The Nuffield Foundation Newsletter



What do humans need from their environment? Can recycling materials stop them from running out? These questions and many more are addressed in *Nuffield STEM Futures*, our new cross-curricular resources for 11-14 year olds. Focussing on human ingenuity, the resources challenge pupils to rethink a sustainable future based on the principles of closed loop systems in nature.

Nuffield STEM Futures provides 28 hours of teaching time broken down into five 'pods'. The pods comprise films, presentations, animations, pupil activities, teacher notes and professional development toolkits. The resources use a range of science, maths, design and technology skills and can be downloaded from our website or ordered on CD.

An introductory pod helps pupils identify closed loop systems found in nature and apply the same principles to high-waste manufacturing processes reliant on non-renewable energy. Three further pods focus on *Waste, Cars* and *Climate change*. Activities in the *Waste* pod include a project to re-design an everyday product and pitch it to a Dragon's Den-style panel. In the *Cars* pod, pupils undertake an investigation of the effect car pollution is having within the grounds of their school.

The video resources were co-funded by the Ellen MacArthur Foundation and Dame Ellen MacArthur joined Programme Director Cris Edgell to launch *Nuffield STEM Futures* at the Association for Science Education Annual Conference in January.

Welcome to the Nuffield Foundation Newsletter

Further details on all the stories marked with this icon www can be found on our website, www.nuffieldfoundation.org The newsletter is published three times a year. For additional copies, or to be removed from the mailing list, please contact fbright@nuffieldfoundation.org

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Charity Tax Map

The Charity Tax Group (CTG) is calling for the government to simplify the tax system following its investigation of the impact of taxation on charities.

Funded by the Foundation, the CTG undertook detailed analysis of 31 charities and found they were liable for a total of 18 different taxes. Employer's National Insurance accounts for the largest share of the tax, with irrecoverable VAT accounting for a further 38 per cent. Most of the remainder is made up by business and domestic rates.

The number of taxes and the extent of their impact varied greatly according to the size and activities of the charity. For example, some charities pay as little as two per cent of annual turnover, while others paid as much as 18 per cent.

getstats

The Foundation has funded the Royal Statistical Society's (RSS) getstats campaign, with the aim of giving everyone the skills and confidence to use numbers well.



In addition to the tax paid, the charities included in the study paid a total of £2.9 million in compliance costs, an amount the CTG say is disproportionate to the taxes collected.

To launch its campaign, the RSS commissioned an Ipsos MORI survey to find out what people know and feel about statistics. In particular those surveyed were asked if they could work out what the government's cuts would mean for them and their families. The survey found that nearly half of those questioned didn't understand the statistics or figures behind the government's spending cuts. Furthermore 78 per cent said they had little or no knowledge of statistical analysis and only one third trusted statisticians. The getstats campaign aims to improve the

> knowledge and skills of the public in using data and statistics for their own benefit. It will have a particular focus on those with responsibility to educate and inform the public about statistics – teachers, employers, the media and elected representatives.

DNA database

The Government's *Protection of Freedoms Bill* proposes a number of changes to the way people's DNA is stored on the National DNA Database, in line with recommendations made by the Nuffield Council on Bioethics in 2007.

Under the proposed changes, DNA profiles and fingerprints taken from people who have been arrested but never charged or convicted of a crime will be destroyed. Previously, police had powers to keep these records indefinitely.

This legislation gives full support to the recommendations made in the Council's report *The forensic use of bioinformation: ethical issues* that the law in England, Wales and Northern Ireland should be brought into line with Scotland, where other than in exceptional cases, DNA profiles and biological samples from a person are kept permanently on record only if they have been convicted of a recordable offence.

If passed, the Bill will gain Royal Assent by late 2011 or early 2012.



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Youth crime and restorative justice

The Independent Commission on Youth Crime has concluded that young offenders facing prosecution should be dealt with by restorative community conferences – where victims are actively involved in agreeing what consequences they face for their crimes – instead of traditional youth courts.

The Commission, funded by the Foundation, carried out an international comparison of responses to offending by children and young people and concluded that restorative justice conferences would be likely to reduce reoffending, improve victims' confidence and result in considerable savings in court time and the costs of custody.

The report, Time for a new *hearing*, is based on research undertaken by JUSTICE, the all-party law reform and human rights organisation, and independent charity The Police Foundation. The findings will inform the Commission's response to the Government Green Paper on punishment, rehabilitation and sentencing, which asks how we can 'best use restorative justice approaches to prevent offending by young people and ensure they make amends?'





Wealth and educational attainment

In 2008, less than one quarter of children from families eligible for free school meals left school with five or more GCSE's at grade C or above, compared to just over half of children from wealthier families. This attainment gap has begun to close over the last ten years, but it still remains large.

The gap is important because educational qualifications are a significant factor in determining the degree of opportunity and income in later life. In other words, gaps in educational attainment restrict social mobility. The latest edition of the Longitudinal and Life Course Studies Journal has published a special edition in order to examine this relationship between socioeconomic background and cognitive and educational achievement. Expert contributors assess the relevance of various factors including parenting, aspirations and engagement with risky and positive behaviour.

This journal was established with a Nuffield Foundation grant and is free to download from www.journal.longviewuk.com

Quality childcare

A new project funded by the Foundation will examine what constitutes 'quality' in the education and care of children from birth up to the age of five.

Researchers from the University of Oxford, A+ Education Ltd and Daycare Trust will look at the different measures of quality applied in nurseries and preschools, including how they are understood and used by parents, childcare providers and local authorities.

The study will provide recommendations for improving the regulatory framework for inspections and assist parents in making sense of the vast amount of data available. It will provide key data to inform decisions by central and local government on how to allocate funding. The research will also help nurseries and preschools identify more clearly both their strengths and potential areas for development.



nformation on all these stories can be found at www.nuffieldfoundation.org

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Prestigious prize

Student Stephanie Tudgey has been awarded a prestigious prize for her Nuffield Foundation Science Bursary project undertaken last summer. Stephanie spent four weeks on placement at the engineering company QinetiQ, where she caught and identified macro moths on Eelmoor Marsh, a designated Site of Special Scientific Interest in Hampshire.

Stephanie's project has earned her a prize to attend the International Sustainable World (Energy, Engineering and Environment) Project Olympiad in Houston, Texas, where she will present her work alongside projects from 70 countries.



Judicial review

Does judicial review give judges too much power? Does the process waste public money? Or is it a vital tool for holding government to account? These questions will be addressed in a major new study undertaken by the University of Essex and the Public Law Project and funded by the Foundation.

As well as exploring government responses to judicial decisions and identifying their impact on policy change, the study will examine how ordinary claimants fare when public authority decisions are reviewed by courts.

Tribunals and asylum appeals

ADMINISTRATIVE JUSTICE AND ASYLUM APPEALS A new book from Robert Thomas examines how the idea of adjudicative quality works in practice. *Administrative Justice and Asylum Appeals* presents a detailed case-study of the tribunal system responsible for determining appeals

lodged by foreign nationals who claim they risk persecution or ill-treatment on return to their country of origin.

Published by Hart Publishing, the book includes chapters examining the organisation of the tribunal system, its procedures, the nature of fact-finding in asylum cases and the operation of onward rights of challenge.



Ethics of biotechnologies

The Nuffield Council on Bioethics has set up a new Working Party to consider the ethical issues raised by emerging biotechnologies such as synthetic biology and nanotechnology. A public consultation will open in April, and a full report will be published in autumn 2012. WWW



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William Morris, Lord Nuffield 1877-1963

The Nuffield Foundation is a charitable trust endowed by William Morris, Lord Nuffield, the founder of Morris Motors. Our aim is to improve social well-being in the widest sense. We fund research and innovation in education and social policy, primarily in the UK but also in Europe and Africa. We also work to build capacity in education and science and social science research.

Full information on all our current activities and details of how to apply for grants can be found at www.nuffieldfoundation.org

The Nuffield Foundation 28 Bedford Square, London WC1B 3JS Tel 020 7631 0566

