

Career learning for the 21st century

CPD series



Module 10b:

**Career development
for STEM learners:
equality and diversity**

Contents

Career development for STEM learners: Equality and diversity workshop	3
Tutor notes	3
Workshop outline	3
Workshop aim and objectives	4
Example workshop timetable	4
Checklist of resources required	5
Slides and notes	6
Handout 1 – Strategies for encouraging take-up of STEM courses and careers	33
Handout 2 – Activity 3 – Using video	35
Handout 3a – Developing group activities: girls into engineering	36
Handout 3b – Developing group activities: women seeking work in science	39
Handout 4 – Useful STEM websites and resources	41
Case study – College of West Anglia	45
Case study – Doncaster College	49
LSIS workshop – trainer’s feedback	54
LSIS workshop – attendee’s feedback	55

Download

This CPD module is available to download in PDF format from the Excellence Gateway, Career Development section.

Publisher

Published by the Learning and Skills Improvement Service (LSIS).

© LSIS January 2013

Publication reference: LSIS230-10b (2013)

Career development for STEM learners: Equality and diversity workshop

Tutor notes

Workshop outline

This workshop has been designed for those working in the FE and skills sector who are either new to career development or wish to broaden their understanding of it. The workshop introduces participants to the importance of career development and explores effective practice, the principles that underpin this and how practitioners can improve the quality of their services.

This module can be delivered by anyone who is an experienced or qualified training professional if they take the time to familiarise themselves with the materials including the web links, handouts and references. It would, however, be an advantage if the trainer had experience and/or training in career development, as it would enable wider and deeper exploration of the topics covered.

The materials can be delivered as they stand, contextualised or modified to suit the time available and the needs of the participants or organisation. The PowerPoint™ slides and handouts are available as separate files.

This workshop covers additional activities focusing on equality and diversity as an extension to the initial introductory module: *An introduction to career development for STEM learners*. Participants undertaking these activities should therefore have attended the introductory module, since these activities build on the knowledge gained from this workshop. (It is suggested that participants should be asked to bring along information and materials from the previous workshop, since they may wish to refer to these during the group activity – but it is not crucial if they forget, and the activity can be undertaken without these. The first activity also includes discussion of changes to practice since the introductory module).

This workshop is an extension to the 10th in a series of CPD workshops produced by LSIS and available to download from the LSIS Excellence Gateway. There are 10 others in the series:

- An introduction to career development
- Introduction to interviewing skills
- Introduction to values and ethics in career development
- Introduction to delivering career development through group work
- Introduction to evaluating and measuring impact in career development
- Introduction to reaching potential by raising aspirations
- Introduction to developing employability skills
- Introduction to career development for those with additional support needs
- Learning and earning: understanding the options for your learners
- An introduction to career development for STEM learners
- Introduction to the Blueprint for Careers.

This series of workshops is supported by a one-day “Train the trainer” programme aimed at those who have responsibility for staff development, continuing professional development or for developing a team’s or department’s skills and knowledge in career development. The programme introduces all the workshops: their aims, objectives, exercises and content while exploring how to tailor the content to specific contexts. If you are interested in gaining further information about this programme, please contact ann.ruthven@lsis.org.uk.

LSIS has also developed an online resource, “Career learning for all”, available free of charge on the LSIS virtual learning environment: just go to www.leadershiplearning.org.uk and create your own login. This has been designed for those involved in supporting learners with their career development, both specialists and non-specialists.

Workshop aim and objectives

The **aim** of the workshop is to develop understanding of how atypical learners can be encouraged to consider, and progress into, a science, technology, engineering and mathematics (STEM) career.

The **objectives** of the workshop are to enable participants to:

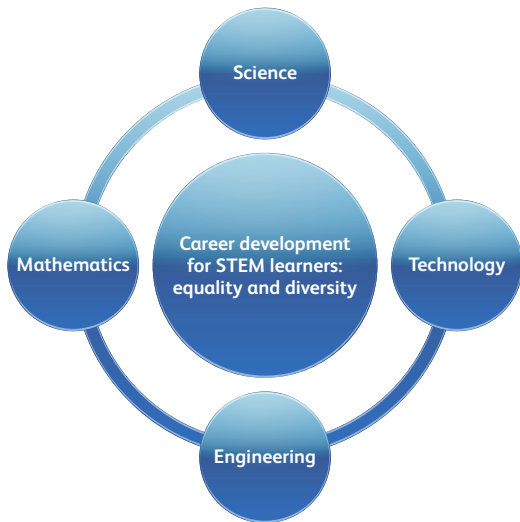
- discuss the current take-up of STEM subjects and the financial implications of choosing STEM qualifications
- identify strategies to address the under-representation of certain groups in STEM careers
- develop activities for recruiting atypical learners and help them explore STEM careers.

Example workshop timetable

Time	Session/s
09.30	Welcome, domestics, introduction of presenter and session
09.35	Aims and objectives
09.40	Group introductions exercise: where are we now with STEM careers, courses and jobs?
10.05	Messages from Ofsted and the STEM agenda
10.30	Do STEM qualifications bring financial rewards?
10.50	Equality and diversity video
11.05	Refreshments
11.15	The STEM agenda and equality and diversity
11.30	Developing group activities to engage and support learners into STEM careers
12.20	Further learning
12.25	Summary
12.30	Conclusion

Checklist of resources required

- ☐ Fire evacuation procedures
- ☐ PowerPoint™ slides 1 to 26
- ☐ Copies of handouts 1, 2, 3a, 3b and 4 (pages 33–43)
- ☐ Copies of College of West Anglia and Doncaster College case studies (pages 45 and 48)
- ☐ Flip chart and marker pens whiteboard
- ☐ Screen
- ☐ LCD projector
- ☐ Laptops for the tutor and for participants when undertaking group activities in groups of four
- ☐ Post-it™ notes
- ☐ Evaluation form: LSIS workshop – trainer’s feedback (see page 54)
- ☐ Evaluation form: LSIS workshop – attendee’s feedback (see page 55).



Career development for STEM learners: equality and diversity

Presented by
Date

Slide 1

Customise this visual to show your name and the date of the workshop.

Introduce the topic and yourself as presenter, and welcome the group. Talk through domestics, i.e. timings, breaks, toilets and fire evacuation procedures. Ask the group to turn off mobile phones.

Resources: Fire evacuation procedures.

Timing: 5 minutes.

Transition statement: Let's look at what we are going to cover today.

Your notes:

Aims and objectives



Aim

To develop understanding of how atypical learners can be encouraged to consider, and progress into, a STEM career.

Objectives

By the end of the session, learners will be able to:

- discuss current take up of STEM subjects and the financial implications of choosing STEM qualifications
- identify strategies to address the under-representation of certain groups in STEM careers
- develop activities for recruiting atypical learners and help them explore STEM careers.

Slide 2

Talk through the aim and objectives for the session and ask if there are any questions. You may wish to point out that this session builds on the activities undertaken in the introductory module.

Resources: Slide 2

Timing: 5 minutes.

Transition statement: Let's start off by reviewing where we are after the first workshop.

Your notes:

Activity 1: Where are we with STEM careers, courses and jobs?



Find a partner and introduce yourself if you do not know them well. You have 10 minutes for this activity.

- Share with each other any changes you have made in your own practice since the introductory session, write these on a Post-it™ note and stick on the flip chart paper.
- Share with each other what you consider to be effective practice in career development for STEM learners, write on a Post-it™ note and stick it on the flip chart paper.

Slide 3

The objectives of this introductory exercise are to:

- remind learners of some of the ideas from the first module and embed the learning
- catch up with action taken by participants in the intervening period
- ensure learners are aware of STEM materials prepared by LSIS on the Excellence Gateway: www.excellencegateway.org.uk/STEM and National STEM Centre sites.

Ask the participants to follow the instructions on the slide.

Once they have discussed the questions and completed some Post-it™ notes, pick out two or three of the 'actions taken' and two or three of the 'strategies' on the flip chart sheets to share with the whole group. Suggest that they have a wander around and look at the rest sometime during the remainder of the workshop, or at the end.

The handout and case studies from Doncaster College and the College of West Anglia introduce the theme of encouraging diversity, and give some additional ideas for them to look at during activity 3 – 'Developing group activities to engage learners' – or pursue after the workshop.

You may wish to showcase the LSIS STEM materials on the Excellence Gateway or the equality and diversity cases studies on the National STEM Centre website: www.nationalstemcentre.org.uk/elibrary/collection/907/equality-and-diversity

Resources: Slide 3, Post-it™ notes, flip chart paper, handout 1 on strategies and the case studies from the College of West Anglia and Doncaster College. Separate sheets of the flip chart paper should be headed up in advance, 'Effective practice for STEM development learners' and 'Changes in my practice' and put up on the walls to enable participants to put on their Post-it™ notes.

Timing: 10 minutes for the exercise and 15 minutes to discuss strategies and give out the handout.

Transition statement: Now let's see what Ofsted is saying about where we are with guidance on STEM careers.

Your notes:

Messages on STEM and careers from Ofsted 1



What does Ofsted say?

“Guidance on the wide spectrum of STEM career opportunities was underdeveloped... and usually depended on the personal experiences of subject teachers and the local knowledge of careers staff.”

“All careers professionals and teachers should be better trained and informed about STEM qualifications and pathways to obtaining them.”

“Students and their parents, as well as teachers and careers advisers, need better access to STEM labour market information.”

www.ofsted.gov.uk/news/improving-science-colleges-sharing-ideas-and-examples-of-good-practice?news=17409

Slide 4

Go through the slide.

In advance of the workshop, you may wish to have a look at this Ofsted report *Improving science in colleges - sharing ideas and examples of good practice* published in October 2011: www.ofsted.gov.uk/news/improving-science-colleges-sharing-ideas-and-examples-of-good-practice?news=17409

It gives a little more detail on the practice highlighted in the next slide.

Resources: Slide 4.

Timing: 10 minutes for slides 4 and 5.

Transition statement: Let's look at ways of delivering career development highlighted by Ofsted as good practice in its report.

Your notes:

Messages on STEM and careers from Ofsted 2



What have providers done to enhance career development for STEM learners?

“Given specific guidance and accurate information about the scientific content of the course to prospective students.”

“Used group tutorials to explore STEM careers websites.”

“Set up a science and technology curriculum academy to provide advice on employability skills and career development through mentoring, speakers and visits.”

www.ofsted.gov.uk/news/improving-science-colleges-sharing-ideas-and-examples-of-good-practice?news=17409

Slide 5

Go through the slide.

Resources: Slide 5.

Timing: 10 minutes for slides 4 and 5.

Transition statement: So let's have a look at how we are doing in general on the STEM agenda.

Your notes:

The STEM agenda – the good and bad news



- Increase in the number of students taking A-level STEM subjects in 2012:
 - increase of 29.2 per cent since 2007
 - but between 2003 and 2012, 60 per cent decline in number achieving A-level computing
- Sustained increase in number of pupils being entered for single subject biology, physics and chemistry GCSE: approximately doubling over five-year period since 2007 – but less in deprived areas
- In 2011, 24 per cent of adults lacked functional numeracy skills.

Slide 6

Go through the slide.

You may wish to highlight specific messages on the slide, depending on the nature of your group and the learners they are supporting.

Resources: Slide 6.

Timing: 15 minutes for slides 6 to 9.

Transition statement: Let's have a look at the action the government is planning to address some of these weaknesses.

Your notes:

The STEM agenda – what action is being taken?



- Ofsted looking in inspection at how well teaching and learning develops English and maths skills.
- From 2012/13 all apprentices to be supported by providers to gain level 2 maths and English.
- Early screening by Jobcentre Plus advisers of the English and maths needs of benefit claimants.
- Assessing English and maths needs of offenders right at the outset of their sentence.

The Department for Business, Innovation and Skills (BIS), 2011. *New Challenges, New Chances*.
www.bis.gov.uk/assets/biscore/further-education-skills/docs/n/11-1213-new-challenges-new-chances-implementing-further-education-reform

Slide 7

Go through the slide.

You may wish to highlight specific messages on the slide depending on the nature of your group and the learners they are supporting.

Resources: Slide 7.

Timing: 15 minutes for slides 6 to 9.

Transition statement: Now let's look at the picture in our sector.

Your notes:

The STEM agenda – what is the picture in the FE and skills sector?

In 2009/10:



- 60 per cent of qualifications gained by 16–18 age group were in the FE and skills sector
- a third of apprenticeships were in STEM, but 74 per cent of these were in engineering or engineering-related subjects: in particular, insufficient advanced apprenticeships are being taken
- nearly three-quarters of achievements in STEM in the FE and skills sector were at level 2 or below: although only 33 per cent at level 2 or below in science; the majority of level 3 qualifications were taken in schools.

Royal Academy of Engineering, 2011. *FE STEM Data Project – July 2011 report*.

www.nationalstemcentre.org.uk/res/documents/page/FESTEMDatareportJuly2011.pdf

Slide 8

Go through the slide.

You may wish to highlight specific messages on the slide, depending on the nature of your group and the learners they are supporting.

Resources: Slide 8.

Timing: 15 minutes for slides 6 to 9.

Transition statement: So, what are the implications for our practice and our learners?

Your notes:

The STEM agenda – what is the picture in the FE and skills sector?



- Achievement at level 3 is important for progression into STEM higher-level courses and careers, and brings transferable skills important to maintain employability
- Insufficient advanced apprenticeships, and level 3 achievement, also impacts on the provision of technicians and on social mobility
- There is insufficient linking of STEM provision to labour market trends.

Royal Academy of Engineering, 2011. *FE STEM Data Project – July 2011 report*.

www.nationalstemcentre.org.uk/res/documents/page/FESTEMDatareportJuly2011.pdf

Slide 9

Go through the slide.

You may wish to highlight specific messages on the slide, depending on the nature of your group and the learners they are supporting.

Resources: Slide 9.

Timing: 15 minutes for slides 6 to 9.

Transition statement: OK, now time for a break: let's take 10 minutes.

Your notes:



Do STEM qualifications bring financial rewards?

Slide 10

Just give the transition statement below and move straight on to the next slide.

Resources: Slide 10.

Timing: 10 seconds.

Transition statement: OK so we are going to discuss a couple of questions about this.

Your notes:

Activity 2: Do STEM qualifications bring financial rewards?



Discuss with the person next to you. You have 5 minutes.

Are you aware of any evidence to indicate that STEM qualifications bring financial rewards?

Is it important that you know about this when guiding learners in their discussions about careers – and why?

Slide 11

Go through the instructions on the slide.

Resources: Slide 11.

Timing: 10 minutes: 5 minutes to discuss in pairs and 5 minutes to discuss as a group.

Transition statement: So let's look at some of the evidence.

Your notes:

Positive wage premium associated with holding a qualification in a STEM subject



Qualification	Additional wage premium for STEM
First / Foundation degree	4.47 %
HNC / HND	7.83 %
RSA Higher Diploma	25.24 %
NVQ / SVQ 3	6.60 %
City & Guilds Foundation / Part 1	9.19 %
NVQ / SVQ 2	5.01 %
City & Guilds Craft / Part 2	8.84 %

http://raeng.org.uk/news/releases/pdf/The_Labour_Market_Value_of_STEM_Qualifications_and_Occupations.pdf

Slide 12

This table is adapted from table 5 on page 33 of the *Labour market value of qualifications and occupations* report produced in 2011 by the Institute of Education for the Royal Academy of Engineering. Explain where the information comes from. It should be pointed out that:

- not all STEM qualifications bring positive wage premiums
- the table highlights the fact that intermediate and lower-level qualifications shown (therefore delivered in the FE and skills sector) tend to be associated with a higher additional wage premium than is the case for higher-level qualifications.

It is recommended that you look at the report in advance of the workshop, so that can respond to any questions: http://raeng.org.uk/news/releases/pdf/The_Labour_Market_Value_of_STEM_Qualifications_and_Occupations.pdf. It is also recommended that participants are encouraged to look at this after the workshop, and the section on *Where's the money* in the CEIAG resource pack, which can be downloaded from www.futuremorph.org/careers-staff/ceiag-resource-pack

Resources: Slide 12.

Timing: 10 minutes for slides 12 to 14.

Transition statement: So what conclusions do the authors of the report draw?

Your notes:

Do STEM qualifications bring financial rewards?



- Many, but not all, qualifications have additional value in the labour market if they are in a STEM subject area though less so in science and more so in engineering
- Most STEM intermediate and lower level occupations attract additional wage premia, though less so for science and more so for technology and engineering
- Some, but not all, STEM qualifications have considerable additional value in the labour market if they are used in an STE occupation.

http://raeng.org.uk/news/releases/pdf/The_Labour_Market_Value_of_STEM_Qualifications_and_Occupations.pdf

Slide 13

These are the quotes from the report summarising the findings. Go through the slide.

Resources: Slide 13.

Timing: 10 minutes for slides 12 to 14.

Transition statement: So what are the implications for our practice?

Your notes:

What are the implications for our practice?



- In general terms, we can say that working in science, engineering or technology occupations (particularly at intermediate level or below) often attracts a sizeable wage premium, but:
- Some STEM qualifications are more valuable in the labour market than others: guidance on specific options needs to be informed
- We need to build this into our career development practice.

http://raeng.org.uk/news/releases/pdf/The_Labour_Market_Value_of_STEM_Qualifications_and_Occupations.pdf

Slide 14

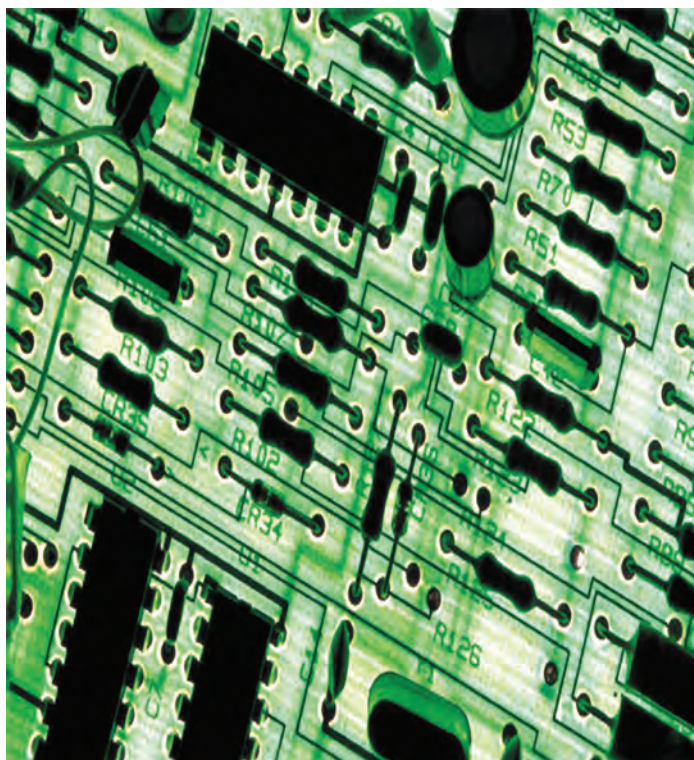
Go through the slide.

Resources: Slide 14.

Timing: 10 minutes for slides 12 to 14.

Transition statement: Now let's have a look at the experience of a woman working in a STEM occupation.

Your notes:



Equality and diversity in STEM: Jade Aspinall – engineering apprentice

www.futuremorph.org/16plus/next-steps/discovering-technicians

4.21 minutes

Slide 15

The video takes 4.21 minutes to run. The video raises issues around preconceptions of what engineering is like: parental attitudes to daughters studying engineering; what is involved in an engineering apprenticeship; and the alternative apprenticeships pathway through HE.

(An alternative video would be the Sara McGowan – building services engineer video at <http://vega.org.uk/video/programme/53>, which raises issues such as a female professional engineer managing men who are older than her – and work-life balance. However, this video lasts 14 minutes, so that subsequent timings would need to be adjusted if the whole video were viewed.)

Give out handout 2 and ask the group to jot down notes under the headings on the handout.

Once the video is over, move on to slide 16 with the questions.

Resources: Slide 15 and handout 2.

Timing: 15 minutes for slides 15 and 16 (5 minutes for the video and 10 minutes to discuss what they thought of it and how they might use it.)

Transition statement: OK, now let's see what you think.

Your notes:

Activity 3 – Using video



1. What issues does this video raise?
2. Anything in addition that you would want to cover when discussing women entering STEM careers?
3. How could you use this video?

Slide 16

Go through the questions on the slide and discuss with the group.

Resources: Slide 16.

Timing: 10 minutes.

Transition statement: Now let's have a coffee break. See you in 10 minutes.

Your notes:

The STEM agenda and equality and diversity – where are we now?



- Gender divide of boys taking physics and girls taking biology persists
- Gender imbalance still very evident in engineering and computing: in 2008/09, only 15 per cent of engineering and technology graduates were girls
- In 2008, 4 per cent of working women with disabilities were in SET occupations.

Slide 17

Go through the slide. You may wish to highlight specific messages on the slide, depending on the nature of your group and the learners they are supporting.

Resources: Slide 17.

Timing: 15 minutes for slides 17 to 21.

Transition statement: What's happening with occupational segregation in apprenticeships?

Your notes:

What about apprenticeships and gender?



Many of the occupations that have the lowest levels of female participation in apprenticeships – such as engineering, construction, and automotive – are those that are facing the most pressing skills shortages.

The gender pay gap for apprentices is greater than the gender pay gap in the wider labour market. In 2007, female apprentices earned, on average, 21 per cent less than male apprentices.

In the 2003 EOC survey, 67 per cent of women were not aware of the differences in pay rates for work usually done by women and men.

www.tuc.org.uk/extras/Apprenticeships_and_Gender.pdf

Slide 18

Go through the slide. The EOC report, *Free to Choose*, published in 2003, found that young people, particularly girls from lower socioeconomic groups, were taking up low-paid jobs in traditional occupations and not being given the access to the careers advice and taster opportunities to enable them to make informed choices and access better paid jobs.

Note the link to the previous discussion about the wage premiums that STEM jobs bring. In the EOC study, two-thirds of the 67 per cent of young women who were not aware of the differences in pay rates would have looked at a wider range of options.

You may wish to highlight specific messages on the slide, depending on the nature of your group and the learners they are supporting.

Resources: Slide 18.

Timing: 15 minutes for slides 17 to 21.

Transition statement: What's the position with women more generally?

Your notes:

The STEM agenda and equality and diversity – where are we now?



- Women make up 45.1 per cent of the workforce, but only 12.3 per cent of people working in SET occupations
- The continuing 'leaky pipeline'
- Many women come to a science career later in life
- Many women who specialise in science early in life do not pursue a career in science
- Women's attitudes impact on the next generation
- Gender is still an issue because:
 - good practice has not been adequately taken up and embedded;
 - contradictory messages counteract positive ones; and positive action is not understood.

www.theukrc.org/influencing-policy/research-projects

www.theukrc.org/resources/ukrc-statistics-guide-2010

Slide 19

Go through the slide.

The 'leaky pipeline' on the slide is the term that has been coined to refer to the situation whereby women in SET employment and education leave their careers or studies – for example, to raise a family – and fail to return to SET employment.

You may wish to highlight specific messages on the slide, depending on the nature of your group and the learners they are supporting.

Resources: Slide 19.

Timing: 15 minutes for slides 17 to 21.

Transition statement: What about ethnicity and social class?

Your notes:

The STEM agenda and equality and diversity – where are we now?



- Concern that science is dominated by the middle classes
- Marked variation in participation in STEM around the country
- Picture of ethnic representation in STEM is complex:
 - Highest level of employment in STE occupations is among the Chinese (8.9 per cent) and Indian populations (7.2 per cent)
 - Lowest level of employment in STE occupations is among the black Caribbean population (particularly men) (2.3 per cent), and the Bangladeshi population (particularly women) (1.6 per cent).

DfE, 2011. *STEM Choices: A Resource Pack for Careers Education and Information, Advice and Guidance Practitioners*.

Royal Academy of Engineering, 2011. *FE STEM Data Project – July 2011 report*.

Slide 20

Go through the slide.

Resources: Slide 20.

Timing: 15 minutes for slides 17 to 21.

Transition statement: Let's look at the requirements impacting on our sector.

Your notes:

The STEM agenda and equality and diversity – what action is being taken?



- The Equality Act 2010 has a proactive requirement for professionals to take equality issues into account.
- The reshaped public sector Equality Duty will require providers to publish more information on equality and demonstrate how they are delivering improvements.
- Ofsted inspectors must evaluate the extent to which achievement gaps are narrowing between different groups of learners.

HM Government, 2010. *The Equality Strategy – Building a fairer Britain* (2010).
Ofsted, 2012. *Handbook for the inspection of further education and skills*.

Slide 21

Go through the slide.

You may wish to check out whether participants are aware of their duties under the Equality Act and be prepared to answer questions on this. There are a number of guides – entitled *Equality Act: What do I need to know?* – outlining the key changes in the law, including on positive action and the equality duty. For further information, visit www.homeoffice.gov.uk/equalities/equality-act/

Resources: Slide 21.

Timing: 15 minutes for slides 17 to 21.

Transition statement: Now let's focus on the activities we can develop to support atypical learners who want to enter STEM careers.

Your notes:



**Equality and diversity –
how can we support
atypical learners to access
STEM careers?**

Slide 22

Just give the transition statement below and move straight on to the next slide.

Resources: Slide 22.

Timing: 50 minutes for slides 22 and 23 covering the final activity.

Transition statement: OK let's go on to our final activity.

Your notes:

Activity 3 – Developing group activities to engage learners



You have been asked by your line manager to develop a series of two-hour group sessions to support girls and women entering STEM careers. In groups of four, choose either:

1. Group work to encourage girls to enter engineering apprenticeships or careers, to be used as part of a taster, or
2. Group work to support women on a science programme seeking work.

Refer to handout 3a or 3b. You have 40 minutes for this activity: be ready to provide feedback.

Slide 23

The objective of this exercise is for participants to think about how they could use the resources and strategies that they have come across – and some new ones – to develop activities to engage learners in STEM and help them progress. There are ideas for resources on the handouts, so that they do not have to spend too much time searching on the internet.

Ask participants to form groups of four – perhaps joining those with whom they have not yet worked during the workshop. Each group needs to choose the group activity they wish to work on – either preparing a session to encourage girls to enter engineering apprenticeships or careers, or to support women on a science programme seeking work. Then distribute the appropriate handout: 3a or 3b. Draw participants' attention to the instructions and questions on handouts 3a and 3b. There are internet links on the back of each handout that participants can search – but remind them not to spend all the time on the internet and not do any planning. If they have brought information and materials from the previous workshop (e.g. their assessment of information sources) they may wish to refer to these during the group activity and also handouts 4 on resources and 1 on strategies. Check on progress part way through.

Resources: Slide 23; handouts 3a and 3b, flip chart paper and pens; laptop with internet per group.

Timing: 40 minutes on the activity plus 10 minutes to share with each other the activities they have planned and developed and the resources used to do this.

Transition statement: Let's look at some sources of online training useful for advising STEM learners.

Your notes:

Exploring further



On the National Guidance Research Forum (NGRF) website:

- Online STEM Careers Learning Module (Getting Started, Moving ON and Digging Deeper):
www2.warwick.ac.uk/fac/soc/ier/ngrf/stem/
- LMI learning module:
www2.warwick.ac.uk/fac/soc/ier/ngrf/lmimodule/

Slide 24

Go through the slide.

The slide gives links to two further sources of online CPD as modules held on the National Guidance Research Forum (NGRF) website if participants wish to continue their CPD subsequently. (As we noted earlier, concern has been expressed at STEM choices and programmes being insufficiently informed by labour market information (LMI)).

Give out handout 4 for participants to take away as a resource.

Resources: Slide 24 and handout 4.

Timing: 5 minutes.

Transition statement: OK let's summarise what we have covered today.

Your notes:

Summary



1. The good news and bad news on STEM progress.
2. Strategies and activities to encourage learners, particularly atypical ones, to consider STEM programmes and careers.
3. Some resources available to help us.
4. Whether STEM qualifications bring financial rewards.

Slide 25

Say that the session is nearly at an end, so you need to recap.

Ask the group to complete evaluation forms and generally ask them for feedback on what they have learned from the session. Thank the group for their participation. Move on to slide 26 while they complete evaluation forms, and ask them to think about what they are taking away from today and share one thing with the person next to them.

Resources: Slide 25 and evaluation forms.

Timing: 5 minutes for slides 25 and 26.

Transition statement:

Your notes:



**One action point
I am taking away
from today**

Thank you for attending;
please complete an
evaluation form.

Slide 26

Resources: Slide 26.

Timing: 5 minutes for slides 25 and 26.

Transition statement:

Your notes:

Handout 1 – Strategies for encouraging take-up of STEM courses and careers



- Challenge preconceptions and stereotyped images arising, for example, from:
 - traditional or cultural views of what a STEM job entails and whether “the kind of person I am from my background does this kind of work” (e.g. “It’s dirty work”, “These subjects are too difficult”, “Only middle-aged men do this”, etc.)
 - perceptions that there is no value in studying STEM subjects unless directly linked to career choice (e.g. “Why should I study chemistry if I don’t want to be a chemist?”).
- Where permission is given to use the resources and images from STEM websites, these can help to ensure that the materials you produce give a positive and inclusive message. Have a wander around your organisation – what messages are being giving out?
- Ensure that learners are aware of the potential wage premium (where applicable) in selecting STEM programmes.
- Where appropriate, engage parents and carers, address inaccurate perceptions and extend their knowledge of STEM careers and the benefits of STEM careers. For example, you could have an event to celebrate achievement in STEM, and invite former learners. For information for parents, see www.futuremorph.org and www.totalprofessions.com/school-student/parents/work-experience
- Address low aspirations.
- Address learners’ lack of awareness of the huge range of STEM jobs: broaden out ideas on STEM careers and what they entail.
- Engage supportive employers with a commitment to equality of opportunity and bring the workplace into STEM programmes and tasters – including academic programmes – and help learners to understand how STEM subjects and jobs relate to everyday life.
- Bring positive role models into programmes and tasters – including accessing these online and using case studies.
- Organise inspiring industrial visits and encourage learners to try engaging atypical work experience placements where positive role models can support and encourage them: ensure adequate briefing and debriefing. A successful work experience placement is often a trigger for entry into non-traditional work areas. Organising placements in single-sex groups can help reduce stereotypical choices. The *Quick Guide to STEM Work Experience Placement* offers some practical ideas, and is available, with the companion *Guide to Examples of Good Quality STEM Placements*, at www.theukrc.org/resources/stem-work-experience. Professional associations and others will often help provide placements.

- Help learners to develop a professional online profile demonstrating a knowledge of STEM.
- Help learners to identify a senior STEM manager or chief executive of a company to follow on Twitter to develop sector knowledge.
- Access STEM mentors to support learners in exploring STEM careers options, helping to ensure choices are realistic, and helping learners to address barriers (real or perceived).
- The following seem to work in attracting and retaining women in STEM careers:
 - Positive exposure
 - Accessible role models
 - Quality hands-on experience
 - Nurturing interest, mentoring
 - Blogs, information and guidance
 - Flexibility to enter or re-enter the career throughout working life.

www.theukrc.org/influencing-policy/research-projects

Handout 2 – Activity 3 – Using video



1. What issues does this video raise?

[illegible]

2. Anything in addition that you would want to cover when discussing women entering STEM careers?

[illegible]

3. How could you use this video?

Handout 3a – Developing group activities: girls into engineering



Be inclusive – think about how you might encourage girls from all backgrounds and circumstances, including, for example, those with a disability or an ethnic group with low participation, to consider engineering. Work in groups of four. You have 40 minutes.

Have a look at the questions below – agree the focus for your session and the issues you want to explore. Bear in mind the work you have already done in this session and the previous session on strategies and resources.

If you want some more ideas, turn over the page for some internet-based resources to explore, but don't spend all your time on the internet. You could take turns at planning the session and searching the web. Write your ideas on the pieces of flip chart paper and display on the wall.

Name of your session:

Agree your objective

1. _____

2. _____

3. _____

What issues would you want to cover or explore?

What activities would you use?

What resources would you use – internal, from partners and employers, from the internet?

If you have answered the above, think about what you could suggest to enable learners to develop their individual career aspirations subsequently?

Resources

A word of caution: a wide range of STEM resources has been produced over the last decade by a number of organisations through government-funded projects and initiatives. Materials may still be available, but are not necessarily being updated – so beware of information that may no be longer current. A lot of resources are aimed at the 11–16 age group – but there may still be useful ideas in these, even if you are working with an older age group.

www.futuremorph.org/careers_staff/ceiag_resource_pack.cfm

Chapter 6 focuses on resources and activities to stimulate awareness of STEM careers.

Chapter 4 gives some background information on equality and diversity.

www.futuremorph.org/careers_staff/resources_database.cfm

gives access to a range of resources in different formats.

www.nationalstemcentre.org.uk/elibrary/collection/907/equality-and-diversity – this includes case studies produced by LSIS to promote equality and diversity across STEM subjects (e.g. peer mentoring, employer engagement).

www.stem-e-and-d-toolkit.co.uk – have a look at resources and tools section of the STEM Subject Choice and Careers Equality and Diversity Toolkit. There are sections on gender, disability, age and race and ethnicity.

www.thelep.org.uk/about/girls – have a look at the ideas on engaging girls from all backgrounds in engineering and on producing inclusive materials in *Getting girls into Engineering; a practical guide* produced by the London Engineering Project and the UK Resource Centre for Women.

www.tomorrowsengineers.org.uk Tomorrow's Engineers enables exploration of job roles and apprenticeships in engineering. Have a look at the Tomorrow's Engineers Resources section and Resources Pack and www.tomorrowsengineers.org.uk/resources.cfm.

www.engineeringuk.com EngineeringUK aims to improve the perception of engineers and engineering and its desirability as a career choice – especially among 7 to 19-year-olds and their influencers.

www.nationalstemcentre.org.uk/elibrary/resource/1634/equal-opportunities-and-diversity-14-19-strategies-and-case-studies. These materials provide examples of effective practice in equality and diversity within STEM subjects and careers.

www.equal-works.com/resources/contentfiles/636.pdf – materials from the GERI (Gender, Equality and Race) project. *Gender Stereotyping in Apprenticeships*.

<https://www.brightlinksengineering.org> Bright Links Engineering (mentoring for young people interested in engineering 14 to 19).

www.youngeng.org/home.asp Young Engineers (mentoring for young people interested in engineering up to 19).

www.stemgirls.co.uk STEMgirls (mentoring for young women interested in STEM).

www.socialmobility.org.uk/app-2011/mentoring (AP programme) (mentoring for bright young people from lower-income backgrounds).

www.stemdisability.org.uk/default.aspx – website for the STEM Disability Committee.

Handout 3b – Developing group activities: women seeking work in science



Be inclusive – think about how you might encourage girls from all backgrounds and circumstances, including, for example, those with a disability or an ethnic group with low participation, to progress into work in science. Work in groups of four. You have 40 minutes.

Have a look at the questions below – agree the focus for your session and the issues you want to explore. Bear in mind the work you have already done in this session and the previous session on strategies and resources.

If you want some more ideas, turn over the page for some internet-based resources to explore, but don't spend all your time on the internet. You could take turns at planning the session and searching the web. Write your ideas on the pieces of flip chart paper and display on the wall.

Name of your session:

Agree your objective

1.

2.

3.

What issues would you want to cover or explore?

What activities would you use?

What resources would you use – internal, from partners and employers, from the internet?

If you have answered the above, think about what you could suggest to enable learners to develop their individual career aspirations subsequently?

Resources you could use

A word of caution: a wide range of STEM resources has been produced over the last decade by a number of organisations through government-funded projects and initiatives. Materials may still be available, but not necessarily being updated – so beware of information that may no be longer current. A lot of resources are aimed at the 11–16 age group – but there may still be useful ideas in these, even if you are working with an older age group.

www.theukrc.org – The UK Resource Centre for Women in science, Engineering and Technology (UKRC) promotes gender equality in SET and provides a range of services for women at all stages of their careers, including those on learning programmes. Their website offers an A-Z advice for women covering topics such as career breaks, CVs, flexible working, interview tips and work placements; and information about job vacancies. www.theukrc.org/women/job-vacancies; www.theukrc.org/resources/stem-work-experience; www.theukrc.org/women/a-z-of-advice-for-women; www.theukrc.org/get-involved/networks/getset-women; www.theukrc.org/blogs/getset-women

www.napequity.org/nape-content/uploads/20-Ways-to-Make-STEM-Careers-Advice-Women-Friendly.pdf – 20 ways to make STEM careers advice women-friendly.

www.wiset.org.uk – includes a section on helping employers recruit more women into SET.

www.stem-e-and-d-toolkit.co.uk – the resources and tools section of the STEM Subject Choice and Careers Equality and Diversity Toolkit has sections on gender, disability, age and race and ethnicity.

<http://vega.org.uk/video> – Vega Science videos.

www.biochemistry.org/SciencePolicy/Womeninscience/WomeninBiochemistry.aspx – some professional associations have a section for women and information on role models or projects on their websites.

www.stepintothenhs.nhs.uk/index.aspx – includes an A–Z of careers, information on work experience and registering for jobs.

www.mentorset.org.uk – a mentoring scheme for women in STEM.

<http://camawise.org.uk> – if you are based in East Anglia, this is regional network for women in SET, including those who wish to return to a SET career after a break.

http://en.wikipedia.org/wiki/citizen_science – Citizen Science.

www.sciencecouncil.org/content/science-careers-expert-group-report-published-0 – some background information.

https://twitter.com/Science_Council – follow developments on Twitter.

<http://royalsociety.org/about-us/equality> – the Royal Society's activities relating to equality and diversity.

Handout 4 – Useful STEM websites and resources



1. General sites and resources

New Challenges, New Choices includes a section on government policy in relation to STEM. www.bis.gov.uk/assets/biscore/further-education-skills/docs/n/11-1213-new-challenges-new-chances-implementing-further-education-reform

National Careers Service (launched in 2012 encompassing the next step service) <https://nationalcareersservice.direct.gov.uk>

Government site for young people: www.direct.gov.uk/en/YoungPeople/index.htm

The National Apprenticeship Service (NAS): www.apprenticeships.org.uk

2. STEM-related sites

Future Morph: www.futuremorph.org

Knowledge transfer networks: www.innovateuk.org/deliveringinnovation/knowledgetransfERNetworks.ashx

LSIS STEM resources: <http://tlp.excellencegateway.org.uk/tlp/stem/index.php>

The National STEM Centre e-library: www.nationalstemcentre.org.uk/elibrary

The Resource Pack for CEIAG Practitioners: www.nationalstemcentre.org.uk/elibrary/resource/936/stem-choices-a-resource-pack

STEM Careers Awareness Guides: designed to provide STEM teachers and careers advisers with an overview of the 'See where they can take you' campaign. www.nationalstemcentre.org.uk/elibrary/resource/4959/stem-careers-awareness-guides

LSIS area on the site with case studies of effective practice: www.nationalstemcentre.org.uk/elibrary/collection/903/lsis-effective-practice-case-studies

www.nationalstemcentre.org.uk/elibrary/collection/908/progression-through-stem

The Women in SET team: www.wiset.org.uk

The STEM Careers Action Programme: www.shu.ac.uk/research/cse/stem-careers.html

STEMNET: www.stemnet.co.uk

STEMNET Ambassadors: www.stemnet.org.uk/content/stem-ambassadors

The UK Resource Centre for Women in Science, Engineering and Technology: www.theukrc.org

WISE Women into Science, Engineering and Construction: www.theukrc.org/wise

STEM Subject Choice and Careers: Lessons Learnt: illustrates how schools have raised STEM careers awareness by means of a range of interventions and including a review of the impact of these: www.shu.ac.uk/_assets/pdf/cse-stem-lessons-learned-report.pdf

STEM Equality and Diversity Toolkit: aimed at 11–16, but includes information of general relevance: www.stem-e-and-d-toolkit.co.uk

Encouraging Equality and Diversity: Working towards equal opportunities in STEM subjects and careers. www.derby.ac.uk/files/stem_careers-may2011.pdf

STEM subject choice and Careers Project: register at info@careersinstem.co.uk for updates, alerts and resources

3. Biology-related sites

Biochemical Society: www.biochemistry.org

British Ecological Society: www.britishecologicalsociety.org

British Pharmacological Society: www.careersinpharmacology.org

Institute of Biomedical Science: www.ibms.org

Society of Biology: www.societyofbiology.org

Society of Experimental Biology: www.sebiology.org

Society for General Microbiology: www.sgm-microbiologycareers.org.uk

4. Chemistry-related sites

Royal Society of Chemistry: www.rsc.org

Association of the British Pharmaceutical Industry: <http://careers.abpi.org.uk>

5. Engineering-related sites

Chartered Institution of Building Services Engineers: www.cibse.org

Engineering Council: www.engc.org.uk

Energy Institute: www.energyzone.net

Engineering UK: www.engineeringuk.com

Institute of Civil Engineers: www.ice.org.uk

Institute of Marine Engineering, Science and Technology: www.imarest.org

Institute of Materials, Minerals and Mining: www.materials-careers.org.uk

Institution of Chemical Engineers: www.icheme.org

Institution of Mechanical Engineers: www.imeche.org

Institution of Engineering and Technology: www.theiet.org

Royal Aeronautical Society: <http://aerosociety.com>

Tomorrow's Engineers: www.tomorrowsengineers.org.uk

For a full list of professional engineering institutions and information about accredited engineering courses visit the Engineering Council website: www.engc.org.uk

6. Mathematics-related sites

Institute of Mathematics and its Applications: www.ima.org.uk

London Mathematical Society: www.lms.ac.uk

Maths Careers: www.mathscareers.org.uk

Royal Statistical Society: www.rss.org.uk

7. Medicine related sites

Step into the NHS: www.stepintothenhs.nhs.uk

British Dental Association: www.bda.org

British Medical Association: www.bma.org.uk

Chartered Society of Physiotherapy: www.csp.org.uk

Institute of Biomedical Science: www.ibms.org

Institute of Physics and Engineering in Medicine: www.ipem.ac.uk

Royal College of Nursing: www.rcn.org.uk

Royal College of Veterinary Surgeons: www.rcvs.org.uk

8. Pharmacy and pharmacology-related sites

Association of the British Pharmaceutical Industry: <http://careers.abpi.org.uk>

British Pharmacological Society: www.bps.ac.uk

Royal Pharmaceutical Society: www.rpharms.com

9. Physics-related sites

Institute of Physics: www.physics.org and www.iop.org

Royal Astronomical Society: www.ras.org.uk

Royal Meteorological Society: www.metlink.org

10. Other science-related sites

Geological Society: www.geolsoc.org.uk

Forensic Science Society: www.forensic-science-society.org.uk

Institute of Food Science and Technology: www.foodtechcareers.org

The Science Council: www.sciencecouncil.org

Adapted from a Future Morph listing.

July 2012

Case study of effective practice 2010/11

The LSIS STEM Programme

Case study – College of West Anglia

Teaching and learning



College of West Anglia: Gender inclusivity in engineering

College of West Anglia

Project title: **Gender inclusivity in engineering**

Themes: **Equality and diversity; Careers in STEM; Engineering**

Laurie-Ann Benner completed a three year advanced apprenticeship in engineering and won Apprentice of the Year 2010. She has gone on to become an excellent role model working with local colleges and through local press to encourage girls to go into engineering.



Summary

The low numbers of girls in engineering has been recognised as a problem for some time. This case study illustrates how a very motivated female engineering apprentice can be promoted to encourage recruitment.

Contents

About the college: Overview of the size, organisation and teaching and learning offered	3
The challenge : The aim of the self-improvement activity was to encourage more women into engineering	3
The activity: Establishing a successful female engineering student as a role model to promote engineering to women	3
The outcomes	3
The impact	4
Contact details	4

About the college

The College of West Anglia is one of the biggest providers of further and higher education in the East of England with around 13,000 students, 1,350 staff and annual revenues of more than £35million. The college operates from centres in King's Lynn, Wisbech, Downham Market and Milton (Cambridge) which collectively address the needs of people across an area of over 2,000 square miles.

The challenge

The low numbers of girls in engineering has been recognised as a problem for some time. This case study illustrates how a very motivated female engineering apprentice can be promoted to encourage recruitment.

The activity

Laurie-Ann Benner completed a three year advanced apprenticeship in engineering at the College of West Anglia (CWA) and is currently employed by PEME Process Control, based in Peterborough.

Founded in 1982, PEME Process Control has

developed into a fully integrated process control organisation which offers a wide range of services from design and software through to installation and asset maintenance. With a highly skilled workforce and a committed approach to quality and safety, PEME Process Control has a proven track record in major industry sectors including processing, manufacturing, industrial and utilities. They currently employ six apprentices through the CWA

CWA has a work-based learning department, headed by Susie Massen, and training advisors who liaise with the companies that offer apprenticeship schemes.

Melissa Fenwick, HR coordinator for PEME says: "We chose the College of West Anglia for our apprenticeship training because of the structured programme they offer and their location, which is ideal for most of our apprentices. I would recommend CWA for our training without hesitation.

"The benefits of using CWA for our apprenticeship

training are that they are very good at communicating with us and keeping us updated with the progress of each learner. The apprentices have been a benefit to our company as we train them into qualified engineers to help overcome the skills shortage and produce good all round engineers to meet the needs of our business."

The outcomes

Laurie-Ann was the only female in her group and said "I was extremely nervous in the beginning and very worried about being the only girl on the course." She needn't have worried though, she soon settled in.

The feedback from her tutor, John Suckling, said that Laurie-Ann was very keen, willing and highly motivated with a pleasant, friendly personality, she was a pleasure to teach. Laurie-Ann proved to be a very conscientious and keen student; she was very committed, highly motivated and had an excellent attendance record.

Laurie-Ann has the aptitude for both the practical and theory side of her

apprenticeship. She listened and worked efficiently to meet all targets set; in fact Laurie-Ann was ahead on the programme. Working within a predominantly male area she certainly held her own!

The impact

Drawing on all these qualities Laurie-Ann supported the college in several projects, for instance she has attended The Thomas Clarkson Community College to promote females in engineering. She has also been involved in marketing focused on engineering training through a local paper and she was nominated for

Young Woman of the Year Award 2008.

Laurie-Ann's greatest achievement was winning the Apprentice of the Year 2010, something of which the college and her employer were very proud.

Laurie-Ann has the enthusiasm and drive to succeed at a high level, an excellent model for females in engineering.

Contact details

Eastern LSIS STEM Champion
Elaine Cornwell
Email:
ecornwell@col-westanglia.ac.uk

Address of case study organisation:

College of West Anglia
Tennyson Ave
Kings Lynn
Norfolk
PE30 2QW

Telephone:

01553 761 144

Website:

www.cwa.ac.uk

Email:

enquiries@col-westanglia.ac.uk

The LSIS STEM Programme

These resources are examples of effective practice in STEM teaching and learning; they have been produced by regional STEM Champions working with managers and practitioners. The contents should not be compared with commercially produced resources, although in many cases they may have comparable or better learning outcomes.

The LSIS STEM Programme offers unique support for the learning and skills sector, working with managers and teachers in all settings – colleges, work-based learning, prison units and adult education.
www.excellencegateway.org.uk/STEM

A consortium of leading organisations involved in STEM education are delivering the programme:



Case study of effective practice 2010/11

The LSIS STEM Programme

Case study – Doncaster College

Teaching and learning



Doncaster College: Gender equality in STEM

Doncaster College

Project title: **Gender equality in STEM**

Theme: **Equality and diversity**

The college is typical in that female learners did not apply in the same numbers as males for STEM courses.

The college held a gender equality event aimed at learners, staff and local organisations and partnerships were formed with UK Resource Centre for Women in SET.



Summary

Doncaster College has taken action to promote and embed its commitment to gender equality particularly in relation to engineering and technology. The senior management team includes two female engineers and the Principal has given this work his full support.

Contents

About the college: Overview of the size, organisation and teaching and learning offered	3
The challenge : The aim of the self-improvement activity was to encourage more female learners to study STEM subjects	3
The activity: Developing partnerships with leading women into engineering organisations	3
The outcomes: Achievements and issues raised	3
The impact: Effect on teaching and learning	4
Additional resources: Details of the useful links for further support and resources	4
Contact details	4

About the college

Doncaster College has over 20,000 people enrolled on a range of courses covering more than 500 part and full time courses. It is one of the largest providers of further education in the South Yorkshire region with approximately 3,000 learners between the ages of 16 and 18 and nearly 100 aged 14 to 16 in the college community.

The college is based on two sites: The Hub which is the main campus (a £65 million waterfront development) in the centre of Doncaster; and the High Melton campus, based in 126 acres of idyllic countryside, 6 miles from the town centre.

The challenge

The UK has a well-documented shortage of females in certain STEM areas, notably engineering and technology. The college is typical in that female learners did not apply in the same numbers as males for STEM courses, so the senior management team recognised that there may be tools and techniques which could support their efforts to address this issue.

The college was already taking action to tackle gender inequalities but were not engaged with specialist organisations and sources of support such as the Women in SET team at Sheffield Hallam University. The senior management team was keen to investigate how they might make best use of existing external resources to support their efforts and bring about change.

The activity

The college took the initiative and held a gender equality event aimed at learners, staff and local partners to raise awareness of the challenges faced, and to send a clear message about the college's commitment to widening participation. The Women in SET team were invited to contribute to the day, showcasing existing resources and expertise, and as a result, a new partnership was formed with the aim of increasing the number of females on STEM courses. Sheffield Hallam University is a partner of the UKRC (UK Resource Centre for Women in SET) and a further link to this organisation was formed as a result.



The outcomes

- The college Principal signed the UKRC CEO Charter, demonstrating the institution's commitment to promoting the recruitment, retention and progression of women in STEM.
- The college hosted a UKRC gender equality training session for the Yorkshire and Humber further education (FE) sector.
- The Principal encouraged further gender equality activity across the region through the Association of Colleges (AoC) network.
- The Vice Principal and the Director of the Academy of Advanced Technologies (both female engineers) attended the UKRC's annual conference and were able to benefit both professionally and personally, as well as support their institution

through their attendance.

- The college hosted a careers advice event to promote the importance of training and education in STEM subjects. This was well attended by local Connexions advisors and during the event the Director of Advanced Technologies focused particularly upon the importance of females entering STEM professions.

The impact

Staff representatives from Doncaster College and the other colleges that attended the gender equality training have benefited by:

- increasing their own awareness of the issues and challenges faced.
- developing their own ideas for local initiatives to raise female participation rates on their courses.
- identifying ways to actively promote their courses in a way that may encourage more girls to apply.
- increasing awareness of systems of support to prevent attrition and

promote retention and progression, e.g. mentoring, networking, identifying female role models.

Doncaster College has raised its own profile as a local employer and education provider committed to supporting women in STEM.

The FE sector in Yorkshire and Humber is known nationally for a number of centres of excellence in relation to gender equality, and Doncaster College has raised its profile through working to develop and embed good practice.

Additional resources

Useful links:

- The Women in SET team
www.wiset.org.uk/
- The UKRC (UK Resource Centre for Women in SET)
www.theukrc.org/

- Gender Equality Training
www.theukrc.org/training/gender-equality-training

Contact details

Yorkshire & Humberside LSIS
STEM Champion

Ken Fielding

Email:

ken.fielding@northlindsey.ac.uk

Address of case study
organisation:

Doncaster College

The Hub

Chappell Drive

Doncaster

DN1 2RF

Telephone:

01302 553553

Website:

www.don.ac.uk

Email:

infocentre@don.ac.uk





The LSIS STEM Programme

These resources are examples of effective practice in STEM teaching and learning; they have been produced by regional STEM Champions working with managers and practitioners. The contents should not be compared with commercially produced resources, although in many cases they may have comparable or better learning outcomes.

The LSIS STEM Programme offers unique support for the learning and skills sector, working with managers and teachers in all settings – colleges, work-based learning, prison units and adult education.

www.excellencegateway.org.uk/STEM

A consortium of leading organisations involved in STEM education are delivering the programme:



LSIS workshop – trainer’s feedback

Please use this form to feed back how useful you found the training materials provided. This is not to measure the success or otherwise of your class, but to help us improve the quality of the materials provided.

Name of workshop: Career development for STEM learners: equality and diversity	Date of workshop:
--	-------------------

Using a rating of 1 = very good to 7 = very poor, please answer the following questions:

	Rating
Overall how happy were you with the materials?	
How well did you think the course met its aim and objectives?	
How well did the course meets its aim and objectives?	
How would you rate the handouts?	
How would you rate the PowerPoint™ presentation?	
How would you rate the exercises?	
How would you rate the trainer’s background information?	

Which parts did you find most useful?
Which parts did you find the least useful?
What do you think could be done to improve the materials?
Please comment on the suitability of the timings provided.
Any other comments?

LSIS workshop – attendee's feedback



Name of workshop: Career development for STEM learners: equality and diversity	Date of workshop:
--	-------------------

Using a rating of 1 = very good to 7 = very poor, please answer the following questions:

Overall how useful did you find the course?	
How would you rate the materials provided?	
How would you rate the trainer?	
How useful were the exercises?	
How would you rate the pace of the course?	
How would you rate the length of the course?	

Which parts did you find most useful?
Which parts did you find the least useful?
What do you think could be done to improve the workshop?
Any other comments?

Learning and Skills Improvement Service

Friars House, Manor House Drive

Coventry CV1 2TE

t 024 7662 7900

e enquiries@lsis.org.uk

www.lsis.org.uk

Learning and Skills Improvement Service

The Learning and Skills Improvement Service (LSIS) is the sector-owned body supporting the development of excellent and sustainable FE provision across the learning and skills sector. Its aim is to accelerate the drive for excellence and, working in partnership with all parts of the sector, build on the sector's own capacity to design, commission and deliver improvement and strategic change.

Disability equality policy

LSIS is committed to promoting equality for disabled people and we strive to ensure that our communication and learning materials can be made available in accessible formats. Please let us know if you consider yourself disabled and require reasonable adjustments made to support you.