

East Midlands
Technicians
2008/2009 Courses



Don't miss out

Science Learning Centres have come a long way since they were founded back in 2004 and this year for the first time all ten Centres are offering a truly integrated programme of courses for you to choose from.

One of the underpinning principles of the programme is to provide technicians and support staff with a combination of skills, knowledge and career-focused training.

I hope you have already had an opportunity to visit either your regional Centre or the National Science Learning Centre in York. If not, there has never been a better time to experience what the Centres have to offer.

As you look through what's available in the coming year, you'll see courses at the regional and National Centres are now listed here together in one convenient brochure, so make sure you check out which venue is listed alongside each course description.

I hope you find many inspiring opportunities for CPD within this catalogue that meet your needs and the needs of your school or college, but don't forget we can always organise a bespoke CPD course for you if you can't find exactly what you are looking for.

If you haven't already done so, then make sure you register on our portal at www.sciencelearningcentres.org.uk. That way we can keep you up to date with all the news about courses, events, bursaries and much more, as soon as it becomes available.

If you want to get in touch you can contact your regional Science Learning Centre or the National Science Learning Centre – the details for both are listed on the booking form on the back page.

I hope we'll see you at one of the Centres soon!

Best wishes,

Professor John Holman
Director, Science Learning Centres

Find your perfect course



This catalogue contains information about courses in your regional Centre and the National Science Learning Centre.

Regional Courses

These courses are indicated by using the above regional colour scheme.

National Courses

These courses are indicated by using the above national colour scheme.

Don't miss out	2
Find your perfect course	3
East Midlands	4-5
National Science Learning Centre	6-7
Supporting Science Teaching	8-14
Practical Work Focus	15-17
Leadership and Management	18
Go Anywhere	19



East Midlands

Continuing to provide high quality CPD for all those involved in science education across the East Midlands.

With main centres in Leicester, Lincoln and Nottingham plus satellites in Coalville and Hinckley, the Science Learning Centre East Midlands is accessible to all across the region.

Science Learning Centre East Midlands has continued to design a varied range of innovative, stimulating and inspiring courses to enhance the teaching and learning of science at all key stages. We support teachers in enhancing their professional skills by learning more about contemporary scientific ideas and gaining experience of modern scientific techniques.

We work with a variety of organisations, scientists and teachers in order to provide a comprehensive range of CPD activities across the East Midlands region that continues to be extremely well received by those who attend. Our aim is to support those in science education at every stage of their career.

We are always interested in your ideas and needs for CPD. We organise courses, twilight sessions and large events for teachers, technicians and teaching assistants in a range of scientific disciplines. We work closely with course providers and leaders to ensure colleagues from the region get the very best experience when attending.

All delegates receive a pack of materials and resources which are easy to disseminate and will be of immediate use when back in school or college. We also provide on-going support and advice through our **FREE** drop-in twilight sessions.

"All expectations were met. I found the content excellent in all areas. Thank you so much, I have thoroughly enjoyed every part of the course and look very forward to the next one! A great day.....thank you."

Previous Delegate



Bespoke Courses and Drop-in Facility

We are able to organise courses to run in school (depending on numbers) or we can tailor CPD directly to your needs. Each bespoke course is charged individually and can be a cost effective way of providing CPD to a number of staff. Please contact us by email slcem@le.ac.uk for the attention of Sue Bull, should you require further information or wish us to organise such CPD for you.

In addition to our courses there is the opportunity to 'drop-in' to the centre at the University of Leicester on Tuesday evenings from 4pm-6pm. In these **FREE** sessions you will be able to review resources, try ICT, look at software, listen to presentations and discuss issues. Should there be something specific you wish to cover, please contact us and we shall do our best to accommodate.

All we ask is that, for any session, you call to let us know you are coming!



National Science Learning Centre

Time spent on a residential course at the National Science Learning Centre in York is a career defining experience for many of the technicians who visit the Centre. However, we understand that it can still be difficult for schools and colleges to find the budget to allow you extended periods of time away.

This year we're delighted to announce the forthcoming launch of The ENTHUSE Charitable Trust, a charitable trust which will provide funding to cover the cost of attending the National Science Learning Centre. **The ENTHUSE Award will cover your course fees, supply cover, travel, accommodation in our high quality residential facilities and all your meals and refreshments during your stay. It will also include a small amount of money to help you implement your ideas once you arrive back in the classroom.**

The exact value of each ENTHUSE Award is listed here in the brochure, alongside the course information. ENTHUSE Awards will be available from September 2008 onwards on all of the core courses at the National Science Learning Centre featured here. Any technician from a maintained school or college can apply for one.

All you have to do is apply for your place on the course of your choice, and a link to the ENTHUSE Award application form will be sent to you.

This year's programme of courses at the National Science Learning Centre is designed to dovetail with the courses available at the regional Science Learning Centres and you will find them listed side by side throughout the brochure, arranged by theme.

ENTHUSE Awards will be popular, and places will no doubt fill quickly, so if you want to make sure you get to the front of the queue, apply for your place online using our web portal at www.slcs.ac.uk/national/courses, alternatively you can fill in the application form on the back of this brochure.



National

East Midlands

West Midlands

Network

East of

st



Supporting Science Teaching

Effective functioning of a classroom and laboratory depends not only on the teacher but also on the key roles played by other staff. In science this includes specific technical and teaching support. This theme provides a combination of skills, knowledge and career focused training. Leadership and management skills for support staff are considered in the Leadership and Management theme.

Technicians Development Programme

Many technical staff in schools and colleges, especially those new to post or facing significant change or challenge, experience a need to develop or update their knowledge, understanding and skills. This five-day programme offers a range of courses to develop basic and/or advanced technical skills for science technicians and senior technicians, enabling them to discharge their professional duties with confidence. Courses include technical skills (basic and advanced), health and safety, management and technicians supporting curriculum change. Courses may be delivered in-house or by third-party providers such as ASE and CLEAPSS.

Outcomes

You will:

- describe and apply policies, procedures and actions that lead to effective and efficient technical services
- describe and explain key health and safety policies and practices for running a safe technical service in accordance with current guidelines
- evaluate your own situations and identify any necessary changes to practice
- work towards successfully implementing the new skills and knowledge acquired in the course, including building team capacity where appropriate



Running a Prep Room

This one day discussion based course explores and shares ideas for good prep room management. The day has been designed for Senior Technicians and those aspiring to fulfil this role in school or college. It is based on the CLEAPSS Guides L248 a+b.

By the end of the course delegates will have examined their existing practice in the topics covered, acknowledged their own good practice and through discussion and sharing ideas, have information to improve other areas. During the day the following will normally be covered:

- design, layout & equipment
- organising practicals
- policies & procedures
- managing time & team
- organisation of resources

Code: EMC08212

Ideal for: science technicians

Age group: 11 – 19 years

Length: 1 day

Course fee: £90

Date: 16 Dec 08

Venue: University of Leicester

Electrical Inspection & Testing

This one day CLEAPSS course is designed for science and technology technicians who will be undertaking the function of carrying out inspection and testing of electrical equipment in school or college but who have limited electrical knowledge.

The course will provide delegates with the confidence required to tackle electrical inspection and testing. During the day the following will normally be covered:

- an introduction to electrical safety and the Electricity at Work Regulations
- what the Regulations say and what they don't say
- the object of the tests
- the importance of the visual inspection

In order to fulfill the visual inspection the following will also be covered:

- mains plugs
- cables
- fuses
- Using a portable appliance tester and recording the results

Code: EMC08203

Ideal for: science technicians

Age group: 11 – 19 years

Length: 1 day

Course fee: £90

Date: 15 Jan 09

Venue: University of Leicester

Supporting Science Teaching

Microscope Maintenance

This hands-on and practical course from CLEAPSS is designed for school science technicians with little knowledge or experience in servicing school microscopes. The aim of the day is to provide delegates with the confidence to tackle simple maintenance and repair tasks and will include:

- dismantling the microscope
- cleaning mechanical parts
- lubrication
- re-assembly and adjustment of mechanical parts
- cleaning the optical components
- testing the serviced instrument

To enable delegates the best hands-on experience they are asked to bring a 'junior' and 'A-level' type microscope (which can be delivered to the Centre before the course); a soft lint free rag; a set of screwdrivers and Allen Keys and an overall or laboratory coat for protection.

All other materials will be provided on the day.

Code: EMC08209

Ideal for: science technicians

Length: 1 day

Course fee: £90

Date: 2 June 09

Venue: University of Leicester

"This has been a superb course and [the tutor] was extremely helpful and informative."

Previous Delegate

First Chemical Handling

This course will provide technicians with information on how to find the names of chemicals and locate relevant hazard information. The day will involve a number of demonstration and paper exercises to show how technicians can use information in CLEAPSS literature on emergency procedures, storage and disposal.

The day will comprise two practical sessions to give delegates the confidence to cope with emergency spills and help them prepare risk assessments for new activities as well as covering a range of issues and topics encountered in a school or college setting.

Topics covered will include:

- about CLEAPSS
- chemical names
- hazcards
- hazard labelling
- A&E
- personal protection – eye protection & gloves
- risk assessing
- examples of reducing risk using lower concentrations & smaller volumes
- storage of chemicals
- spills
- disposal of chemicals
- fire!

Throughout the day there will be ample opportunity to ask questions on individual chemicals and other matters pertaining to chemistry.

Code: EMC08204

Ideal for: science technicians

Age group: 11 – 19 years

Length: 1 day

Course fee: £90

Date: 4 Dec 08

Venue: University of Leicester

Second Chemical Handling

This CLEAPSS course is suitable for technicians who work specifically in chemistry and/or prepare materials involving chemicals for GCSE, GNVQ and A level work. (It is useful, but not essential if delegates have attended the First Chemical Handling course before attending this session.)

The day will provide delegates with details of how risk assessments are carried out with special emphasis on chemicals. This will involve identifying hazards and how effective control measures can be put in place.

There will be an emphasis on making solutions, especially those concerning corrosive acids as well as a practical session on preparing salts. The course ends with a number of demonstrations which technicians frequently have to prepare.

Topics will include:

- making up solutions – Recipe cards
- purifying water
- risk assessing your own work using Recipe & Hazcards
- pH meters, probes & other instruments in chemistry
- preparing salts
- titrating
- solving COSHH problems - Hazcards
- thermite reaction & other demonstrations

Throughout the day there will be ample opportunity to ask questions.

Code: EMC08205

Ideal for: science technicians

Length: 1 day

Course fee: £90

Date: 6 May 09

Venue: University of Leicester

Basic Practical Microbiology for Secondary Schools

This accredited one-day course will provide basic training in the techniques needed to carry out interesting microbiology investigations safely in school or college. The course is suitable for both complete beginners and those wishing to 'brush up' on their practical microbiology skills.

There will be plenty of hands on activities. Safety in all aspects of microbiology practice will be emphasised throughout the day. The course will end with a short theory test of 20 questions and a practical examination, in order to gain Society for General Microbiology (SMG) accreditation. You will receive a set of fact sheets and investigations for use back in school or college.

If delegates' schools are members of SGM the course cost will be discounted by a further £10.

Code: EMC08115

Ideal for: secondary teachers, post-16 teachers, NQTs, science technicians

Age group: 11 – 19 years

Length: 1 day

Course fee: £65

Date: 17 Dec 08

Venue: University of Leicester

"Excellent blend of practical techniques & theory. Easily the best in service training I have been on."

Previous Delegate

Supporting Science Teaching

Advanced Practical Microbiology for Secondary Schools

Many practical microbiology investigations in schools and colleges involve an assessment of microbial growth. However, there are several different approaches to measuring growth and it is of vital importance to choose one that is appropriate for a particular activity.

This accredited (by the Society for General Microbiology) one-day, practical based course will deal with a variety of suitable methods. You must be competent in basic microbiological techniques through having completed an appropriate training course.

There will be hands-on activities in the context of investigations relevant to the curriculum, with careful attention to safety issues. The methods used will include:

- turbidity measurement
- acid production
- colony counts
- microscopical procedures

The use of data loggers and generation of data for statistical analysis will also be considered. If delegates' schools are members of SGM the course cost will be discounted by a further £10.

Code: EMC08116

Ideal for: secondary teachers, post-16 teachers, NQTs, science technicians

Age group: 11 – 19 years

Length: 1 day

Course fee: £65

Date: Summer term 2009

Venue: University of Leicester

Skills for Science Technicians

This exciting course has been designed to provide a comprehensive and practical hands-on day and will be particularly suitable for inexperienced science technicians.

You will have the opportunity to share your experience, skills and good practice throughout the day.

Comprising a number of workshops with activities in biology, chemistry and physics the day will illustrate how you can support some of the more difficult practical procedures that take place in a large science department. You will be able to choose which sessions to attend to suit your own requirements. In addition you will have plenty of opportunities to ask questions, try out practical procedures and hone skills.

Code: EMC08118

Ideal for: science technicians

Age group: 11 – 19 years

Length: 1 day

Course fee: £65

Date: 2 June 09

Venue: John Cleveland College, Hinckley

"Expectations have been fully met. A very informative and enjoyable day. Thanks very much, a worthwhile day."

Previous Delegate

Science Technician CPD Conference 2009

An exciting day of hands-on sessions designed especially for school science technicians. The day will comprise a keynote presentation followed by a range of hands-on sessions.

You will have the opportunity to choose four different hands-on sessions to attend. The sessions will cover a variety of skills you will encounter in your work in secondary school. You will gain more confidence in skills, share good practice and network with other technicians from across the region.

Details of the sessions will be available in the summer term 2009.

Code: EMC08119

Ideal for: science technicians

Age group: 11 – 19 years

Length: 1 day

Course fee: £35

Date: 18 June 09

Venue: John Cleveland College, Hinckley

Skills for New Technicians

This course will provide a through grounding in the science technician profession for those new to the role in a school or college.

Sessions on the course include:

- the role of a technician: An overview of what a technician is and could/should be
- health and safety: health and safety for technicians
- technician skills: a series of workshops on important skills for technicians, making solutions, repairing equipment, glass working, organisation skills, soldering, basic tools
- biology: a look at biology: plant and animal care, microscopy, and general biology equipment with a separate microbiology session
- chemistry: a look at chemistry: equipment orientation, chemistry preparation and chemistry practical experiments

- physics: a look at physics: equipment orientation, physics practical's, radiation, circuits, and electronics
- ICT: looking at ICT skills and ways for technicians to use ICT in their jobs. A chance to explore some CD ROMs and other programmes and a separate lab session with datalogging equipment
- demonstrations: a chance to gain experience of some interesting demonstrations and look at presentation ideas and how technicians can be demonstrators
- input from experienced Technicians and Teachers: On the LATA NVQ for Technicians, a teachers point of view, Issues in education, support networks and other courses

Course Outcomes

You will:

- work towards successfully implementing the new skills and knowledge acquired in the course
- describe and apply policies procedures and actions that will lead to an effective and efficient technical service
- describe and explain safety implications and how to address them

Code: NAC08148

Ideal for: science technicians

Age group: 11 – 19 years

Course fee: £718 + VAT

ENTHUSE Award: £1718

Date: 3 – 7 Nov 08 or 6 – 10 July 09

Venue: National Science Learning Centre



Supporting Science Teaching

Advanced Skills for Technicians

This is a hands on practical course for Science Technicians looking to enhance or refresh their practical skills and knowledge.

The course will cover a wide range of practical activities and technical skills that will include:

- biology: biotechnology, microbiology and ascetic techniques, microscopy, hints and tips
- chemistry: titrations, standard solutions, colorimeters, chemical handling, Brownian motion, melting point app, hints and tips
- physics: using physics equipment, radiation, oscilloscopes and signal generators, hints and tips
- health and Safety with an emphasis on risk assessment.
- technical skills: making equipment, soldering, glass working
- datalogging
- what is an advanced skills technician?
- a chance to share ideas with other science technicians

Course Outcomes

You will:

- describe and apply policies, procedures and actions that lead to effective and efficient technical services.
- work towards successfully implementing the new skills and knowledge acquired in the course, including building team capacity where appropriate.
- evaluate their own situations and identify necessary changes to practice
- explain relevant knowledge and skills to technical and teaching colleagues.

Code: NAC08149

Ideal for: science technicians

Age group: 11 – 19 years

Course fee: £404 + VAT

ENTHUSE Award: £1004

Date: 4 – 6 March 09 or 6 – 8 May 09

Venue: National Science Learning Centre

Technicians as Demonstrators: The Practical Expert in the Classroom

This course is designed for technicians that want or have to perform demonstrations as part of their role as a science technician.

The focus will be on demonstrating to students but the skills can also be used to perform to colleges.

The course will also look at the organisation of presentations and the setting up of demonstration equipment.

The course will include:

- demonstrations for Physics, Chemistry and Biology
- aspects of teaching and learning
- the importance of demonstrations
- confidence in the classroom
- health and safety
- presentations and ICT

Course Outcomes

You will:

- work towards successfully implementing the new skills and knowledge acquired in the course, including building team capacity where appropriate
- evaluate their own situations and identify necessary changes to practice
- explain relevant knowledge and skills to technical and teaching colleagues
- work towards developing confidence in the classroom

Code: NAC08150

Ideal for: science technicians

Age group: 11 – 19 years

Course fee: £404 + VAT

ENTHUSE Award: £1004

Date: 17 – 19 March 09 or 8 – 10 June 09

Venue: National Science Learning Centre

Practical Work Focus

Practical work underpins all science teaching. Scientific knowledge is advanced through measurements and their interpretation. Teaching skills, subject knowledge and insights into learning are all acquired through carrying out and rehearsing practical work.

These courses will provide opportunities for you to undertake practical work and improve your skills both as a demonstrator and practitioner. A substantial part of the programme focuses on developing your practical skills and will help you to translate experimental and investigative work into the classroom.

Science Demonstrations: Effective and Safe

Teachers will gain strategies and experience of presenting an effective demonstration. The focus will be on how more exciting experiments can be used to support the curriculum and generate enthusiasm in your pupils. The practical preparation of a number of demonstrations will be undertaken and resourcing and safety issues will be addressed.

Outcomes

You will:

- improve skills in carrying out science demonstrations
- extend your repertoire of science demonstrations at KS3 and KS4
- understand the preparation and planning requirements of a good demonstration
- analyse safety issues and resourcing of the practicals used on the course

Code: EMC08020

Ideal for: secondary teachers, heads of science, science technicians

Age group: 11 – 16 years

Length: 1 day

Course fee: £125

Date: Spring term 09

Venue: University of Leicester

Practical Work Focus

New Practical Techniques in Physics

This course is designed to enable science teachers and technicians to gain an insight into a wide range of new practical techniques in physics using resources, publications and software including those produced by the science enhancement programme.

The focus will be on supporting the teaching and learning of the programme of study for KS4, introducing refreshing and dynamic approaches that make the subject more accessible and relevant. Topics covered include radiation in the environment (microwaves, mobile phones, and phone masts), physical changes and energy.

Outcomes

You will:

- use new practical skills in physics teaching
- incorporate new practical techniques into your schemes of work

Code: EMC08019

Ideal for: secondary teachers, heads of science, science technicians

Age group: 14 – 16 years

Length: 1 day

Course fee: £125

Date: Summer term 09

Venue: University of Leicester



New Practical Techniques in Chemistry

This course is designed to enable science teachers and technicians to gain insight into a wide range of new practical techniques in chemistry, using resources, publications and software produced by the science enhancement programme.

The focus will be on supporting the teaching and learning of the new programme of study for KS4, and/or KS3, introducing refreshing and dynamic approaches that make the subject more accessible and relevant. Topics covered include investigating building materials, metals and smart alloys, bouncy fluids and storage materials, changes of state, 'mixing' and chemical change.

Outcomes

You will:

- rehearse and practice new and effective practical skills in chemistry teaching
- incorporate new practical techniques into your schemes of work

Code: EMC08095

Ideal for: secondary teachers, heads of science, science technicians

Age group: 14 – 16 years

Length: 1 day

Course fee: £125

Date: Summer term 09

Venue: University of Leicester



Leadership and Management

Courses across all centres are relevant to those who lead science teams and themes, offering them CPD that will raise their capacity to make a success of particular projects and initiatives relating to their personal needs and their school or departmental improvement plans. These courses often include an element of training on building team capacity for the project in question.

However, there is a specific need to develop general leadership skills, particularly for new and aspiring leaders in science education. The Leadership and Management theme of the network programme falls largely within the National Science Learning Centre's remit.

Technicians: Co-leaders in Science Education

This course is for senior technicians who are responsible for managing a technical service within their science department and who are responsible for the support and training of other technicians in their school, or a cluster of schools or Local Education Authority.

Participants will be taken through a process that will help them to develop their skills as a trainer and coach, but also to harness the expertise of others in sharing skill development within a local network of technicians. Through a series of problem based learning approaches technicians will also develop their leadership and management skills in the areas of health and safety, managing and training colleagues, managing a budget, deploying a technical workforce, performance management, managing a prep room and science resources, mentoring, coping with and managing a changing role and aspects of working in the classroom.

Outcomes

Participants will:

- develop their skills in specific areas of science technician work
- enhance their leadership skills
- develop their skills by sharing good practice and addressing key issues that are essential for effective performance in the job.
- be able to plan and create a programme of professional development activities to support a group of technicians in their own school or cluster of schools.
- evaluate their own situations and identify and necessary changes to practice

Code: NAC08147

Ideal for: science technicians

Age group: 11 – 19 years

Course fee: £651 + VAT

ENTHUSE Award: £1651

Date: 19 – 21 Jan or 20 – 21 April 09

Venue: National Science Learning Centre

Go Anywhere



In order to ensure that access to high quality professional development is within easy reach there are ten Science Learning Centres located across the country.

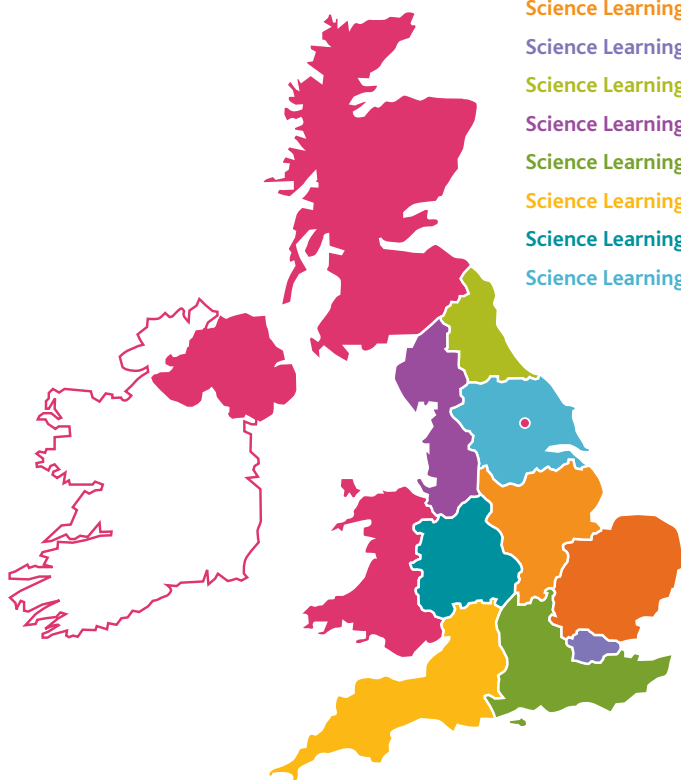
We've included in this brochure all the courses happening either in your region or at the National Centre, but we understand that it might be easier for you to visit one of the other Centres.

So, if one of the Centres listed below is easier for you to get to, then all you have to do is log on to our web portal to view their course catalogue.

There's nothing to stop you attending a Centre outside your region – in fact we're very happy for you to do so – so please, have a good look at what's available online.

Network Map

- National Science Learning Centre**
- Science Learning Centre East of England**
- Science Learning Centre East Midlands**
- Science Learning Centre London**
- Science Learning Centre North East**
- Science Learning Centre North West**
- Science Learning Centre South East**
- Science Learning Centre South West**
- Science Learning Centre West Midlands**
- Science Learning Centre Yorkshire & the Humber**



For details of courses available at all Centres visit:
www.sciencelearningcentres.org.uk

Booking Form

How to book

Online at: www.slcs.ac.uk/network/courses

Fax back this form to: 01904 328 328

For telephone enquiries please contact the Centre on the number below.

Course details

Course title	Course code
Course venue	Course date

Delegate details

Title	First name
Surname	
Job title	
Personal email*	
Special requirements	
Booked by (if different from above)	
Authorised by	

*this is essential

Organisation details

School/Organisation	
Address	
Postcode	Email
Telephone	Fax

Postal address for regional centre	Postal address for National Science Learning Centre
Science Learning Centre East Midlands University of Leicester School of Education 21 University Road Leicester LE1 7RF	National Science Learning Centre University of York York YO10 5DD
Tel No: 0116 252 3771	Tel No: 01904 328 300
Email: slcem@le.ac.uk	Email: enquiries@national.slcs.ac.uk

Your submission of this form is taken as acceptance of our terms and conditions which can be found at www.slcs.ac.uk/eastmidlands/courses/tacs

The national network of Science Learning Centres is a joint initiative by the Department for Children, Schools and Families and the Wellcome Trust.

Myscience.co.uk Limited, Trading as the National Science Learning Centre. Company registered in England and Wales, Company Number 0508 1097. Registered Office: National Science Learning Centre, University of York, Heslington, York, North Yorkshire YO10 5DD.