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**STEM Showcase & Partner’s Fair**

**Thursday 7th June 2018**

**Programme**

3.45pm Registration starts

4.05pm Welcome - Year of Young People Ambassadors/Janey Irving

4.10pm Presentations:

1. Keynote: Erin Callan (Diageo) – The Importance of STEM in Moray’s Local Economy
2. Steven Tubbs/Pupils from Keith Grammar School – impROVise (STEM Club) and the MATE ROV competition
3. YESC participants from Hythehill Primary School/Melanie Riddell – Young Engineers & Science Club
4. Primary Engineer – Pupil participants
5. Jennifer Walker – Winner of Career Ready STEM Award with her mentor Brian MacAulay
6. National STEM Strategy/Launch of Moray STEM Position Statement – Janey Irving

5.10pm Marketplace & networking (Tea/Coffee/Home bakes available from 5.30pm)

6.30pm Plenary/Evaluation – Presentation

7pm Close

**Please note:** In addition to the Marketplace Stands detailed below; there will be several local STEM businesses represented at this event. We will ensure that education delegates are able to easily identify the business attendees for networking purposes.



**Marketplace Stands**

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| **Establishment** | **Contact details** | **Key Information:**   * **ELC/Schools/College – what are you showcasing?** * **Partners/Businesses – how do you support STEM learning in Moray?** |
| **North Scotland STEM Ambassador Hub** | Debbie Mathers [stemambassadors@asc.scot](mailto:stemambassadors@asc.scot) | We link volunteers from STEM sectors with schools, youth/uniform groups and event organisers.  STEM Ambassadors aim to inspire young people to see the opportunities within STEM subjects.  We are always looking for more volunteers, so you may wish to sign up (we offer free training and resources to all volunteers).  Or you may want to tell us about an event you have coming up and we can put you in contact with some of our local STEM Ambassadors (we have around 80 STEM Ambassadors in Moray).  Or just pop over to our stall to chat and try out some of our STEM puzzles! |
| **Aberdeen Science Centre** | [Education@asc.scot](mailto:Education@asc.scot)  01224 640340  [www.aberdeensciencecentre.org](http://www.aberdeensciencecentre.org) | ASC’s STEM Learning Programme offers shows and workshops for early years, primary, secondary and ASN audiences covering a range of cross-curricular linked STEM topics from ‘How to make the Perfect Poo’ to ‘Explore Your Universe’.  Travel funding may be available to support your visit to the Science Centre.  To continue to support STEM learning and teaching in the classroom we also provide rich CLPL opportunities for both early years and primary teachers which are delivered in a local setting.  Topics include ‘All About Inside Me’, ‘Fun with Forces’ and ‘Plants vs Science’. |
| **Emma Donald**  **Kinloss Primary School** | [emma.donald2@moray-edunet.gov.uk](mailto:emma.donald2@moray-edunet.gov.uk) | I will be sharing how we run our after school STEM club for P4-7, how we run our STEM taster sessions for P1-3, how we plan and run our STEM day in March for the whole school and also I will share the STEM learning taking place in individual classes this year. |
| **K'NEXT Generation** | info@knextgeneration.co.uk  01779 813 097  07860 873 079  @knextgen | K'NEXT Generation provides curriculum-linked K’NEX workshops for nursery and primary schools in Scotland. These cross-curricular workshops are innovative, challenging, exciting and fun. They are designed to inspire the next generation of scientists, technologists, engineers and mathematicians. [www.knextgeneration.co.uk](http://www.knextgeneration.co.uk) |
| **Royal Society of Chemistry** | [miltonh@rsc.org](mailto:miltonh@rsc.org)  [www.rsc.org](http://www.rsc.org) | The Royal Society of Chemistry is the professional body for chemical scientists in the UK. We aim to enrich the teaching and learning of chemistry and connect the chemical sciences with the wider world. |
| **Royal Academy of Engineering - Connecting STEM teachers network** | Rob Gray [rob.grayconnectedteacher@gmail.com](mailto:rob.grayconnectedteacher@gmail.com) | The CST network aims to deliver resources and CPD from the Royal Academy of Engineering. Resources could be used as part of the curriculum or as kit for engineering/STEM clubs.  The network is a place where STEM can be celebrated and events shared. |
| **Garmouth and Kingston Playgroup** | Fiona Palmer, Anita Rodgers  01343 870262 | We are a partnership playgroup run by a voluntary committee of parents and our Manager Jessica Myers. We currently have 3 staff and 16 children who love to be scientists and take part in design and maths challenges. At our stall we will show an example of our tinkering station, the fruit clock, our science book and also information on some of our stem challenges. |
| **Whale and Dolphin Conservation** | Lorna Hall  01343 820 339  [Education.scotland@whales.org](mailto:Education.scotland@whales.org) | Based at the Scottish Dolphin Centre at Spey Bay our education programme offers talks and educational outdoor activities, focusing on nature and the environment, particularly whales and dolphins in the marine environment, all of which link to the Curriculum for Excellence. |
| **Aberdeen for a Fairer World**  **Montgomery Development Education Centre (MDEC)** | [montgomerydec@btconnect.com](mailto:montgomerydec@btconnect.com)  01224 620111  Brian McNally  [mdec.brian@btconnect.com](mailto:mdec.brian@btconnect.com) | We work with local authorities, schools, teachers and pupils to develop Learning for Sustainability firmly rooting our work in the Rights of the Child and the UN-Sustainable Development Goals with a particular emphasis on STEM subjects.  MDEC is an Aberdeen based organisation, covering the whole of the North-East of Scotland. We are the education section of Aberdeen for a Fairer World (formerly the Third World Centre). The Centre is part of the International Development Education Association of Scotland (IDEAS). This is a network of over 40 organisations and individuals involved in Development Education and Education for Global Citizenship/Sustainable Development Education across Scotland.  Brian McNally is delivering STEM work at MDEC – looking to design a 2-part CPD for Secondary Science teachers linking STEM and the Global Goals. |
| **Skills Development Scotland**  **My World of work** | [elizabeth.dumbell@sds.co.uk](mailto:elizabeth.dumbell@sds.co.uk) | [www.myworldofwork.co.uk](http://www.myworldofwork.co.uk)  enables pupils to create a personal profile using the My Career Options section of My WoW, to enable them to understand more about themselves, their strengths and their future goals.  Using this information they can explore the world of work from job profiles, vacancies and courses, the growth industries, and also search for volunteering opportunities. |
| **My WOW Live - Inverness** | [studioinv@sds.co.uk](mailto:studioinv@sds.co.uk) | Inverness Digital Studio and Careers Lab:  The Digital Studio offers a range of exciting activities and bookable group slots. Test your skills in 3D modelling, program a handheld games console or experience what it’s like to be an environmental scientist and much more.  There are also six exhibits at the new Careers Lab using the latest in technology. Try our Virtual Reality headsets and see what working in construction is really like. Explore the Minecraft Careers World, Maker Space, Game Learning, 3D printing or the Creative Station where you can film your My World of Work Live! experience.  Lab Rats is an after school club for 10-15 year olds. Young people can also sign up to take part in longer term projects involving photography, video editing and film making, programming, engineering and design.  For details on how to book contact [studioinv@sds.co.uk](mailto:studioinv@sds.co.uk) |
| **The Moray Council – Consultancy** | Kenna Warren 01343 563762 [kenna.warren@moray.gov.uk](mailto:kenna.warren@moray.gov.uk)  Lindsay Jackson 01343 563383  [Lindsay.jackson@moray.gov.uk](mailto:Lindsay.jackson@moray.gov.uk) | Kenna - School visits/workshops about Civil Engineering, Bridge Building and Flooding.  Lindsay – Workshops can be tailored to suit your needs.  Examples previous workshop activities include:   * Take part in the energy journey from the oil platforms in the North Sea to the PC in your classroom * Interview our planet and find out how climate change is affecting our daily lives * Generate your own renewable energy using wind and solar power * Find out how much your school spends on energy every year and what you can do to make a difference |
| **Moray Digital Learning Team** | Ashleigh Symonds/ Glen Dunn [learntech@moray.gov.uk](mailto:learntech@moray.gov.uk)  @digilearnmoray | We provide advice, training and support in the use of technology enabling our teachers and support staff to decide how best to use technology to enhance learning.  This covers all types of technologies that are currently used in the classroom and also technologies that schools may use in the future. Visit our stall to discuss Glow and have a chat about future training. |
| **Lossiemouth ASG - Science and STEM Transition Planet X** | Rachel Wolford - Hythehill Primary  [Rachel.wolford3@moray-edunet.gov.uk](mailto:Rachel.wolford3@moray-edunet.gov.uk)  Jenny Baird - Lossiemouth High  [jennifer.baird@moray-edunet.gov.uk](mailto:jennifer.baird@moray-edunet.gov.uk)  Emily Michell - Burghead Primary  [MicheE@moray-edunet.gov.uk](mailto:MicheE@moray-edunet.gov.uk)  Aoife Moore - Hopeman Primary  [MooreA1@moray-edunet.gov.uk](mailto:MooreA1@moray-edunet.gov.uk)  Jill Robinson - Hythehill Primary  [RobinJ@moray-edunet.gov.uk](mailto:RobinJ@moray-edunet.gov.uk)  Alex Mackenzie - St. Gerardine Primary  [MacKeA7@moray-edunet.gov.uk](mailto:MacKeA7@moray-edunet.gov.uk) | Planet X – We are the Lossiemouth ASG Science and STEM Transition Group, formed of Lossiemouth High School, Burghead, Hopeman, Hythehill and St. Gerardine Primary Schools. All of our Primary 7 pupils have taken part in three science and one STEM challenge during each of their Primary 7 terms, supported by LHS’ science department. As part of their transition programme, We celebrate their achievements in science and STEM at Lossiemouth High School in a joint event attended by all of the pupils, parents and teachers. We have brought an overview of our challenges, pupils’ work and some of the STEM challenge space HABS, which recently won at our May celebration event. |
| **Royal Air Force Lossiemouth** | Flt Lt Fiona Padbury ([Fiona.padbury147@mod.gov.uk](mailto:Fiona.padbury147@mod.gov.uk)) | We will be advertising the STEM in the work place event for Primary Schools being held at RAF Lossiemouth in Sept.  The intent is to have the P8/Boeing Stand to showcase potential STEM careers in the future at RAF Lossiemouth on this aircraft.  We will also be showcasing a number of resources that we can bring to your schools including Bob in a box, model wheelchair and roller-coaster building. An interactive, fun filled stand.  The RAF 100 Aiming for Awesome STEM Boxes and accompanying materials produced by Moray teachers and Janey Irving will also be on display. Moray were gifted 8 of these STEM Kits and following the May CPD session trained teachers in each ASG will be available to provide CPD in their locality on this project. |
| **AES Solar** | Keith Esson – [ke@aessolar.co.uk](mailto:ke@aessolar.co.uk)  01309 676 911 | We are a leading solar energy company installing PV, Thermal and battery storage systems throughout Scotland both commercially and domestically. We also manufacture solar thermal collectors which we ship nationally and internationally.  We support STEM by attending and hosting events aimed at attracting young people into STEM subjects. We also commit time to any stakeholder related to STEM events to learn about our business and how we benefit as a company from STEM subjects and the importance of such subjects for our future and the future generations. |
| **Moray College – Bloodhound Project** | Hannah Clay | Moray College UHI is the only Scottish HUB for the UK BLOODHOUND Project:  <http://www.bloodhoundssc.com/education>  The BLOODHOUND Project is a global Engineering Adventure, using a 1,000mph World Land Speed Record attempt to inspire the next generation to enjoy, explore and get involved in science, technology, engineering and mathematics.  We will be showcasing how Moray schools/STEM Clubs can use the Bloodhound Supersonic Car for a fantastic STEM Project with our fully trained Rocketeers! |
| **Moray College - Engineering** | Keith Mitchell | Come and explore the ECO House to look at green technology. The Green Technology Teaching Set puts a model home into the classroom, enabling you to investigate green energy production and energy conservation.  <http://www.ljcreate.com/us/component/virtuemart/247/20/middle-and-high-school/green-technology-teaching-set-detail?Itemid=0>  There will also be a 3D printer so come and investigate how this works and marvel at what you can now make with it.  A Thermal (IR) Camera will also be available to demonstrate the effects of energy loss with the Eco house or even with the printer. |
| **Moray College - Science** | Sam Bright plus Manon Jesus and Cameron Smith | HNC Science students will demonstrate how SMART Materials can be used to have fun with magnetics, to explore the effect of light on fluorescent materials and how to use hydrophobic materials to look at cell structure. |
| **Moray College - Computing** | Nathan Sanderson | Will showcase how they use Games in the Computing Science & Digital Design degrees showing how Minecraft can be created. |
| **Earthtime** | [enquiries@earthtime.co.uk](mailto:enquiries@earthtime.co.uk) | Earthtime is an award-winning charity, accredited by the Forest School Association, connecting children and young people with the natural environment; using creative and woodland based activities to improve self-esteem, health and well-being.  Earthtime’s outdoor nursery follows the Forest School principle. This involves the children being in an outdoor environment to develop a range of skills. Practitioners build a different relationship with the children because it’s much more child-led. When they discover something, or realise they can do something, it’s that complete WOW moment.  Cooking on a wood fire and using tools are incorporated in the sessions, giving the children confidence in their own abilities and the opportunity to develop strong cooperation skills. The Forest School ethos teaches respect for all and promotes the child’s right to play. Learning in a woodland also provides a multi-sensory environment, providing a magical experience for all. |
| **Energy Skills Partnership / Engineering UK** | Wendy Findlay  [wendy.findlay@esp-scotland](mailto:wendy.findlay@esp-scotland)  07812 664 954 | ESP and Engineering UK are working with local employers and other stakeholders to promote STEM careers to young people both through outreach activities, in schools and the Big Bang Events hosted by Scotland’s Colleges. |
| **The T Exchange** | Bill Graham  [carvic@gmail.com](mailto:carvic@gmail.com) | The T - Exchange are a group of unlike-minded individuals, living around the inner Moray Firth - but also some further away, who want to make their own or joint way with creative thinking, practical skills and new or old technology to make innovative objects and devices. We aim to present this expertise via science festivals and workshops to help the public understanding of science and technology and to encourage community development using this knowledge.  We will be bringing various examples of how we use STEM topics at the T-exchange. For example we have lots of parts made on 3D printers and examples of using Raspberry Pi computers. |
| **Steven Tubbs**  **Keith Grammar School STEM Club:**  impROVise | [tubbss@moray-edunet.gov.uk](mailto:tubbss@moray-edunet.gov.uk) | We are a group of young engineers and have been meeting after school at Keith Grammar for three years. Our main goal has been competing in the MATE ROV competition; this entails the design, fabrication, demonstration and promotion of a Remotely Operated Vehicle capable of flying underwater. Recently this has seen us reach great success on the international stage, placing 11th at the world finals in Long Beach, California. To progress to the final we had to win our Scottish regional at Robert Gordon University. The status we gained through attending this high profile event resulted in numerous companies reaching out and inviting us to other events. Often we have been asked to educate Primary School Pupils to promote STEM Subjects i.e. Science, Technology, Engineering and Maths, outlining their relevance and importance when working in modern industry. |
| **St Sylvester’s Primary School Maths/STEM Club** | Paula Menzies-Smyth  [MenziP@moray-edunet.gov.uk](mailto:MenziP@moray-edunet.gov.uk) | I will be sharing how we run our after school Problem Solving club for P5s with P6 and P7 mentors. We will share some of the activities we complete including tangrams, pentominoes, cipher coding and 24 game.  This club was set up using a £300 grant awarded from the Royal Society and continues our work with specific pupils in our school to help increase their confidence and attainment. |
| **Morayvia** | [admin@morayvia.org.uk](mailto:admin@morayvia.org.uk)  Morayvia Sci-Tech Experience Project  North Road  Kinloss  Moray  IV36 3YA | Morayvia, a registered company and Scottish charity, was formed in 2011 to establish an interactive science and technology centre in Moray. A key objective is to record and commemorate the long and fascinating history of military aviation in Moray.  Our aerospace visitor centre at North Road, Kinloss has a number of complete aircraft displays including Sea King and Wessex SAR helicopters, a Russian Antonov biplane, a Jaguar fast jet together with cockpits from Nimrod, Jet Provost, and Hunter, Herald, Valiant and Vampire aircraft. Other exhibits include a selection of fire engines including 2 civilian airport rapid intervention vehicles and a former military Green Goddess fire engine. Inside there are many hands on displays including 3 flight simulators as well as a number of aero engines, and aerospace related exhibits. There is also a 7 metre diameter inflatable planetarium where up to 35 people at a time can experience night sky tours and space/ science-related wrap around cinema shows.  Run by enthusiastic volunteers, many of whom are ex-servicemen and women, you can learn about our aerospace history, from what it was like to be flying in stormy conditions on a rescue mission, to hanging from a winch wire about to land on the deck of a fishing vessel. You can also experience the wonders of Moray's night sky, and the Universe in the planetarium. |
| **Keep Scotland Beautiful**  **(Eco-Schools Scotland)** | [ecoschools@keepscotlandbeautiful.org](mailto:ecoschools@keepscotlandbeautiful.org)  01786 471333  [www.keepscotlandbeautiful.org/ecoschools](http://www.keepscotlandbeautiful.org/ecoschools) | Keep Scotland Beautiful is the charity that provides education initiatives for children, young people and educators which focus on environmental issues to improve understanding and encourage positive action. It's part of our work to make Scotland clean, green and more sustainable.  The Eco-Schools programme, managed in Scotland by Keep Scotland Beautiful, supports whole-school community action on Learning for Sustainability and is aligned to the United Nations Sustainable Development Goals (SDGs). It is a flexible framework which provides pupils with a framework to take action on environmental issues in their own local area.  Keep Scotland Beautiful provides Professional Learning Programmes which develop teacher confidence with Learning for Sustainability. Pupil focussed programmes provide opportunities for young people to engage with local environmental issues whilst developing skills to support planning for choices and change as well as STEM subjects. |
| **Helen Winton Senior Adviser**  **SSERC** | SSERC 2, Pitreavie Court, South Pitreavie Business Park, Dunfermline,  KY11 8UU  T:01383 626070  M:07915092539  [Helen.Winton@sserc.org.uk](mailto:Helen.Winton@sserc.org.uk)  [http://www.sserc.org.uk](http://www.sserc.org.uk/) | SSERC works with a range of partners, including the Scottish Government, National STEM Learning Centre (NSLC), The Primary Science Teaching Trust and others to deliver a programme of experiential CLPL for early years, primary and secondary teachers, student teachers and technicians focussing on STEM.  In addition, SSERC offers Specialist Health & Safety advice for schools and Local Authorities.  SSERC, on behalf of STEM Learning, works in partnership with the three Scottish STEM Ambassador Hubs to support the work of volunteer STEM Ambassadors. These volunteers, from a wide range of STEM related jobs and disciplines, offer their time and enthusiasm to help bring STEM subjects to life and demonstrate the value of them in life and careers. As such, they are an important and exciting free of charge resource for teachers and others engaging with young people inside and out of the classroom. |