So, what is so important about STEM skills?

BCC Conference, 27th April 2009, ICC Birmingham.

Yvonne Baker
Chief Executive, STEMNET.

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Science, Technology, Engineering & Mathematics (STEM) skills are vital for future economic health

- "Over the last fifteen years the contribution of high-technology manufacturing and knowledge-intensive services to UK gross value added has increased steadily to over 40%."

  'New Industry, New Jobs' HMG, April 2009

- "In this kind of economy, countries who out-educate us today will out-compete us tomorrow." *President Obama*

- 59% of employers report they are having difficulty recruiting enough STEM-skilled individuals to meet their needs.

  CBI education and skills survey 2008

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Where does STEMNET fit?

- Organisation dedicated to promoting STEM subjects and careers to all young people across the UK;
- Funded by DIUS, with additional programme funding from DCSF. Key part of HMG's STEM support infrastructure;
- Key focus on helping education, STEM employers and STEM people work together to challenge stereotypes, increase understanding, raise aspirations and help all young people achieve their potential.

Say ‘Hello’ to your future workforce

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What can business do?

- Be much clearer to young people that they value STEM skills ;
- Communicate the value of STEM skills to individuals as well as business ;
- Encourage employees and others to be positive, dynamic role models for STEM skills – benefitting themselves and young people.

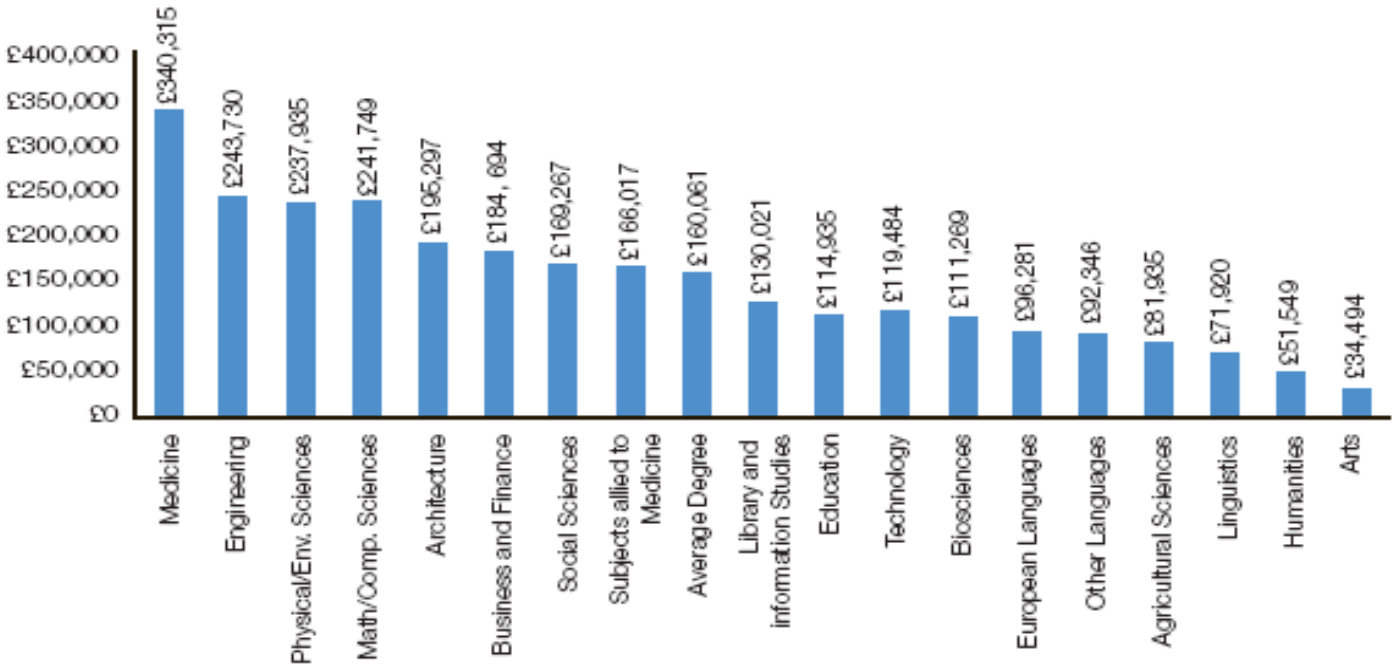
Value of STEM skills to business

"Almost all (91%) of businesses employ people with STEM skills, valuing their problem solving abilities across a range of jobs. Businesses from all sectors want STEM skills – well over a third of businesses prefer STEM when recruiting graduates. Those sectors which are predicted to grow and create employment opportunities in the future are particularly reliant on these skills.“

Source - CBI

Value of STEM skills to individuals

Gross additional lifetime earnings (wage premiums) by degree subject compared to two or more GCE A-levels



Source: (Pooled labour force survey 2000-2005)

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Utilising your best STEM assets – your people!

Space Scientist

Microbiologist

Mechanical Engineer

Images taken from STEMNET's new 'Leading Lights' Exhibition
www.stemnet.org.uk

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Encouraging employees to be STEM Ambassadors is a simple first step

- UK-wide programme, funded by DIUS, endorsed by National Council for Educational Excellence;
- 18,000 volunteers from all walks of STEM (over 24,000 involved since 2002);
- Over 1,500 employers involved, ranging from largest to smallest;
- Free of charge to the volunteer and employer; flexible to fit all lifestyles and work patterns.

STEM Ambassadors get involved in a wide range of activities -

- Linking with schools or colleges to create long-term partnerships;
- Assisting with Enhancement & Enrichment schemes from the STEM Directories;
- Mentoring students on specific projects – within the curriculum or beyond;
- STEM Clubs – encouraging schools to consider Clubs or assisting with on-going activity;
- Supporting CPD – working with Science Learning Centres, NCETM etc.

The impacts are significant

'For us, using the Ambassadors scheme has meant that the students can see the things we are learning can and do have genuine applications in the 'real' world. It was good to see the students relating to the Ambassadors and asking them questions about their careers and experiences.'

Sarah Fennell, Teacher, Woodcote High School

'When we ask the students to design a space buggy, they come up with great ideas. They have imaginations beyond ours and they have no concept of what they can't do. Seeing the way students think makes me think differently when I come back to work.'

Naomi Green, Arup

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As a business, where do you start?

- Speak to STEMNET;
- Avoid ‘reinventing the wheel’; see what is already happening at www.stemdirectories.org.uk and www.stemnet.org.uk
- Talk to other companies already doing things (STEMNET can put you in touch with others)
- Get involved!

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