

STEM Ambassador Newsletter

Welcome to the April newsletter for STEM Ambassadors in the West of Scotland. Schools have been off for 2 weeks and a couple of 3 and 4 day weeks following, but that hasn't stopped the requests coming in! We have quite a few requests for schools which are immediate so please have a look at the list overleaf and see where you can help. Schools taking part in the "Heather's Hut" project for Young Engineers and Science Clubs are now in the final stages of the competition and are looking for help to build their models, so please consider these schools as a matter of urgency.

The K'NEX Challenge is well under way now and most schools have completed their Cluster Challenges. Winners from these Challenges will compete in the Area Finals in May and we are now looking for Ambassadors to be judges at the Area Finals. These will be held in Glasgow, Kilmarnock, East Kilbride, Dumfries and Stranraer so please have a look at the dates overleaf and volunteer if possible. No experience necessary! The winners from the Area Finals will attend the West of Scotland Final in June and the overall winners will go onto compete in the UK Final in London. Thank you to all the Ambassadors who have been helping schools with their K'NEX Challenges over the last couple of months and assisting with workshops and judging.

If you have not yet had a look at STEMNetworking please visit www.stemnet.org.uk and click on the link to this area of the website. STEMNetworking enables you to find out what is in the resource bank for activity ideas, share your resources with other Ambassadors and take part in online blogs.

Glasgow Science Festival 1st – 18th June 2011

The fifth annual Glasgow Science Festival will be taking place in June. There is a huge programme of events for all ages including film, shows, workshops, exhibitions, talks and walks. The festival is taking place at venues across the City, including, the Universities of Glasgow, Strathclyde, Glasgow Caledonian and West of Scotland, Glasgow Science Centre, Kelvingrove Museum and Art gallery, CCA, GFT, Glasgow Sculpture Studios and many more.

Many events are free and there are three main sections: all ages, adult and schools.

For more information or to download the programme, please visit www.glasgowsciencefestival.org.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 currently on the request. To go to "Other information" [click here](#).

If you can help please email us at ambassadors@physics.gla.ac.uk or phone on 0141 330 6396 and we can liaise with the school on your behalf.

SCHOOL / EVENT	DATE	REQUEST
Glasgow Science Centre	All year long	Meet the Expert Events, see section for details
CAREERS EVENTS		
Stranraer Academy, Dumfries and Galloway	3 rd May	Speed Networking Event for various year groups – part of Dumfries and Galloway Science Festival
New Farm Primary, Kilmarnock	26 th May	Careers Event for P7 pupils
KNEX CHALLENGE		
Lanarkshire Area Final, East Kilbride	11 th May	Judges for Final at South Lanarkshire College
Wigtownshire Area Final, Stranraer	12 th May	Judges for Final at Stranraer Academy
Glasgow Area Final, Glasgow	18 th May	Judges for Final at St Francis Centre, G5
Ayrshire Area Final, Kilmarnock	20 th May	Judges for Final at Kilmarnock College
Dumfries Area Final, Dumfries	24 th May	Judges for Final in Dumfries Academy
LAB IN A LORRY		
Hamilton College	26 th /27 th April	Help with Physics Experiments on board lorry
Langholm Academy, DG13	3 rd May	Help with Physics Experiments on board lorry
Castle Douglas High School	4 th – 6 th May	Help with Physics Experiments on board lorry
Duncanrig Secondary, East Kilbride	12 th , 13 th May	Help with Physics Experiments on board lorry
Craigmount High School, Edinburgh	17 th , 18 th May	Help with Physics Experiments on board lorry
Airdrie Academy, Lanarkshire	19 th , 20 th May	Help with Physics Experiments on board lorry
Bannerman High School, Glasgow	7 th June	Help with Physics Experiments on board lorry
Castlemilk High School, Glasgow	8 th , 9 th June	Help with Physics Experiments on board lorry
YOUNG ENGINEERS & SCIENCE CLUBS		
Aultmore Park Primary, Glasgow, G33	Thursdays 3-4:15pm	Help with Heather's Hut renewable energy project
St Conval's Primary, Glasgow G43	ASAP	Help with Heather's Hut renewable energy project
St Fillan's Primary, Glasgow, G44	3:15pm-4:30pm Wed and some lunchtimes	Help with Heather's Hut renewable energy project. P5 class
Holycross Primary, Glasgow, G42	Tues afternoons 3:15- 4:15pm	Help with Heather's Hut renewable energy project
St Charles' Primary, Paisley	ASAP	Help with Heather's Hut renewable energy project

Burnside Primary, Rutherglen	ASAP	Help with Heather's Hut renewable energy project
Avenue End Primary, Glasgow, G33	ASAP	Help with Heather's Hut renewable energy project. P2 and P3/4 class
FUNMATHS ROADSHOW		
Various Primaries – click here for schools	May/June	Help with Maths Roadshow at various schools
GENERAL REQUESTS		
Baljaffray Primary, Bearsden	2-6 th May	Any STEM related help during Science Week. Have 2 Ambassadors already but would like more.
Towerlands Primary, Irvine	Week beginning 9 th May	Help with various topics during Science Week
St Vincent Primary, East Kilbride	Anytime	P6 - Clyde in the Classroom, any presentations / activities - looking at the biodiversity and ecology of rivers. Also looking for Forensics help for P6 class.
Auchinleck Nursery, Ayrshire	Anytime	Very basic help for 3-5 year olds on forces
Neilsland Primary, Hamilton	ASAP	Ambassador to talk about co-ordinates and grid references as part of a maths lesson.
The Glasgow Academy, Atholl, Milngavie	ASAP	Looking for help with various classes
Blackwood Primary, Kirkmuirhill, Lanark	ASAP	Looking for an Ambassador to help build a scale model of the solar system with P7 class.
King's Park Secondary, Glasgow	ASAP	Help with Sci-Art project. Marine Biology or technology would be a help here.
Avenue End Primary, Glasgow G33	ASAP	Help with plants, trees and local wildlife information, as well as mini beasts
Davidson Mains Primary, Edinburgh	ASAP	Request from the East of Scotland for help with data loggers to collect weather statistics and enliven the topic
Postgraduate Researcher	ASAP	Looking for opinions on public engagement from biological/biomedical researchers
University of Glasgow	Before end of June	Gaelic speaker with science background required for electricity workshop
Darvel Primary, East Ayrshire	May/June	Help with numerous science related topics
Troon Primary, Ayrshire	31 st May – 2 nd June	Help with "Health Week" Food Nutrition, Physiotherapy, Hygiene or similar
Largs Academy, Ayrshire	7 th June	Help with IOP Ashfield Music Festival day
Whitehill Secondary, Glasgow	9th June	Science4Survival Day. Help with activity day – water purifying, bacteria, parasites etc
Lanark Grammar School, Lanark	15 th June between 10.30 and 1.30pm.	Looking for activities for pupils to take part in during Science Week
The Glasgow Academy	17 th June 20 th June	Space Station Day for S1 pupils Climate Change Day
Williamwood High School, East Renfrewshire	Planning for next year	STEM Ambassadors to work with teacher on ideas for projects for Royal Partnership Grants in 2011/12

New Farm Primary, Kilmarnock

New Farm Primary School in Kilmarnock is having a Careers day for the 26th May to inform the P7 pupils (approx 30) of the wide variety of jobs and careers that are available to them when they are older. The day will consist of a main employer event, from 9.15-10.15am, in the main hall with the pupils rotating around various stations. There may be another slot available to talk to the whole class late morning but this is still to be confirmed.

If an ambassador has something interactive that they feel would be beneficial then by all means they can bring that along but it is not compulsory and the pupils will be happy to listen to your career story of what you do in your job and how you choose this field. If you would like to help out, please let us know. ([back to list](#))

Lab in a Lorry, all over Scotland

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](#))

Heather's Hut – Renewable Energy Project

"Heather's Hut" is a 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. Many of SCDI's Young Engineers and Science clubs are taking part in the "Heather's Hut" project and would like assistance with their after school clubs (see section above for schools).

For the "Heather's Hut" project, YE&S Clubs are asked to undertake several tasks and the Clubs are coming up to the stage where they need to **design a model Heather's Hut showing ideas in practice.**

Design challenges include: Wind powered generator, Hydro powered generator, Solar Heater, Solar Cooker

The best Heather's Hut projects across Scotland will be invited to showcase and compete at the Celebration of Engineering and Science at the Glasgow Science Centre on Friday 10 June 2011 so please do consider helping these clubs! ([back to list](#))

Funmaths Roadshow

The Funmaths Roadshow is a collection of 350 interactive mathematical puzzles for use with school children, from age 10 onwards. The resource has been developed by the Liverpool Mathematical Society. It is a valuable interactive classroom resource that improves problem solving skills and most importantly, it changes attitudes towards mathematics. The emphasis is on enjoyment, challenge and relevance to the real world enabling youngsters to become highly motivated successful learners underpinning the design for the Curriculum for Excellence.

One of our STEM Ambassadors is taking the Funmaths Roadshow to various schools in May and June and Ambassadors are welcome to join her at the schools to a) find out more about the puzzles and activities used and b) offer an extra pair of hands as support during the sessions. The following schools have Roadshows booked:

St Eunan's Primary, Clydebank	23rd May a.m.	Castlehill Primary, Bearsden	24th May a.m.
Oxgang Primary, Kirkintilloch	24th May p.m.	Killermont Primary, Bearsden	25th May a.m.
Baljaffray Primary, Bearsden	1st June a.m.	Our Lady of Loretto Primary, Glasgow	2nd June p.m.
Lairdsland Primary, Kirkintilloch	3rd June a.m.	Craighead Primary, Milton of Campsie	3rd June p.m.

If you would like to help at any of the Roadshows listed above please get in touch with [\(back to list\)](#)

Towerlands Primary School, Irvine

Towerlands Primary School is having a Science Week w/c 9th May 2011 and the whole school will be involved in learning about all things science. Towerlands is quite a small school with class sizes averaging about 22 pupils.

Some of the topics covered include growth/lifecycles, the body, and the senses; however they are happy for ANY science input at all! If you would like to help out please let us know. [\(back to list\)](#)

The Glasgow Academy, Atholl at Milngavie

Pupils at the Primary school of The Glasgow Academy in Milngavie are covering various science topics this term and would like STEM Ambassadors to give talks related to the following subjects:

P1 (12 pupils) - The Sea

P2 (12 pupils) - Planting and growing/Forces and Motion

P3 (12 pupils) - Birds and mini beasts

P4 (13 pupils) – Rainforests

If you are interested in taking part let us know. [\(back to list\)](#)

Kings' Park Secondary School, Glasgow (G44)

King's Park is running a "Sciart" project after Easter and is looking for Ambassadors to help out at various stages. "Sciart" involves both Science and Art and aims to provide young people with a number of different skills and experiences. The project is for S2 pupils and will ask young people to consider the possibility of life underwater. This will involve lots of scientific considerations as well as art and design. An Ambassador with any sort of marine biology or even engineering background would be great. Please let us know if you would like to be involved. [\(back to list\)](#)

Avenue End Primary, Glasgow

Primary 1, 2 and 3 classes are studying a Park topic in term four and would like any Ambassador help with plants, trees and local wildlife information. The children are particularly interested in mini beasts. They will also be carrying out mini topics on growing and planting as part of Eco Schools. If you are interested in being involved in this topic please do get in touch. [\(back to list\)](#)

Postgraduate Research

We received a request from a Science, Media and Communication postgraduate from Cardiff University who is undertaking an MSc research project on **bioscientists** and their role in public engagement in science. Her study is primarily concerned with determining the motivations and perceived costs and benefits for the scientists involved. The student has created a questionnaire to seek your perspective as a scientist on what participation in public engagement means for the individual scientist and the scientific community. Even if you do not participate in any public engagement activities, she is still interested in your responses to the questionnaire. The survey will take no

more than 10 minutes. Please follow the link to answer the questions anonymously (your email will not link to your answers): <https://www.surveymonkey.com/s/ScientistPES> ([back to list](#))

University of Glasgow

The Hunterian Museum at Glasgow University is putting a project together working with the Gaelic department. They are looking for STEM Ambassadors who speak Gaelic to help facilitate an electricity workshop, which they will film and put on the school intranet website, Glow.

The workshop will take place in the University with a class from the Glasgow Gaelic school in late June. Full training will be given. If you are interested in taking part let us know. ([back to list](#))

Darvel Primary, East Ayrshire

The following topics are for Term 4 so the school is looking for an input from Mid May through to the end of June.

P2 + P2/3 - Growth and Lifecycles P4 - Forces, magnets and springs
P6 - Forces and Friction P7 – Flight

If you can help with any of the above topics please let us know. ([back to list](#))

Largs Academy, Ayrshire

On 7th June Largs Academy will be involving 3rd year physics students in the Ashfield Music Festival event, an IOP project. The school is looking for Ambassadors to come along and help enhance this event, sharing with pupils their expert knowledge, and help encourage them to continue their physics studies at Higher and further education.

The Ashfield Music Festival is an activity designed to develop skills in work-related learning and inspire more students to study physics post-16. The activity is a simulation, based on the scenario that a council (Ashfield) wants to create a new music festival. Students develop skills in enterprise and learn how physics applies in this context by taking on one of six roles: project manager, health and safety advisor, construction manager, electrical engineer, sound engineer and lighting engineer. They are supported by real-life scientists (Ambassadors) and must use a mixture of physics-based knowledge, creativity and skills associated with enterprise in order to win the contract to build the main stage. With a theme chosen to engage students and illustrate the broad relevance and potential application of physics, Ashfield Music Festival is a one-day, off-timetable activity that has been fully trialled in schools.

If you would like more information we can send you the IOP pack for you to consider before committing. If you would like to take part please let us know. ([back to list](#))

Whitehill Secondary, Glasgow

Whitehill Secondary is hosting a Science4Survival day on Thurs 9th June. This day has been designed and piloted at the Gaelic School by Dr. Christine Peters (a STEM Ambassador), who now has a Royal Society of Chemistry grant to take this to Whitehill Secondary. The day will be for 26 teams of three P7 and three S1 pupils. The scenario is that they are all aboard a science research plane bound for Antarctica, which has to crash land on a tropical island. The groups will work through the activities in 2 separate rooms and they require Ambassadors to customise and run the various sessions for these groups during the morning:

- Purifying water to drink, to tie in with the RSC's Global Water experiment, in celebration of the International Year of Chemistry
- Risks of microbial disease and purifying water, to tie in with the RSC's Global Water experiment, in celebration of the International Year of Chemistry

- Energy sources, using S CUBES
- Food, what to eat to survive (including live locusts!!!)
- Identify a snake and treat the bite
- Malaria awareness
- Treating wound infections
- Building of emergency shelters
- Mapping of the island to better understand where to gain water and power etc

In the afternoon the pupils will work on drug development in the hope of being the six pupils that the Scottish Government can afford to rescue due to their ability to treat malaria. If you would like to be involved in this very exciting project please contact us. ([back to list](#))

Lanark Grammar School, Lanark

Lanark Grammar School is planning a Science day for 200 pupils from their associated primary schools on Wednesday 15th June between 10.30 and 1.30pm. They are hoping to have 10 classes of 20 pupils making three rotations and need 10 workshops that can be delivered three times on a timescale of 30 minutes to allow movement around the department.

If you have a workshop related to any of the STEM subjects (or you could borrow the S Cubes renewable boxes, or KNEX from our office) and would like to be involved in this Science event please let us know. ([back to list](#))

The Glasgow Academy, Glasgow G12

The Glasgow Academy is again running their **Space Station day on 17th June**. This day was run very successfully last year (the day ends with all the rockets being launched) and the S1 pupils had to perfect and make rocket fuel, design and test a rocket, research rocket design and write some code to send into space. This year's event will be similar and again for S1 pupils, but focus more on the history of the space station, dehydrating food to take into space, perfecting and making rocket fuel and making a shuttle rocket to go to the space station.

In addition, the Glasgow Academy will be running a **Climate Change day on 20th June**. During the day pupils will choose three workshops to attend and they are looking for volunteers to run these. Some examples are below (but the school is very open to other suggestions and ideas.)

- floods and sanitation, to tie in with the RSC's Global Water experiment, in celebration of the International Year of Chemistry
- effects of Climate Change on clothes and houses
- movement of carbon within the world
- the response of the developed world to Climate Change
- Climate Change, volcanoes and earthquakes
- ice core data and cold adaptation
- marine ecosystems
- the opposition to Climate Change
- experiments with carbon dioxide
- art after natural disasters

The day will end with a debate/discussion on Climate Change and they are also looking for anyone with any expertise in Climate Change who would be willing to take part in this.

If you would like to be involved in this Space event or Climate Change Day please let us know. ([back to list](#))

Williamwood High School, East Renfrewshire

Williamwood High School is keen to begin discussions with STEM Ambassadors concerning projects for next academic year, with a view to applying for funding for a Royal Society Partnership Grant. Through this scheme grants are available from £250 up to £3000, to support teachers, engineers and scientists develop science projects. "The aim is help make science more interesting in primary and secondary schools. The partnership grants scheme

forms partnerships to allow teachers to increase their scientific knowledge and to give scientists and engineers the chance to develop their communication skills and engage with enquiring young minds."

The teachers feel this is an excellent opportunity to start a good project with Ambassadors, extending the partnership to the cluster primary schools.

We currently have 2 Ambassadors volunteering to take part in this project, but would like a team of 5 to bring different ideas together. An initial meeting will be held with the teacher in mid-May so please do consider getting involved. ([back to list](#))

The Glasgow Science Centre – Volunteering Opportunities



The Glasgow Science Centre would like to invite STEM Ambassadors to take part in their many "Meet the Expert" weekend events taking place over the next year. If you would like to take part in any of the events listed below please get in touch with us and we will put you in touch with the GSC. Staff from the "Meet the Expert" Team at the Glasgow Science Centre will then arrange to meet with you and brief you on what is required for the event you are volunteering for.

Memory Weekend 28th-30th May

From Alzheimer's to brain training, amnesia to ageing, if you are an expert on memory and would like to tell the public about the work that you do, we would love to hear from you. We are looking for memory experts who have interesting facts and demonstrations to share with our visitors.

Brain Weekend 30th and 31st July

Do you know lots about the brain? We are looking for brain experts to help us and our visitors celebrate our amazing brains. If you have interesting brain facts and demonstrations you would like to share with our visitors please get in touch with us.

Solve It! Weekend 13th and 14th August

Are you a professional problem solver? We are looking for problem solving experts who would like to join us for Solve It weekend where we focus on the skills needed in maths, science, and engineering and even in every day life. If you have interesting problem solving facts and demonstrations you would like to share with our visitors please get in touch with us.

If you would like to take part in any of the exciting opportunities above please get in touch with us and we will pass your details on to the Glasgow Science Centre. This is an opportunity to get involved with science communication to a wider audience, not only school children

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Other information of interest to Ambassadors...

STEM Ambassador Awards for Scotland 2011

Members of Scottish Parliament and leading industry figures gathered in Edinburgh on Thursday 10th March for the STEMNET Awards for Scotland 2011, chaired by STEM Ambassador Heather Reid OBE, formerly BBC Scotland weather presenter. We were delighted that two of the Finalists were from the West of Scotland, selected from a total of 33 nominations: Thales Optronics Ltd for Most Dedicated Employer Award and Mr Greg Bremner of Clober Primary for the Most Dedicated Teacher Award.

Pupils from two of our local schools, the Glasgow Gaelic School and The Glasgow Academy also took part in the event and demonstrated the exciting science they do in the classroom. Dr Christine Peters, a winner from last year's STEM Ambassador Awards, gave a fantastic presentation along with the Gaelic School and showed just how inspiring Ambassadors can be.



Award Nominees

For full details of the winners please visit <http://www.stemnet.org.uk/news/region/view/1232181>

“Young Researchers Improving Lives” Competition

Glasgow City of Science, in partnership with the Glasgow Science Festival, is launching a new competition for early career researchers working in industry and

academia in the West of Scotland. Entrants are asked to showcase their research emphasising how it impacts on improving lives across Scotland and beyond. There are two prizes of £500; one for PhD students/first post docs based in academia; and the other for early career researchers from companies with a West of Scotland base. All candidates should have no more than 5 years research experience.

Entrants are asked to submit a 100 word outline of their research, written in layman's language, explaining “how it will improve lives”. They should also include one image relevant to their research and a personal photograph. A selection panel will short list 5 entrants in each category and the winners will be chosen by panels of P6 and P7 children in schools across Glasgow.

Entry forms are available on the web sites of Glasgow City of Science www.glasgowcityofscience.com and Glasgow Science Festival www.glasgowsciencefestival.org.uk

The closing date for entries is May 2nd 2011



Science Council – Hidden Science Project

The Science Council's Hidden Science Project - <http://www.hiddensciencemap.org>

The Science Council is calling all types of science people to come out and help them show just how much science and maths is used every day all over the UK, and the amazing range of different jobs there are out there. From pharmacists and farmers to fireworks designers, if you are using science, maths, engineering or technology as the foundation for your work or career they would like you to put yourself onto the new [hiddensciencemap](http://hiddensciencemap.org).

The map is open to individuals, including retired science people and aspiring scientists and students, organisations, employers and teams of scientists. A short profile takes about 10 minutes. Those with a creative streak, or with lots of friends and colleagues who want to join in, can make a place portrait (our name for a group image) to which personal and organisational profiles can be pinned. They aim to have a science person in every postcode over the next few weeks so that when the map is launched for its audience it will be a rich source of information.

For more information please email hiddensciencemap@sciencecouncil.org

I'm a Scientist, Get me Out of Here



I'm a Scientist is an award-winning science enrichment project, funded by the Wellcome Trust, where school students talk to real scientists online. The next event takes place 13th-24th June.

There will be 23 zones in June, so there's space for 460 classes to take part. The organisers need 115 scientists altogether (there are five scientists in each zone). Half of the zones will be general - with a mixture of scientists from all areas of science. Half of the zones will be themed - with scientists whose work has something in common (e.g. in the past they have had a Brain Zone, a Cancer Research Zone, a Stem Cells zone...).

They are particularly interested in hearing from the following specialist areas:

Forensic science	Nanotechnology	Marine and Underwater Science
Energy generation	Evolution	Ecology
Sports Science	Cannabis legalisation	Use of chemicals in everyday life
Climate	Sustainability	Brain
Microbiology	Keeping Healthy	

This is the shortlist of topics for themed zones, based on what teachers have said they would like.

Deadline: Fri 6th May: Info and sign up form: <http://imascientist.org.uk/scientists>

Induction Training

If you have not already undertaken your induction training, the next session will be run on **Tuesday 31st May 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 Tuesday 5th July 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 or drop us an email with the activity and we will do it for you.

Regards

A handwritten signature in black ink that reads 'Aileen Hamilton'.

Email: aileen.hamilton@glasgow.ac.uk