

**For immediate release: 7 March 2006**

## **MEDIA INFORMATION**

### **Code Cracking ~ DNA Profiling & Funny Money ~ in Fort William**

The Royal Society of Edinburgh (RSE) is running a broad range of exciting educational activities for school students in the Fort William and Lochaber area in its two day road show which started yesterday. These include hands-on workshops for P6/7; S3-Higher-grade students and a talk on DNA Profiling for S5 & S6 Students.

#### **Participating Schools:**

Banavie Primary School; Fort William Primary School; Fort William RC Primary School; Inverlochy Primary School; Lochaber High School; Lochside Primary School; Upper Achintore Primary School.

The RSE's Education Outreach Officer, Emma Faragher said:

*These popular hands-on workshops can really bring alive the theory of maths and science for young people. With a recognised drop in the numbers of students going on to study science, engineering and maths, it's essential that we give them a great experience of science and show how it impacts on all of our lives. The RSE is very grateful to the Facilitators of these classes who devote their time to them as Volunteers.*

#### **Maths Workshops (for P6/7) by Professor Jack Carr and Mrs Teresa Carr, Heriot-Watt University**

Pupils have a choice of workshops.

##### *Codes and Circles*

*Once upon a time there were three circles, a great big daddy circle, a medium sized mummy circle and a little tiny baby circle. Find a code that will help you all draw the same picture of domestic bliss.*

##### *Funny Money*

*How would you cope if your money suddenly changed, instead of £1, £2, £5, £10 coins and notes you were faced with 5 scab and 8 scab notes? What would you do if the shopkeepers never gave change? Money is funny anyway but this is weird!*

**Programming Concepts Workshops by Dr Peter Dickman, The University of Glasgow.**

EPSRC-funded workshops demonstrating the widely used thinking skills that are at the heart of computer science via a collection of linked activities. The different components are closely tied to other school subjects, such as English, Art and Science, and they are designed to support the curriculum for those other subjects. The component parts are linked to both the National Guidelines for Scotland and the English National Curriculum.

**Hands-on Workshops for S3 - Higher Students at Lochaber High School**

***Computer Science Inside....*** by Dr Quintin Cutts, The University of Glasgow

*Computer Science Inside...* consists of a set of hands-on workshops for schools which aim to introduce core Computer Science concepts that underpin the technologies all around us, including mobile phones, MP-3 players, gaming consoles and the Web. Each workshop focuses on a particular feature of a device and explores how it works. For example, how does Google give us such useful results?

Each workshop gets students working with the Computer Science concept that supports the feature, using a range of key skills such as problem solving, analysis and discussion. Workshops also highlight other applications of the concept under study in every day life and its relevance to the schools' curriculum.

***Zipping it up***

Why has it taken so long to introduce 3G mobile phones? Lack of bandwidth is a key issue. *Zipping it up* explores data compression and decompression, essential in any application where the bandwidth is low or storage is limited, and gets pupils working with the kind of algorithms that underlie the Zip utility found on a PC.

***Getting onto the right page***

How do search engines find just the information you are looking for? *Getting on to the right page* identifies the range of mechanisms used by Web search engines like Google to bring us to the pages that most closely match our search criteria. Pupils attempt to develop their own *page ranking* mechanism and, in doing so, realise how complex Google must be, despite its incredibly simple interface.

***Doing a million things at once***

Consider working at a PC - typing into Messenger, playing a CD, receiving e-mail and streaming a video - how does the PC do it all simultaneously? *Doing a million things at once* exposes the way phones and computers appear to be working on many tasks at once whilst really processing different tasks individually. Pupils role play at 'being' different tasks and the components of a computer in order to analyse different mechanisms used by computers to schedule multiple tasks, and the effects this has on the users of the technology.

**Talk(s) for S5/6 Students** Tuesday 7 March at Lochaber High School.

***DNA Profiling: what it is and how it can be used by Dr Adrian Linacre, University of Strathclyde***

Exploring an important modern development in forensic science, DNA profiling has received much interest and attention in recent years. It has proved to be a powerful means by which criminals and innocent people have been identified.

This talk will use a variety of famous cases to explore what DNA Profiling is and how it has been used to identify people in previously unsolved mysteries.

This talk is illustrated with slides and is suitable for students in S5-S6. Dr Adrian Linacre is a lecturer in the Forensic Science Unit at the University of Strathclyde.

**Talk for the Public** Monday 6 March at 7.30pm at Lochaber High School (refreshments from 7.00pm)

***DNA Profiling: It's Use in Famous Cases by Dr Adrian Linacre, University of Strathclyde***

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**Notes for Editors:**

**The Royal Society of Edinburgh (RSE)**

The Royal Society of Edinburgh (RSE) is an educational charity, registered in Scotland. Independent and non-party-political, we are working to provide public benefit throughout Scotland and by means of a growing international programme. The RSE has a peer-elected, multidisciplinary Fellowship of 1400 men and women who are experts within their fields.

The RSE was created in 1783 by Royal Charter for “the advancement of learning and useful knowledge”. We seek to provide public benefit in today’s Scotland by:

- Organising lectures, debates and conferences on topical issues of lasting importance, many of which are free and open to all
- Conducting independent inquiries on matters of national and international importance
- Providing educational activities for primary and secondary school students throughout Scotland
- Distributing over £1.7 million to top researchers and entrepreneurs working in Scotland
- Showcasing the best of Scotland’s research and development capabilities to the rest of the World
- Facilitating two-way international exchange to enhance Scotland’s international collaboration in research and enterprise

- Emphasising the value of educational effort and achievement by encouraging, recognising and rewarding it with scholarships, financial and other support, prizes and medals
- Providing expert information on Scientific issues to MSPs & Researchers through the Scottish Parliament Science Information Service.

Further information about the RSE can be found on its website at:  
<http://www.royalsoced.org.uk>

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