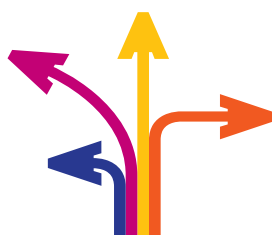




A Quick Guide for

# STEM Work Experience Placements



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## Acknowledgements

This guide arises from the STEM (science, technology, engineering and maths) Subject Choice and Careers Project undertaken by the Centre for Science Education at Sheffield Hallam University and VT Enterprise on behalf of the Department for Children Schools and Families. It is intended to assist organisations and individuals who support learners in STEM work experience placements.

The STEM Subject Choice and Careers Project would like to thank the Royal Society of Chemistry, the British Science Association and Business & Education South Yorkshire for their support in developing the ideas and materials for this resource. The project would also like to acknowledge the valuable work undertaken by other STEM organisations and work related learning specialists. Focus groups were held during September 2009 to assist in developing information on the issues and in collecting examples of good practice. A list of the organisations represented can be found at the end of this brochure.

We welcome feedback to inform the updates and supplements to this resource.  
Please email us at [info@careersinstem.co.uk](mailto:info@careersinstem.co.uk)

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Enterprise

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## Introduction to this guide

This guide has been developed through the STEM Subject Choice and Careers Project. It is designed to help teachers, learners, employers and anyone involved in work experience develop strategies for creating good quality placements for young people age 14–19. The question and answer format has been used to assist users in finding information relevant to their needs as quickly as possible.

This Quick Guide to STEM Work Experience Placements is the first in a suite of resources to support STEM work experience placements. A Guide to Self Arranged STEM Placements and a Guide to Examples of Good Quality STEM Placements will follow. There is a plethora of general information available about work related learning and placements. Links to some of the main organisations involved in the promotion of work experience have been included. However, there are many more sources of information available which have not been referenced in order to focus on placements that feature STEM subjects and careers.

This is the first version of the Quick Guide to STEM Work Experience Placements and an amended edition will be produced within twelve months of publication to incorporate feedback.

## Background and rationale

Skills shortages in the science, engineering, technology, maths and built environment sectors are well documented and will continue to be an issue whether we are in a period of recession or recovery. The three year STEM Careers Action Programme is one of 11 that make up the National STEM Programme, under its Director Sir John Holman. Action Programme 8 is charged with improving the quality of advice and guidance about STEM careers to inform subject choice. The STEM Careers Action Programme (AP8) is managed by the Centre for Science Education and VT Enterprise, on behalf of the Department for Children Schools and Families (DCSF). The project is part of a substantial national investment to combat the decline in the numbers of students choosing subjects, courses and careers in the STEM field. The key message is that a decision to study STEM subjects leads to a very wide range of interesting and well paid careers, inside and outside the STEM arena.

The national STEM careers co-ordinator, Kate Bellingham, is leading and co-ordinating the campaign, working with stakeholders and the organisations involved in delivery. The Centre for Science Education and VT Enterprise are developing a wide range of curriculum resources, careers workforce resources and continuing professional development over the life of the project under the theme of enthusing students, equipping professionals, supporting employers.

The other strands of the campaign are

- Careers Awareness Timeline Project, led by the Centre for Education and Industry, University of Warwick
- Future Morph the Science Council led STEM careers website aimed at young people [www.futuremorph.org](http://www.futuremorph.org)
- A communications campaign involving TV and cinema advertising, aimed at young people



## Context and issues covered in this guide

The effect of work experience placements on young people's career choice is well documented. However, the tendency for schools and work experience organisations to encourage young learners to make early or ill informed choices or to find their own placements serves to reinforce stereotypes in terms of socio-economic status, gender, ethnicity and a range of other factors. Well informed choice can be used to positively influence future career decisions and help to make STEM related work experience placements visible and attainable. Enjoyable and inspiring STEM work experience placements will also help young people to make informed and positive STEM subject and career choice.

Following the focus group discussions in September 2009 we identified a number of key issues to be highlighted in a question and answer format.

The issues covered by the questions are

- Making more coherent links between all STEM subjects, potential careers and work experience placements
- Providing information for parents, carers and young people to set up self arranged STEM work experience placements
- Tackling gender stereotypes and promoting equality and diversity in work experience placements
- Identifying practical ways to make STEM work experience placements interesting and meaningful
- Identifying guidance on health and safety issues
- Signposting the range of resources to support STEM work experience placements
- Providing ideas for accessible STEM related work experience placements by thinking creatively about STEM.



# STEM work experience – your questions answered

## 1. I would like to see more young people doing work experience placements linked to my subject. What can I do?

### Design and technology teacher

Design and technology is linked to a wide range of careers and some of these will be represented in the list from which your students can choose ( speak to your work experience coordinator about the register of placements). A good starting point for you would be to look at the Jobs4U section of the Connexions website at **[www.connexions-direct.com/Jobs4u](http://www.connexions-direct.com/Jobs4u)**

This will give you an idea of the range of jobs linked to design and technology and you can use this to do some preparatory work with the students you work with before they make their work experience choices.

You could also think about helping students to identify the skills they currently use in design and technology lessons and linking to Personal Learning and Thinking Skills encourage them to think about the workplaces where they might use those skills. You could use the design and technology association website to get some ideas about the skills and activities pupils can use during their placement at **[www.data.org.uk](http://www.data.org.uk)**

STEM Subject Choice and Careers have a range of resources that can help you. See the section at the end of this guide, visit the Careers section of Future Morph or email **[info@careersinstem.co.uk](mailto:info@careersinstem.co.uk)**

## 2. We have been asked by our daughter's school to help her find a work experience placement. She is interested in science. Where do we start?

### Family of Y10 pupil

You could approach this in a number of ways, thinking about jobs directly linked to science and those where science is useful. A good place to start finding out more is to explore the Future Morph website at **[www.futuremorph.org](http://www.futuremorph.org)**

Work experience placements linked to science are not always obvious to spot. You will need to think about the types of employers in your area that might have some of the jobs mentioned in Future Morph. You can also use the job families section for science, maths and statistics on the Jobs4U website at **[www.connexions-direct.com/Jobs4u/index.cfm?pid=35](http://www.connexions-direct.com/Jobs4u/index.cfm?pid=35)**. You can click on some of the jobs along the right hand side and get some useful links to professional bodies, trade associations and other national networks that may be able to help you find a placement. Think about whether you have any contacts through your friends, children's friends' parents or other people you have met and ask if they can help set up a placement. See also the response to Q5.

Check if the school has any existing contacts with potential organisations, such as the hospital or health authority. This could be through a subject teacher or through someone with responsibility for work related learning such as a careers co-ordinator or a work related learning co-ordinator.

If none of the above produces any contact names, you can write to or phone the companies and organisations direct. Ask for the person who deals with work experience or schools links. If that does not work, you could ask for someone in Human Resources or in the Schools Liaison Team.

Make sure you are prepared so that you know what sort of experience you are seeking and the dates. It is best if your daughter rings or writes herself as that is part of the learning process around work experience that could be the next stage.

Most schools have a list of possible placements by category and in the local area, so if you cannot find something yourself you could go back to your daughter's school and ask for help.

Girls are under represented in some science sectors. To obtain more information on what is available to promote the entry of girls into science visit our Equality and Diversity toolkit or visit **[www.stem-e-and-d-toolkit.co.uk](http://www.stem-e-and-d-toolkit.co.uk)** to find out more.



### 3. Hardly any young people in my school request placements linked to science, technology, engineering and maths. What can I do to encourage them?

#### Work experience co-ordinator

Careers in science, technology, engineering and maths (STEM) are often less well known to young people because they are not an obvious part of their daily lives. Each of these subjects is hugely important, but we aren't always aware of their impact without giving it some thought. You could use some positive action to encourage your learners to think about where STEM jobs are. For example, ask them to list everything they have come into contact with since they got up that day that has been designed and made by someone with STEM related skills. Everything from the bed they slept in, the alarm clock or phone that woke them up, to the breakfast they ate and the bus they caught will have had people using STEM skills involved in the design and manufacture.

One way to encourage more young people to choose STEM placements is to check whether the school is involved in the British Science Association CREST awards. CREST awards are extremely flexible – they can link into work experience placements, after-school clubs or several linked schemes. Some CREST projects might be done in one day, others over several months. Students can investigate or design, make and research a subject, or design a science communication project. The awards provide valuable accreditation of STEM placements in a way that continues to add value to the experience of the young person long after they have completed their placement. For more information about CREST awards see [www.britishteachers.org.uk/crest](http://www.britishteachers.org.uk/crest)

You could also link with the STEM subject teachers in your school and support them in delivering some of the activities provided through the DCSF STEM Subject Choice and Careers project. You can get a range of resources by emailing [info@careersinstem.co.uk](mailto:info@careersinstem.co.uk) or see the section at the end of the guide.

You might find it useful to watch the teachers TV programme STEM Subject Choice and Careers Role Models and Work Placements for more ideas and examples of good practice. The programme can be viewed at [www.teachers.tv/video/36674](http://www.teachers.tv/video/36674)

### 4. I have a small printing business and regularly offer work experience to pupils from local schools. I would like to highlight the links to science, technology, engineering and maths in my business. How can I do that?

#### Managing director

One of the easiest ways to help students appreciate how their science, technology, engineering and maths (STEM) links to your business is to build in specific activities which help them identify this. You could, for example, include an activity on the science of ink manufacturing, possibly asking them to find out about the role of chemists in the process, using the Royal Society of Chemistry website [www.rsc.org/Education/SchoolStudents/careers.asp](http://www.rsc.org/Education/SchoolStudents/careers.asp). The Proskills Prospect4u website also has some useful careers information about the print industry with case studies about various jobs – [www.prospect4u.co.uk](http://www.prospect4u.co.uk)

The learner on work experience could also spend time finding out about the technology involved in printing. The engineering involved in the print machines should be easier for them to spot and you could encourage them to come up with a list of different types of engineers involved in the process such as design, mechanical and electronic. You may also have engineers on site who can act as role models and answer questions about engineering.

Maths is easier to spot in finance and other areas of business but don't forget how this links to engineering and technology too. The Maths Careers website will give further ideas about jobs linked to the subject – [www.mathscareers.org.uk](http://www.mathscareers.org.uk). You can find sample programmes to get an idea of how different companies have linked their placements to STEM. Email [info@careersinstem.co.uk](mailto:info@careersinstem.co.uk) or visit the Careers section of Future Morph

The British Science Association's CREST award scheme provides a framework for STEM activities. CREST enhances the quality of STEM placements and gives students a nationally recognised award at the end. For more information about CREST awards see [www.britishteachers.org.uk/crest](http://www.britishteachers.org.uk/crest)



## 5. I sometimes interview young people before they choose work experience placements. What can they do if they are interested in science, technology, engineering or maths?

### Connexions personal adviser

Your local work experience provider or the person responsible for work experience in school will have lists of the placements obviously linked to these areas. If you're not sure what the jobs are, visit the Connexions website at [www.connexions-direct.com/Jobs4u](http://www.connexions-direct.com/Jobs4u)

Beyond that, you might like to introduce the idea that science, technology, engineering and maths (STEM) are evident in a wide range of careers and they could use Future Morph – [www.futuremorph.org](http://www.futuremorph.org) or [www.mathscareers.org.uk](http://www.mathscareers.org.uk) – to get some ideas. The best ways you can support this group of learners is to make sure that you are aware of the careers directly related to STEM and those which are linked more loosely. There is a Careers Education, Information, Advice and Guidance Pack called STEM Choices which can help you find out more. The pack is available on [www.futuremorph.org](http://www.futuremorph.org) or via email [info@careersinstem.co.uk](mailto:info@careersinstem.co.uk) to get a printed copy. You could use materials in the pack to offer a group session for those interested in STEM placements to generate ideas.

You may also get some ideas including how to tackle stereotyping from the teachers TV STEM Subject Choice and Careers programme Role Models and Work Placements, which can be viewed on [www.teachers.tv/video/36674](http://www.teachers.tv/video/36674)

Finally, if the young people you are working with are not keen on trying something different and want to do their placement in a familiar environment such as a school or a shop, you could encourage them to think about the STEM careers that link to that workplace. For example, schools will probably have some building services engineering they can explore such as how the building is powered, heated and wired for IT. A placement in a supermarket or clothes shop could link to food science, ICT or science related to textiles and intelligent fabrics. They might start to broaden their ideas from this initial starting point.

## 6. I am a member of the senior management team at school responsible for equality and diversity. I am aware that work experience placements are selected in gender stereotyped ways. What can we do to broaden the choices young people make?

### Deputy head

The 'Gender equality in work experience placements for young people' report by the Equal Opportunities Commission (now the Equality and Human Rights Commission) in 2005 highlighted the fact that young people choose placements in very gender stereotypical ways. However, when 'asked whether they would like to try a non-traditional placement, 36 per cent of girls said that they would, and a further 33 per cent were undecided' so there is some evidence that girls in particular will try something new. There have been initiatives in the past to challenge this, such as the Wider Horizons work experience programme in the JIVE project where female learners were encouraged to try work experience placements in science, engineering and technology related areas. You can find out about Wider Horizons by visiting [www.wiset.org.uk](http://www.wiset.org.uk) where you will also find other resources including posters to tackle stereotypes.

The gender equality duty, introduced in schools in 2007, requires schools to consider the choices young people make at Key Stage 4 and beyond, which includes work experience placements. You could build some equality and diversity content into your sessions with learners about their work experience choices.

For girls, the issue of the gender pay gap (around 18 per cent) is often a good way of introducing the fact that females tend to choose jobs which pay less. For boys, you could build in some exercises to encourage them to think about what their values are and how this might affect their career choice.

The Future Morph website has a values game which could form the basis of this. You could also challenge homophobic attitudes in careers such as hairdressing and caring to encourage learners to move away from stereotypical ideas. You can download a useful guide on tackling gender stereotypes from the DCSF 14-19 Reform: Nuts and Bolts guides website, written to support diploma work. Visit [www.stem-e-and-d-toolkit.co.uk](http://www.stem-e-and-d-toolkit.co.uk) to get the link to the STEM careers Equality and Diversity Toolkit.



## 7. I manage a team in a large organisation and am responsible for arranging work experience. How can I include hands on activities which won't contravene health and safety rules?

### Project manager, engineering company

The organisation responsible for health and safety and risk assessments in work experience placements for your area will be able to advise you regarding this. You may also have a health and safety adviser within your company who can help identify and minimise risks. Your local work experience organisation will have examples of activities that some employers have used with 14–19 year olds. Some require more planning and organisation than others but all will have been risk assessed by the Education Business Partnership/Connexions/Trident Edexcel.

During the Wider Horizons Project, which was aimed at encouraging more girls into STEM placements, companies came up with a variety of ways the learners could be involved in hands on activities. For example, an engineering company asked learners to measure the company car park and use the CAD system to work out how to fit the maximum number of vehicles into a small space. Another company gave the learner information on the employees in the organisation and asked her to analyse the workforce in terms of gender, age, ethnicity, qualifications, etc to help identify where the company's skills shortages might exist in the future.

The Royal Society of Chemistry – [www.rsc.org](http://www.rsc.org) – has a section on its website about work experience and offers some advice and examples of good practice to help employers plan safe and interesting placements. The guidelines cover a range of STEM related placements and may well provide you with some ideas.

The NHS has produced an excellent guide to work experience which gives lots of good examples, some mythbusters and generally good advice about arranging placements. This may give you some ideas of activities you could organise in your company. It is available at [www.nhscareers.nhs.uk/workexperience.shtml](http://www.nhscareers.nhs.uk/workexperience.shtml)

Some companies, such as BP, ask learners to identify what they are interested in as part of the application process and you could use that sort of information to negotiate with your colleagues and encourage them to think creatively about what they can do with the learner.

Connaught plc have developed a national programme of work experience placements and created resources to support their local offices. Examples of the activities, which have all been risk assessed by the company and the local education business partnerships, are available through the STEM Subject Choice and Careers Project. To access the information on the BP and Connaught resources contact the STEM Subject Choice and Careers project by emailing [info@careersinstem.co.uk](mailto:info@careersinstem.co.uk) or visit the Careers section of Future Morph

The Health and Safety Executive has some useful guidelines about young people and work experience which may help you too. Visit [www.hse.gov.uk/youngpeople/workexperience/index.htm](http://www.hse.gov.uk/youngpeople/workexperience/index.htm). However, the best place to start is probably your local work experience organisation's health and safety team. New arrangements for barring unsuitable people from working with children or vulnerable adults came into force on 12 October 2009 to replace List 99, the Protection of Children Act (POCA) barred list and the Protection of Vulnerable Adults (POVA) list. The new arrangements do not in themselves require any special measures to be taken by work experience organisers. The new vetting and barring scheme (VBS) is fully in force from November 2010, your local work experience organisation will be able to support you to stay within the law.

## 8. My school has suggested that I try to find my own work experience placement. I like maths but I don't know what sorts of placements I could do or where to look.

### Y10 Pupil

There are several places to start your research. The Maths Careers website [www.mathscareers.org.uk](http://www.mathscareers.org.uk) has some information about jobs you probably wouldn't have thought of yourself. There's a medical statistician, a formula one race car engineer and a computer music researcher for a start. You can see from the six themes of environment, health and society, business and money, entertainment, science and engineering and sport that maths can take you in many directions. The Future Morph website at [www.futuremorph.org](http://www.futuremorph.org) and the Jobs4U website at [www.connexions-direct.com/Jobs4u](http://www.connexions-direct.com/Jobs4u) will also have examples of maths related jobs. A good way to start is to go into the list through the section Job Families: Science, Mathematics and Statistics.

Once you know the types of things you might be interested in, you can talk to your work experience co-ordinator in school about where those careers are found locally. Some jobs will be harder to find than others but you might be able to come up with something similar. It will give you a chance to try things out and develop some new skills. There will probably be lists of placements you can choose from and it is a good idea to have a few alternatives in case your first option is not available. The more preparation you can do before looking at the lists, the better chance you have of obtaining the right placement for you.

The government has written some guidelines on Directgov for young people seeking work experience. Visit [www.direct.gov.uk/en/EducationAndLearning/14To19/Years10And11/DG\\_10013569](http://www.direct.gov.uk/en/EducationAndLearning/14To19/Years10And11/DG_10013569)

## **9. I oversee the work experience placements at our company and have noticed that colleagues often expect pupils to undertake easy tasks which do not require much supervision. However, they tend to be repetitive, uninspiring jobs which will put people off, rather than encourage them. Where can I find some examples of good practice to show my colleagues and help create more interesting placements?**

### **Training manager**

It is great to lead by example and there are lots of organisations with some really good activities planned for young people on work experience placements.

One approach is to give the young person a project so they have a focus to their placement. This does not have to be too complicated and might be something that you can make more easy or difficult depending on the interest and ability of the individual. For example, if you have facilities where the learner can do some computer-aided drawing, you could encourage colleagues to design a simple project such as designing a flat for a young person. Some companies have a standard programme they give everyone that comes to them and others assign tasks on a more ad hoc basis.

Generally learners will be more engaged in the placement if they have something which they are responsible for, so it makes sense to plan something in. Check with your local work experience organisation – usually an Education Business Partnership, Trident Edexcel or Connexions Service. They can give you examples of projects other companies ask young people to complete.

More general information about how to structure a placement can be found at the Institute for Education Business Excellence at [www.iebe.org.uk/index.php/business](http://www.iebe.org.uk/index.php/business) or Trident from Edexcel at [www.trident-edexcel.co.uk/tsec4.asp](http://www.trident-edexcel.co.uk/tsec4.asp)

The answer to question seven also provides some useful information and you can email [info@careersinstem.co.uk](mailto:info@careersinstem.co.uk) or visit the Careers section of Future Morph for more ideas.

## **10. I would like to do more to encourage the pupils in my lessons to reflect on how they have used science at work, using their work experience placement as the basis. Are there any activities I can use to do this?**

### **Science teacher**

You could set the students a 'Where's the science in that' type activity where they have to ask people in the workplace and report back in school. It will encourage learners to look out for certain things. You could give pupils a prompt sheet so they can ask people they come into contact with how science fits into their job.

You could consider asking one or more STEM Ambassadors ([www.stemnet.org.uk](http://www.stemnet.org.uk)) to come into school before the students go out on work experience placements, to give them an idea of how science is used in some jobs. The STEM Subject Choice and Careers Teachers TV programme on Science gives some good examples of the questions learners can ask people about their jobs. This is available on Teacher TV website – search for the STEM Careers Collection. Email [info@careersinstem.co.uk](mailto:info@careersinstem.co.uk) for more resources linked to science lessons hosted by science upd8.



The Future Morph website at [www.futuremorph.org](http://www.futuremorph.org) has pages with resources for teachers and quizzes for 11-19 year olds you may find some useful ideas you can use in school. The CREST award process encourages students to reflect on what they have learnt. CREST awards are extremely flexible. They can link into work experience placements, after school clubs or several linked schemes. Some CREST projects might be done in one day, others over several months. Students can investigate or design, make and research a subject, or design a science communication project. For more information about CREST awards visit [www.britishteachers.org.uk/crest](http://www.britishteachers.org.uk/crest)

On return from placement you could ask them about the daily tasks they did, then break them down into smaller chunks so they can identify the science, maths, technology and maybe engineering or manufacturing.

For specific links to the different sciences you could use the following websites for inspiration and information.

Chemistry	<a href="http://www.rsc.org">www.rsc.org</a>
Physics	<a href="http://www.iop.org">www.iop.org</a>
Biology	<a href="http://www.societyofbiology.org">www.societyofbiology.org</a>

## 11. How can we support our son in preparing for his work experience placement? He loves science, technology and maths at school so we would like to help him see the relevance of these subjects in the workplace.

### Carers of Y9 pupil

As a first step, you can check if your son's school is doing something to prepare him for his forthcoming placement. The amount of preparation offered by schools varies and it may well be that his work experience co-ordinator, form tutor and other staff are already helping learners to anticipate how they might relate their work experience to the subjects they are studying.

You could encourage him to use the Future Morph and the Maths Careers websites to get some ideas about how science, technology, engineering and maths (STEM) relate to different careers – including those containing elements of STEM subjects, even if they do not form the main focus of the job. There is a section on the site for parents and your son might like to use the 14–16 section to get some information. As part of the STEM Subject Choice and Careers project a leaflet has been produced for parents entitled 'Explore the Possibilities' email [info@careersinstem.co.uk](mailto:info@careersinstem.co.uk)

You may find this useful in helping you support your son in the future. Explore the Future Jobs « Science So What website (<http://sciencesowhat.direct.gov.uk/future-jobs>) to find more potential STEM careers that may be available when he leaves school.

Trident Edexcel has a booklet aimed at parents and carers that you may also find useful, it can be downloaded free of charge from [www.trident-edexcel.co.uk/tsec3\\_guide4p.asp](http://www.trident-edexcel.co.uk/tsec3_guide4p.asp)

Your local work experience organisation (details will be available from the school) will probably have helpful information and tips on its website too so it is worth investigating this option.

Generally, any support you can give your son with preparing will help so he

- knows what he's looking for
- asks people questions
- finds out about the business and how it makes its money
- thinks about the things he's good at
- discovers what he would want to avoid in a job



## 12. What can an Education Business partnership do to encourage under-represented groups into STEM work experience placements?

Young people are often unaware of the range of STEM related subjects and careers on offer and tend to make stereotypical choices when selecting work experience placements and yet an Equal Opportunities Commission (now the Equality and Human Rights Commission) report in 2005 indicated that in a survey of 1,300 year 10 pupils, almost eight out of ten girls and almost six out of ten boys said that they would like to try out non-traditional work before making their final job choice. The STEM Subject Choice and Careers Equality and Diversity Toolkit has more information about under-represented groups and has information on action some organisations have taken to encourage more females, people from black and minority ethnic groups, individuals with special educational needs and others. The toolkit is available on [www.stem-e-and-d-toolkit.co.uk](http://www.stem-e-and-d-toolkit.co.uk). STEM subjects are evident in a broad range of careers and some areas have a fair representation of different groups – eg females in bio-sciences and Chinese young people in science, engineering and technology professions so it is important to take care and not make assumptions.

In the past EBPs and other organisations involved in organising work experience placements have offered events targeted at under-represented groups. One option is to run 'taster days' or other awareness raising events prior to the point where learners make their placement selection. The 'Experiencing work in a positive way' and 'Get more women into your industry' JIVE Posters on <http://www.jivepartners.org.uk/products/posters.html> have useful tips on events for girls.

One example of a programme encouraging girls into STEM subjects is the Wider Horizons project where two distinct groups of learners were offered placements in STEM related organisations. Young women who had already undertaken taster activities in Year 9 were offered placements, to support their aim of pursuing STEM subjects and careers. Others, who had selected alternative placements (eg clerical, catering), were given the chance to work in STEM related organisations and to explore some jobs they had not considered before. Learners took part in a briefing session which highlighted the gender pay gap and why they were being encouraged to try something new. They were given special workbooks to find out about the roles men and women undertake in the workplace. Placement providers were asked to link the girls to female role models and to put together a varied and interesting placement which would encourage girls to consider STEM careers. On their return to school some learners gave presentations to year 9 students, to show the range of placements available linked to STEM. Information on Wider Horizons is available on [www.wiset.org.uk](http://www.wiset.org.uk)

There have been a range of initiatives and there is existing good practice aimed at encouraging under-represented groups into STEM subjects and careers and some of these are included in the STEM Subject Choice and Careers Equality and Diversity Toolkit.



## Organisations involved in focus groups

Two focus groups were held in September 2009 with national and regional groups as well as employers, work experience practitioners and schools to exchange ideas that will be practical and help create good quality STEM work experience placements.

**ETB (Now Engineering UK)**

**Institute of Physics**

**More Maths Grads**

**The Design and Technology Association**

**DCSF Work Related Learning**

**Leicester EBP**

**Sheffield Local Authority - Engineering Diplomas**

**Rotherham College of Arts & Technology**

**Sheffield City Council, Employer Liaison, Work Experience**

**Sheffield Futures**

**SSAT National IAG Champion**

**SEMTA - Diplomas**

**BP**

**NHS Sheffield**

**Qinetiq**

**Royal Air Force**

**Thomas Deacon Academy**

**Construction Skills**

**STEMNET London**

**Leicestershire Education Business Company**

**Construction Skills**

**Martin Hill**



## Useful Websites

### [www.futuremorph.org](http://www.futuremorph.org)

Future Morph is designed to show you just some of the amazing and unexpected careers that studying science, technology, engineering and maths can lead to.

### [www.scienceandmaths.net](http://www.scienceandmaths.net)

Linked to Future Morph and developed by the Department for Children, Schools and Families (DCSF) to encourage more teenagers to take science and maths subjects at A level.

### [www.connexions-direct.com/Jobs4u](http://www.connexions-direct.com/Jobs4u)

Careers categorised by job families to help people search for jobs linked to subjects or other interests they might have.

### [www.data.org.uk](http://www.data.org.uk)

The recognised professional association which represents all those involved in design and technology education and associated subject areas, Contains schemes of work and other resources for teachers.

### [www.britishecienceassociation.org/crest](http://www.britishecienceassociation.org/crest)

Gives information on the different levels of CREST awards and how they can be achieved.

### [www.rsc.org/Education/SchoolStudents/careers.asp](http://www.rsc.org/Education/SchoolStudents/careers.asp)

Careers pages from the Royal Society of Chemistry, including pages on work experience placements.

### [www.prospect4u.co.uk](http://www.prospect4u.co.uk)

Proskills UK represents the industries that make up processing and manufacturing and has a dedicated careers website to encourage young people into these sectors.

### [www.mathscareers.org.uk](http://www.mathscareers.org.uk)

Information, resources, career profiles and articles for teachers, careers advisers and employers as well as young people, to publicise the careers linked to mathematics.

### [www.nhscareers.nhs.uk/workexperience.shtml](http://www.nhscareers.nhs.uk/workexperience.shtml)

A page on the NHS careers website where the downloadable pdf version of the work experience pack is available.

### [www.hse.gov.uk/youngpeople/workexperience/index.htm](http://www.hse.gov.uk/youngpeople/workexperience/index.htm)

Specific information related to work experience placements for young people by The Health and Safety Executive.

### [www.direct.gov.uk/en/EducationAndLearning/14To19/Years10And11/DG\\_10013569](http://www.direct.gov.uk/en/EducationAndLearning/14To19/Years10And11/DG_10013569)

A government website containing useful guidance about work placements and links to other sites. Mainly aimed at young people.

### [www.iebe.org.uk/index.php/business](http://www.iebe.org.uk/index.php/business)

The Institute for Business Excellence was launched in June 2009 and brings together individuals and organisations working in the space between education and business.

### [www.employers-guide.org](http://www.employers-guide.org)

The Education and Employer Task Force is a new site to support engagement between employers and education including the provision of work experience placements.

### [www.trident-edexcel.co.uk/tsec4.asp](http://www.trident-edexcel.co.uk/tsec4.asp)

The employer pages of the Trident Edexcel website. Other sections are aimed at learners and teachers.

### [www.trident-edexcel.co.uk/tsec3\\_guide4p.asp](http://www.trident-edexcel.co.uk/tsec3_guide4p.asp)

A guide for parents and carers to help them support young people in work experience placements.



## **www.iop.org**

The Institute of Physics has a comprehensive website which gives information on careers linked to physics and the sciences.

## **www.societyofbiology.org**

Information and educational resources linked to biology careers.

## **www2.warwick.ac.uk/fac/soc/cei**

The Centre for Education and Industry is involved in research and teaching in work related learning, vocational education and training, and enterprise education. It organises an annual work experience conference and promotes excellence awards in enterprise education, work related learning and for work experience organisers.

## **www.ssatrust.org.uk**

The Specialist Schools and Academies Trust can 'work with employers to develop tools and resources to support schools in work experience placements'.

## **www.wisecampaign.org.uk**

Watch the film of the RAF work experience scheme developed by WISE that illustrates ways of promoting engineering to girls.

# **Guidance and Quality Standards from the Department of Children, Schools and Families**

'Work Related Learning Guide (Second Edition)', available on:

**[http://www.dcsf.gov.uk/14-19/documents/work-relatedlearningguide\\_2.pdf](http://www.dcsf.gov.uk/14-19/documents/work-relatedlearningguide_2.pdf)**

'Quality Standard for Work Experience', available on:

**<http://www.dcsf.gov.uk/14-19/documents/Quality%20Standard%20for%20Work%20Experience.pdf>**

IAG Strategy: 'Quality, Choice and Aspiration – A strategy for young people's information, advice and guidance.'

Available on:

**<http://publications.dcsf.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=DCSF-00977-2009>**

'Statutory Guidance: Impartial Careers Education'. Available on:

**<http://publications.dcsf.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=DCSF-00978-2009>**

## **Subject Choice and Careers Resources**

Many resources are available on Future Morph and Maths Careers.

Science resources with careers links are available on **www.upd8.org.uk**. Search under careers.

Careers Education, Information, Advice and Guidance pack – STEM Choices available to download on Future Morph or from cegnet.

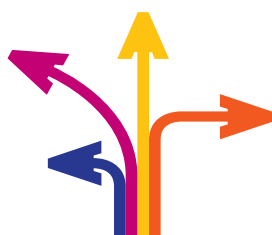
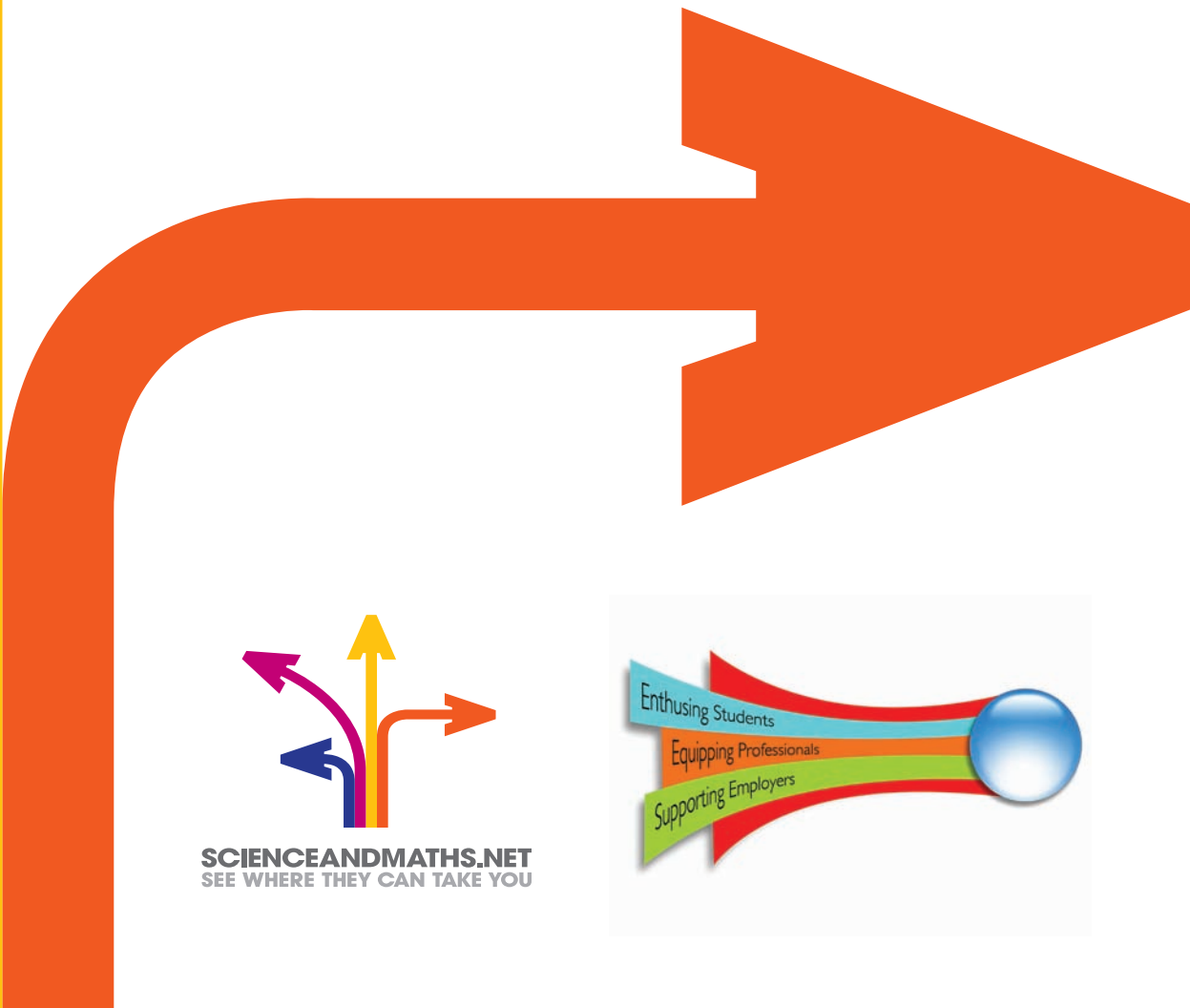
8 TV programmes linked to STEM careers on Teachers TV including (insert the one cut from above)

Discovering Talent, Developing Skills is a new publication aimed at gatekeepers and enablers to support engagement with STEM in schools including work experience placements.

To get details of all resources and more information email **info@careersinstem.co.uk**

The National STEM Centre at **www.nationalstemcentre.co.uk** will host the STEM careers resources after March 2011.

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