

## STEM Ambassador Newsletter

Welcome to the October newsletter for STEM Ambassadors and hello to all the new Ambassadors who have registered in the last month. The GO4SET and Engineering Education Schemes for 2012 are about to be launched by EDT (Engineering Development Trust) and we have many new Ambassadors who have volunteered within their companies to be part of these Challenges. These schemes are a great way for companies to become involved with schools and to work closely with a team of pupils over a 10 week period.

We have lots of requests in this newsletter from schools, looking for Ambassadors to give careers talks, to help with topics in Curriculum for Excellence as well as many schools having an IOP Lab in Lorry visit so please have a look overleaf and see where you can volunteer to help.

We also have another CPD session available with Young Engineers and Science Clubs which is open to 5 Ambassadors – this time it is for the Heather's Hut resource. The session will enable Ambassadors to hear more about Heather's Hut and to meet teachers who will be running this in their YE Clubs. The session will be held next Tuesday, 1<sup>st</sup> November at the Ibrox Study Centre in Glasgow. See overleaf for details.

### My World of Work web resource

Skills Development Scotland has launched its new online web service "My World of Work" to help people plan, build and direct their career throughout their lives. As a STEM Ambassador you may find it useful to have a look at for your own use, but also to be familiar with it if you are working with pupils and want to encourage them to find out more about careers.

The resource provides information on skills, learning and employment and supports the Scottish Government's ambitions for the improved delivery of an all age, universal careers service.

You can see jobs in action; build your CV; search for vacancies and explore training opportunities. There is a wide range of video clips of people talking about their job roles and a significant magazine element with exciting, current content that is relevant to the world of work. My World of Work complements SDS's current face-to-face and telephone services, as well as those provided by partners, so that users have access to a range of channels depending on the level of support they need.

**If you are interested in being filmed, talking about your job**, please contact us so we can facilitate this.



Visit <http://myworldofwork.skillsdevelopmentscotland.co.uk/>

## REQUESTS for HELP

Please see below requests from schools and STEM Providers for Ambassador help. The **requests which have additional information available are clickable** to take you directly to the appropriate section. If the school is not clickable, this is all the information we have on the request. To go to "Other information for Ambassadors" [click here](#).

If you can help please email us at [stem-ambassadors@glasgow.ac.uk](mailto:stem-ambassadors@glasgow.ac.uk) or phone Gail Penny on 0141 330 6396

SCHOOL / EVENT	DATE	REQUEST
<b>GENERAL REQUESTS</b>		
<a href="#">Young Engineers and Science Clubs</a>	1 <sup>st</sup> Nov 3:30-5pm	Meet with Teachers and Ambassadors to find out more about Heather's Hut.
Bannerman High School, Glasgow	ASAP	Assistance with developing an iPod case with retractable earphones to make it as slim and sleek as possible. Part of a Young Enterprise project
Glengowan Primary, Larkhall	ASAP	Looking for help to set up and run a Science Club.
Knightswood Primary, Glasgow	ASAP	Help with building a bike generator. The school plans to apply to the Royal Society Partnerships Grants scheme
Notre Dame High School, Glasgow	ASAP	Assistance with AH Biology, particularly HPLC analysis of cholesterol and also GC/MS of poppy seeds.
<a href="#">Notre Dame High School, Glasgow</a>	Wednesdays 3-4pm	Looking for speakers for Café-Sci events – see sections for Topics.
<a href="#">St Peter's Primary, Partick</a>	October onwards	Ambassadors to show the relevance of Science and Engineering in the real world. Any help at all but in particular, forensic science for P6/7 and an engineering project for P5/6.
St Aloysius College, Glasgow	Friday lunchtimes	Ambassadors to talk to pupils at Café Sci style events lasting around 40 minutes about their careers / qualifications etc.
<a href="#">Clobber Primary, Milngavie</a>	Various	Requests for help for P2-P7 classes. See section for details.
Colquhoun Park Primary, Bearsden	Friday afternoons, 2-3pm	Looking for help with science club working towards CREST Star Investigators Award
<a href="#">Irvine Royal Academy, North Ayrshire</a>	October onwards	Help with a variety of physics and chemistry topics for S3-S6 – see section
<a href="#">Cardonald College, Anniesland College, Stow College</a>	Oct – March	Skills For Work – "Health" related talks to S3 and S4 pupils while at college
Gallowhill Primary, Paisley	November 2011	Looking for support for their Enterprise Month. Themes include: skills for learning; life and work; careers education, team building. Ambassadors' focus would be on different careers and what the job involves but open to other suggestions.
Ralston Primary, Paisley	7th-11th Nov 11	Looking for Ambassadors to help during Careers Week
Killermont Primary, Bearsden	Mid – end Nov 11	Looking for support for sun, moon and stars topic at

		basic level for P1/2 class.
Calderglen High School, East Kilbride	Nov / Dec 11	Ambassador with an energy background to give a talk on energy to help with Chemistry Standard Grade topic of Fuels.
<a href="#">Millersneuk Primary, Lenzie</a>	Before Christmas	Requests for help for P1-P7 classes. See section for details.
Grammar Primary, Ayr	Jan – April 2012	Help with P4 topic on “Transport” and P6 topic on “The Water Cycle”. Also looking for KNEX help in preparation for KNEX Challenge 2012
Winton Primary, Adrossan	30 <sup>th</sup> Jan – 2 <sup>nd</sup> March 2012	Support for whole school electricity, sound waves and forces topic.
Castlemilk High School, Glasgow	7 <sup>th</sup> March 2012 (am)	Ambassador required to relate maths skills to their career for a “Numeracy in the World of Work” event for S1 pupils.
Glengowan Primary, Larkhall	14th-16th March 12	STEM ambassador to help with Science week for a day to carry out Science activities across all stages.
King’s Park Secondary, Glasgow	22 <sup>nd</sup> March 2012 (am)	3 Ambassadors from different business backgrounds to demonstrate how STEM Subjects are relevant to the World of Work.
Lennoxton Primary	March 2012	Looking to discuss ideas now for National Science and Engineering Week in March, for P3 class. Theme is “Our world in motion”.
<b>LAB IN A LORRY</b>		
<a href="#">Banchory Academy, Aberdeen</a>	8 <sup>th</sup> - 9 <sup>th</sup> Nov 2011	Help with Physics Experiments on board lorry
<a href="#">Mearns Academy, Aberdeen</a>	10 <sup>th</sup> – 11 <sup>th</sup> Nov 11	Help with Physics Experiments on board lorry
<a href="#">Cumbernauld High School</a>	15 <sup>th</sup> – 17 <sup>th</sup> Nov 11	Help with Physics Experiments on board lorry
<a href="#">Perth Academy, Perth</a>	22 <sup>nd</sup> – 24 <sup>th</sup> Nov 11	Help with Physics Experiments on board lorry
<a href="#">Smithycroft Secondary School, Glasgow, G33</a>	1 <sup>st</sup> – 2 <sup>nd</sup> Dec 11	Help with Physics Experiments on board lorry
<a href="#">Kirkintilloch High School, Kirkintilloch</a>	6 <sup>th</sup> – 8 <sup>th</sup> Dec 11	Help with Physics Experiments on board lorry
<b>BUSINESS DYNAMICS</b>		
<a href="#">Bearsden Academy, Bearsden</a>	9 <sup>th</sup> Nov 2011	Help with Business Awareness Day

## Young Engineers and Science Clubs, Glasgow

Following on from the very successful CPD session last month, Young Engineers and Science Clubs Scotland (run by SCDI) are hosting a session on Tuesday 1<sup>st</sup> November to go through the Heather’s Hut materials. “Heather’s Hut” is an exciting renewable energy project inspired and supported by Dr Heather Reid OBE, meteorologist and formerly senior forecaster with BBC Scotland. It is aimed at upper primary Young Engineers/Science Clubs and also encourages transition project work.

The kit will allow a series of practical investigations including:

- How to make electricity and store charge
- Wind power generation and wind speed
- Hydro Power
- Solar Power



The CPD session will enable Ambassadors and Teachers to meet and learn more about the materials to use in the Clubs. The session will be held at the IBROX study Centre, Glasgow from 3:30-5:00pm.

There are 5 places for Ambassadors so first come first served. If you would like to attend please get in touch with us ASAP. ([back to list](#))

## Notre Dame High School, Glasgow

Notre Dame High School is looking for Ambassadors to help with their Junior Café-Scientifique events. These are run on Wednesdays after school and they would like to have Ambassadors give a short talk on any of the following topics and then answer questions:

- Space (NASA, Aliens, dead stars)
- Cloning and Stem Cell research
- Medicine (Smart Drugs)
- Cosmetics
- Neurology
- Forensics
- Nuclear Fuels (and disasters eg Fukushima)

If you would like to provide talks relating to any of the above topics please get in touch with us. ([back to list](#))

## St Peter's Primary, Partick, Glasgow

The Science Coordinator at St Peter's Primary is aiming to make pupils aware of the relevance of science and engineering in the real world. The school has a P6/7 class which is very interested in forensic science and a P5/6 class which would love to be involved in an engineering project. Both classes have wide ranging interests and the co-ordinator would be more than happy to hear about any other options available from Ambassadors.

If you would like to assist the Science Co-ordinator in any aspect of STEM please get in touch with us. ([back to list](#))

## Clober Primary, Milngavie

Clober Primary has utilised Ambassadors over the last 18 months or so and is a great supporter of the Ambassador Programme. They have been delighted with the visits they have received and are so enthusiastic, they have sent us a list of all the classes they would like an Ambassador to visit.

Class	Area of Science	Approx time of visit
P2	Living Things	ASAP
P3	Forces and Magnets, Heating and Cooling, Light and Sound	ASAP
P4	Electricity & Energy	ASAP
P5	Friction, Solar System, Growing Plants	Any Term
P6	Electricity	Jan – April 2012
P7	Energy Conservation Sustainability Gravitational Forces	Any Term
Class	Area of Technology	Approx time of visit
P4	3D Shape - buildings	Oct – Dec 11 (pm)
P5	Moving Heavy Objects	Jan – April 12
Class	Area of Mathematics	Approx time of visit
P4	2D & 3D Shape Project	Oct – Dec 11 (pm)
P5	Fractions	Jan – April 12
P6	Fractions	Oct 11 - April 12
P7	Decimals & Percentages	Jan – April 12 or anytime

If you can help with any of the topics listed please get in touch with us. ([back to list](#))

## Irvine Royal Academy, North Ayrshire

Looking for help with a variety of physics and chemistry topics for S3-S4 as follows:

S3 Intermediate 1 Biology	Sep / Oct 2011	Growing Plants
S4 Physics	Oct / Nov 2011	Energy Matters: Supply and Demand Generation of Electricity Source to Consumer
S4 Intermediate 1 Biology	Feb / Apr 2012	Biotechnological Industries Waste Management Pharmaceutical Industries Antibiotics production and action
S3 Physics	Feb / Mar 2012	Health Physics : Light and Sound ; Using the Spectrum Nuclear Radiation – Humans and Medicine

If you would like more detailed information on each topic or to be involved please get in touch with us ([back to list](#))

## Skills for Work “Health”, various colleges

Scottish Business in the Community is working with Glasgow City Council's Vocational Training Team in terms of employer inclusion for their Skills for Work, Enhanced Vocational Inclusion Programme and Supported Vocational Programme courses. All courses run from September to April and are based in Colleges across the City.

SBC is looking for STEM Ambassadors with a “Health” bias to give a talk to S3 and S4 pupils during their time in college. The pupils are in from 9.30am to 3.00pm each day and usually the talk would be approximately 30minutes with a Q&A afterwards, all in 40minutes. SBC will confirm on an individual basis with the school/college whether AM or PM suits but in a majority of cases the schools/college are totally flexible and will work with the speakers.

The colleges looking for speakers are as follows:

College	Day	Year Group
Cardonald	Thursday afternoons	S3
Anniesland	Wednesday	S4
Stow	Thursday afternoons	S4

If you are interested in being involved please let us know. ([back to list](#))

## Millersneuk Primary, Lenzie

Millersneuk Primary is very keen to engage with Ambassadors and has sent us the topics each class will be covering from now until Christmas. We have information on which experience and outcomes in Curriculum for Excellence they are particularly interested in for each topic, so if you are able to volunteer for any of the topics listed below please contact us and we can send you the full document!

P1	<ul style="list-style-type: none"> <li>• Basic electricity, appliances which use it and how to stay safe.</li> <li>• Senses, identify them and carry out basic investigations</li> <li>• Materials, Identify materials and select different materials for different purposes</li> <li>• Sun, moon and stars</li> </ul>
P2	<ul style="list-style-type: none"> <li>• Identify living things from non-living and sort them into groups depending on characteristics</li> <li>• Plants; growth, importance to us, identify different parts</li> <li>• Food chains and habitats relating to the seashore</li> </ul>
P3	<ul style="list-style-type: none"> <li>• Body systems, senses, skeleton and common diseases</li> </ul>
P4	<ul style="list-style-type: none"> <li>• Electricity, circuits and conductors</li> <li>• Space, relation to day, night, month and year</li> <li>• How characteristics are inherited in humans plants and animals and how they may relate to the environment</li> </ul>
P4/5	<ul style="list-style-type: none"> <li>• Water cycle</li> <li>• Solids, liquids and gases and their properties</li> </ul>
P5	<ul style="list-style-type: none"> <li>• Body systems, role of different parts and factors which could cause harm</li> </ul>
P6	<ul style="list-style-type: none"> <li>• Classify living things and relate characteristics to their survival or extinction, discuss ecosystems and plants importance to society</li> </ul>
P6/7	<ul style="list-style-type: none"> <li>• Earth's materials and structure</li> <li>• Lifecycles of plants and animals and different stages of development</li> <li>• Forces(magnetic, electrostatic and gravitational), friction and motion</li> </ul>
P&	<ul style="list-style-type: none"> <li>• Solar system</li> </ul>

If you can offer assistance of any sort to this school please let us know. ([back to list](#))

## Lab in a Lorry

Lab in a Lorry is an interactive mobile laboratory, run by the Institute of Physics, which gives 11-14 year olds the opportunity to explore science through open-ended experiments. Volunteers guide the students through the experiments (oil and viscous liquids, sound and resonance, light scattering and colours, climate change and energy sources, optoelectronics) and makes sure everyone gets to be involved through hands on experience.

As an Ambassador you will oversee an experiment for the day. You receive training on the Lab beforehand and the organiser sends you all the background material in advance. Ambassadors commit to a minimum of one full school day but you are welcome to come along for as many days as you like. Please see the Requests table above for schools and dates in our area. If you would like to be involved please get in touch with us – you don't have to be a Physicist to take part! ([back to list](#))



## Business Dynamics

Business Dynamics aims to bring business to life for young people. Volunteers from companies introduce pupils to the opportunities and challenges of business as well as improving their key skills in preparation for the world of work. Business Dynamics operate Business Awareness days and would like Ambassadors to help with the sessions. Ambassadors talk about their expertise and role within their company in relation to the topic, and then run a business exercise based on that topic, to help pupil participation and learning. Full information will be sent to you before the event. ([back to list](#))

## Other information of interest to Ambassadors...

## Careers Information on the Oil and Gas Sector

Opito services the needs of the oil & gas industry and is the industry's focal point for skills, training and workforce development. It is a self-sustaining, employer and trade union led organisation committed to developing and sustaining a safe, skilled and effective workforce now and in the future. This is achieved by working in collaboration with: industry employers, learning & training providers, education & academia and partnership organisations.

OPITO aims to inspire school leavers, college graduates, university graduates and postgraduates by raising awareness of the breadth of exciting career opportunities in the oil and gas sector. The organisation has produced a careers related leaflet outlining important information about careers which you are able to use when you visit schools to give pupils more information.

We have PDF copies of this leaflet (1MB in size). If you are interested in finding out more and would like a copy please email us at [stem-ambassadors@glasgow.ac.uk](mailto:stem-ambassadors@glasgow.ac.uk) and we will email you a copy.



## STEM Challenge 8 is now open!

If you are looking for an activity to do with your local school, then a STEM Challenge may be ideal. STEMNET and Deloitte are challenging 11-14 year olds to find out where and how more disabled people could take part in Paralympic sports.



Deloitte



The latest STEM Challenge is to help disabled people in a school and local area learn more about the opportunities available to them to partake in Paralympic sports. For their Challenge entries, pupils must produce information about what is currently available in their local area, and then make recommendations to increase the Paralympic sport provision both in school and their local area.

To achieve this, pupils must produce (a) information about what is available now and (b) recommendations to increase the Paralympic sports that are available, in their school and local area. Pupils must create a presentation summarising what Paralympic sports are available in the local area and where they are held. They must also include a report for their school and/or local venues, recommending Paralympics sports that they could offer.

Teams will be competing for cash prizes for STEM Club equipment, and an experience prize to be provided by Deloitte and Parasport.

Important dates: Deadline for team entries: Friday 25th November 2011, Local Judging sessions: 1st to 9th December 2011, Challenge Final: Wednesday 11th January 2012, London

## Science in the Parliament

### 9th November - Our Dynamic Earth, Edinburgh

Science in the Parliament is an annual event organised by the Royal Society of Chemistry. It is aimed at promoting engagement between members of the scientific community, MSPs and other policy makers in the Scottish Parliament and Government. This year's event will focus on the contribution of science and engineering to the economy, considering how public policy can best encourage activity in these sectors. In the immediate aftermath of the UK and global economic difficulties of recent years, considering how best we can take advantage of existing strengths in high value sectors is all the more critical.

The event consists of plenary lectures and breakout sessions, with an exhibition involving organisations across the scientific and engineering community. Confirmed speakers include: John Swinney MSP (Cabinet Secretary for Finance, Employment and Sustainable Growth); Professor Anne Glover (Chief Scientific Adviser to the Scottish Government); Professor David Phillips (President of the RSC); Ian Ritchie (Co-Chair of the Scottish Science Advisory Council); Professor Alice Brown (Vice Chair of an RSE Women in STEM working group) and Professor Lesley Yellowlees (President elect of the RSC).

Attendance at this event is free, but you must register your place. Visit [http://www.rsc.org/ConferencesAndEvents/RSCConferences/science\\_and\\_the\\_parliament\\_2011/index.asp](http://www.rsc.org/ConferencesAndEvents/RSCConferences/science_and_the_parliament_2011/index.asp) for more information and to reserve a place.

## Induction Training

If you have not already undertaken your induction training, the next session will be run on **Tuesday 8<sup>th</sup> November at 3:00pm** at the University of Glasgow. To register for an induction please email or call us and we will confirm your place. The training will last around 2 hours and will enable you to complete your disclosure form also. The next training after this will be Thursday 17<sup>th</sup> November 2011 at 3pm.

Please do consider all the requests listed in the newsletter. Thank you for all your efforts and please do remember to record your activity at [www.stemnet.org.uk](http://www.stemnet.org.uk) or drop us an email with the activity and we will do it for you

Regards



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