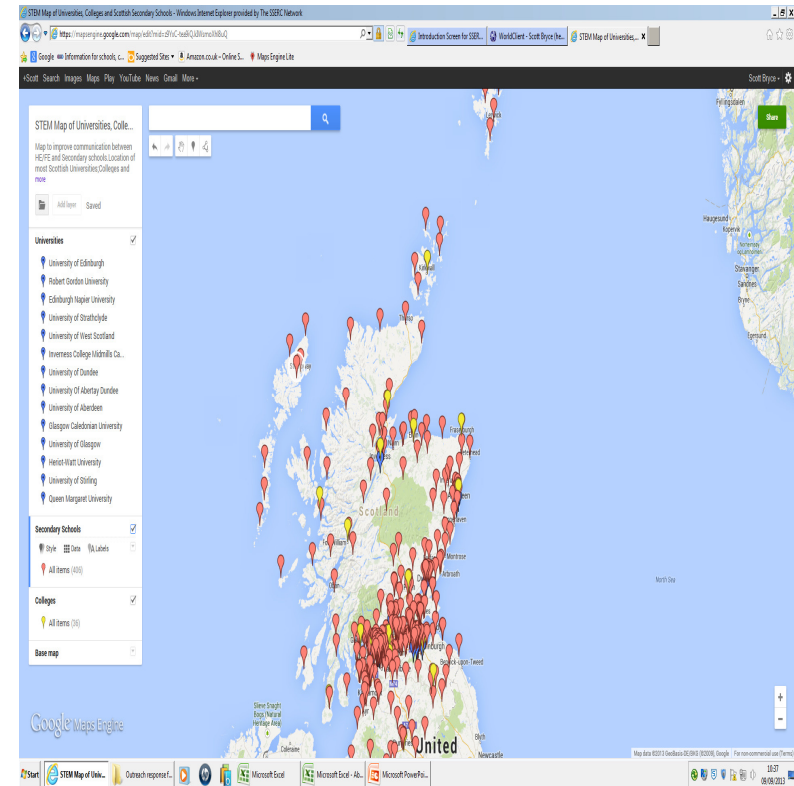


Update on progress and next steps



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STEM Education Support Officer

In conjunction with Education Scotland, Deans of Science and Engineering, SSERC, Learned Societies and Industry Bodies



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Objectives and Progress*

- To map, evaluate, support and co-ordinate current schools engagement with Higher Education and Industry
- To map, evaluate, support and co-ordinate existing STEM Continuing Professional Development (CPD) activity offered by Higher Education and Industry
- To map and stimulate the use of learning support materials
- To contribute to the development of Interdisciplinary approaches to enhance the learning experience



Higher Education, Industry, Learned Societies, Researchers and creative others, can support the provision of rich experiences and contexts, to help teachers deliver an experience that will embed Science, Technology, Engineering and Mathematical curiosity, knowledge and skills into Scotland's future communities.



Some of my former Pupils from Broxburn Academy at the Big Bang fair in London 2013, showcasing the work they have been doing.



STEMNET STEM 'Most dedicated club of the year' at CERN 2013



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Not to mention all the other Organisations that form partnerships with HE and Industry
(note that this is not a complete representation, just a suitable amount for one slide!)



The Big Bang
UK Young Scientists & Engineers Fair



IET The Institution of
Engineering and Technology



Nationally coordinated by STEMNET



Young Engineers & Science Clubs Scotland



**Tomorrow's
Engineers**



IOP
Institute of Physics

**Practical
Biology**

In partnership with SOCIETY OF
Biology



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To contribute to the development of Interdisciplinary approaches to enhance the learning experience



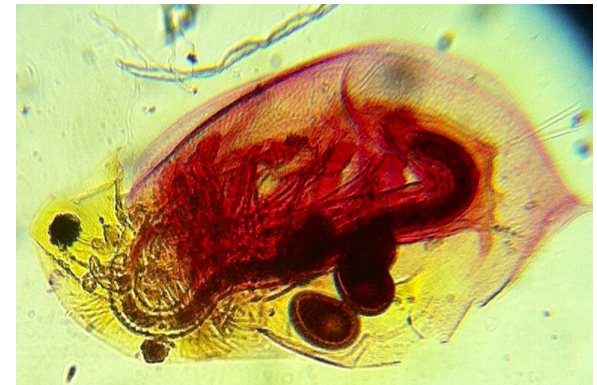
Teachers Anodising Titanium to make jewellery at SSERC Physics CPD. Idea came initially from 'Solar Spark' programme by Neil Robertson of Edinburgh University. Adapted to make cost effective for schools and used for IDL project and also AH Physics Experiment.



Above - Supporting Charles Cockell, Edinburgh University in the development of the 2014 Astrobiology teacher CPD. Providing advice and support from a teacher perspective.



Above - Interdisciplinary project using Queensferry crossing as a context, working with Sharon Edgar of CITB to develop a curriculum based challenge



Above - Daphnia image using smartphone microscope, trial of this project due to commence in August 2014



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Connecting Research and Education day – Feb 2014

In partnership with SSERC and Moredun Research Institute

- Share, collate and discuss current activities that Scottish Research Institutes (and individuals) are doing to support school education (3-18). Including websites, outreach activities, public engagement etc.
- Create links between teachers and research institutes with the aim to set a date for a follow up development day to construct materials that will support the new qualifications.
- Coordinating educational resources and prioritising some key curriculum target areas for future development that will bring some tangible short term outputs
- Discuss how to create an environment that enables increased communication and connectivity between Biology teachers and the Scottish Research Institutes going forward in a sustainable manner.



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SYNAPSE Biology online teacher network

Register by e-mailing name, organisation/school to synapsebiology@gmail.com

Set up on 29th Jan 2014 as a pilot to test demand for communication structure amongst teachers and to fill gap as there is already

- SPUTNIK + IOP Teacher network (>900 Teachers)
- CompEdNet (unknown)
- STRONTIUM + SSERC Chem and RSC teacher network (>400 teachers)
- Scottish CDT Teachers Facebook page (>800 teachers)

SYNAPSE now has over **580 registered users** with the majority being teachers.

So far this has reached over **260 Schools** via word of mouth

Over **950 curriculum resources** have been shared via the online resource drive

Future – Working with the Society of Biology to hand over SYNAPSE and set up a group of teacher network coordinators in Scotland.



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Next steps

curriculum for excellence



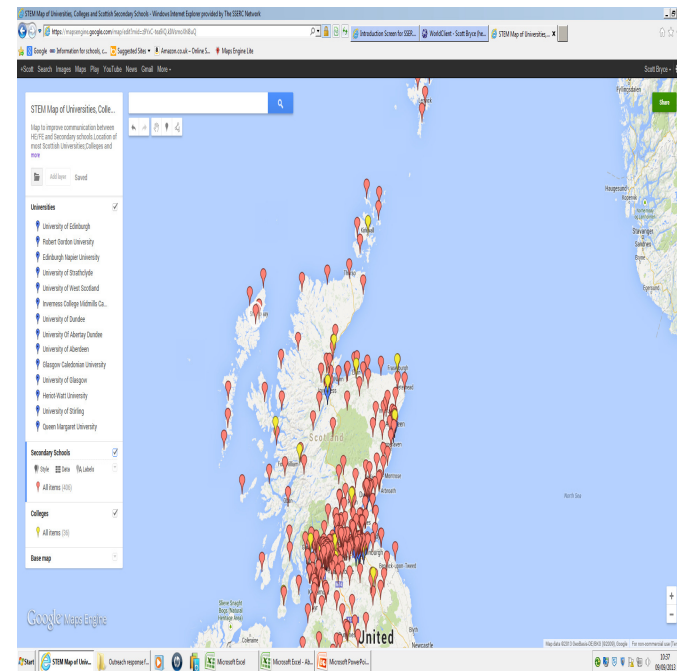
Support for New Qualifications by encouraging increased CPD on new curriculum content



Continued work on IDL materials, but need more support from HE/Research Institutes and Industry

SSERC

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STEM Map



Biology Teacher Network – Work with the Society of Biology to set up a Biology teacher (Education) network in Scotland