challenge month.

Live Q&A:

* YouTube LIVE and moderated chat
* Questions covered multiple themes, focusing on career pathways, research applications, life at University, struggles at school, and the monthly challenges.



Objectives

Sustained contact ?

Overall Aim

'Your output is excellent, very much appreciated and if we can plan it appropriately, would really help inspire our pupils and break down the preconceptions about Universities/subjects that they could inspire to.'

'I love the Women in Chemistry resources, and will definitely show them to our pupils!'

'Thank you for sending me these. They seem very exciting...

'My daughter was very excited to be involved and really enjoyed taking part in the YouTube live event. The interactive Q&A were so effective too.'

'She read your instructions and made the whole thing very carefully. She loved it,…. She did a few trial and error runs, where it wasn't quite right, she'd think about the problem, note it down and then try to fix it.'

'We have had a lot of fun doing the Q&A sessions.'

'We have all thoroughly enjoyed it! It's been such a wonderful project to be a part of.'

Open up target audience to all genders

Work alongside STEM / After-school clubs

Adapt for community organisations

Produce short clips from LIVE streams

Overall Project Aim: Increase the perception of chemistry as a discipline that impacts positively on society and one in which females thrive and contribute.

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