



Science
LEARNING NETWORK

School science technician networks

A guide to setting one up and making it succeed

What is a technician network?

A technician network exists where a group of school science technicians get together on a regular basis either physically or virtually. These meetings are an opportunity to focus on solving problems, sharing advice and carrying out group professional development.

Schools are organised in many different ways so the network you set up will be unique to your setting; you could join with schools in your local authority, you could include your local university and colleges, or you may want to connect with schools through an academy chain.

This guide is focused on face-to-face meetings, but virtual forums can be a good source of advice and support between meetings. See page 10 for more information about these.

A local science technician network is a great way to share expertise, solve problems, gather ideas and to carry out cost effective professional development.

If there isn't a local network in your area this guide will give you the information and support you need to set one up. Taking the lead and creating the network for your local area is a worthwhile opportunity for you as an individual and for your whole school.

This guide has been created by the National Science Learning Centre, drawing on the advice of a number of experienced senior science technicians. We believe that technicians are vital to practical science in schools and that they all should have access to a local network.

In this guide you will find information about how to:

- create and maintain a network through good quality communication with fellow technicians
- run effective and useful network meetings
- illustrate the benefits of the network to senior leaders

You'll also find a couple of case studies full of hints and tips from technicians already running networks across the UK.



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Why you should set up a network

The benefits to you, your school and the local school community

A technician network has lots of benefits and you may need to highlight these to your colleagues to gain support for your network. Think about the different people you want to get involved and how they will benefit from the new network.

You

- starting a network demonstrates to your manager that you can take on responsibility, use initiative and are interested in your professional development; this could support your career progression
- setting up a network will demonstrate your organisational and leadership skills. This would provide an excellent example of your experience if you were applying to become a Registered Science Technician (RSciTech) **www.professionalregisters.org**
- you will benefit from the expertise, problem solving and Continuing Professional Development (CPD) opportunities created by the network
- if you work on your own or in a small team, meeting technicians in your local area will be especially valuable
- many technicians who start up or attend networks also report an increase in confidence and greater job satisfaction

Remember: It's not all down to you. You will still be expected to do your other tasks in the science department so make sure you share out any responsibilities. Talk to your manager about the extra tasks that you will need to take on as a network lead. Think about who could help you in your own school or share out tasks and hosting responsibilities with other local schools.

Other technicians

Involving your fellow technicians with your plans will increase their enthusiasm and commitment to the network. They will be able to suggest ideas and share the responsibility for attending and organising meetings. They benefit by having a much bigger input into the content of the meetings as they are part of the team running the network.

Benefits to all technician members include:

- the opportunity to borrow, or even have, equipment and consumables
- the possibility of sharing the purchase cost of large pieces of equipment
- access to cheap and relevant professional development
- sharing best practice e.g. inventory systems
- sharing subject specific knowledge e.g. microbiology
- facilitating opportunities to visit other schools' prep rooms to get ideas
- getting an overview of relevant issues e.g. curriculum changes and health and safety updates
- troubleshooting assessment issues for new specifications
- meeting suppliers and getting the best value for money
- troubleshooting practicals and trying out new ones

If you already know one or two technicians in nearby schools talk to them about your idea for a network. Gather ideas and advice, and gauge their appetite for getting involved.

Heads of department

- better relationships with neighbouring schools which may lead to shared equipment, expertise and troubleshooting
- small departments benefit from the experience of senior technicians in other schools
- increased motivation of the technician team as they develop
- cost-effective professional development
- improved knowledge and systems will have a positive impact on the practical work teachers can do, and ultimately on student experiences

You may need to support technicians in local schools in persuading their managers that they should attend a network. Help them by sending them some ideas for the benefits to the science department and the whole school.

Senior leaders in your school

- cost effective professional development for staff
- builds reputation of the school
- increased numbers of technician networks will increase the national profile of technicians
- leading or attending a network may match the school ethos or development plans

TIP: Be specific

Tailoring the benefits of setting up a network to your school is likely to gain you more support. For example, ask yourself:

- *does your school have technicians in other departments? Could you link up with the D&T department and create a broader network?*
- *is someone in your technician team keen to develop a specific skill? A network could be an opportunity to pool funds to pay for cross-school training, or there may be someone in another school who could offer training directly*
- *is your school a teaching school or lead academy? If so, your school may in fact be required to support schools in the local area*
- *have you recently changed awarding body? Could a network help you implement a new specification?*
- *do you have an Ofsted inspection coming up? Setting up a network is an opportunity to demonstrate how you are supporting local schools*



Making it happen: working with senior leaders

The first step in setting up a local network is discussing your proposal with leaders in your school. This includes your head of department, the senior leadership team and head teacher.

Taking the lead and setting up a technician network is good for both the science department and the school as a whole, and you just need to demonstrate this to your colleagues.

You could arrange a meeting with your manager and with the senior leadership team to present your idea, or you could decide to write a letter containing your proposal. Here are the key points to consider:

- why you want to start a network for technicians
- the cost and manageability of your suggestion. Think about both the cost of hosting (refreshments etc.) and also the cost of your time to plan and arrange the meeting
- the direct benefits to your school
- if you already know one or two technicians in your local area you could discuss the idea with them and get their support. This will demonstrate that you already have interest from local schools
- if your head teacher agrees to support your network ask them to sign a letter for neighbouring schools explaining the plans for the new network and the benefits for other schools. Local schools may be more supportive of their technicians attending if the letter is signed by your head teacher

You could include a summary of one of the case studies from this booklet to demonstrate how a network works in practice.

“ The benefits we’ve gained make this network a valuable and cost effective way for the academies trust to deliver CPD. ”

TIP: Be positive and be concise

As you know, schools are busy places! Make sure you plan your meetings, keep positive and focus on key points and the benefits that are most relevant to the person you are speaking to. If you are writing a letter try and make it no more than two sides; ideally less than one.

Making it happen: getting the message out

There are lots of ways to find out the names of schools in your local area. Although individuals in schools move on and schools change their names, remember that you don't need a perfect list. Your group will grow and expand over time. Word of mouth is a powerful thing.

Finding schools in your local area:

- if you work in an academy get in touch with your lead school. There may be a member of staff responsible for science across the chain
- speak to your head of science; they may already attend meetings with local schools and might be able to give you named contacts in science departments
- the Department for Education has a list of all secondary and primary schools. You can search their database by region or postcode. You'll be able to find out the name of the school, its address and the name of the head teacher
www.education.gov.uk/edubase/home.xhtml
- your local authority may have a list of local schools, and they may have a regional science officer with direct contact to science departments

TIP: Named contacts

Having a named contact and personal email address or phone number for a technician will mean information will not get lost in the school system. Try phoning or emailing the school to ask for direct contact details for the technicians. You may even find direct contact details for the science department on the school website.

Advertising the network

Most of the senior technicians we have spoken to said that email was their preferred form of communication. Attachments containing follow up letters or brochures advertising certain events are also useful. Whichever communication routes you choose, make sure all the information is up-to-date, succinct, carefully laid out and has a professional tone. Get a colleague to check through anything you send out. It's easy to overlook little mistakes such as dates, spelling or grammatical errors.

Consider using some of the following ideas to recruit members to your network:

- physical letters outlining the network and its principles might be a good idea when the network first begins
- use online media such as the technicians Facebook group, SciTech, Techknow and the CLEAPSS website to advertise the network. This may increase the reach of your group. More details of these online networks can be found on page 10 of this guide
- discuss ways to grow your network when it has started, gather ideas in your first meetings
- keep details of the people who have been contacted and the people who have attended the network. You could consider setting up a database that could be accessed by others in the group to help keep it up to date. Make sure you have asked for permission before you share email addresses

“ I discovered there were many who agreed that a network for technicians, with the opportunity to get together to discuss common issues, would be useful. ”

Planning network meetings

A network meeting is not much different to a meeting you would have internally with your colleagues; it may just have to be planned a little further in advance as people are working across different sites. The following list outlines some of the things you need to consider when putting together network meetings:

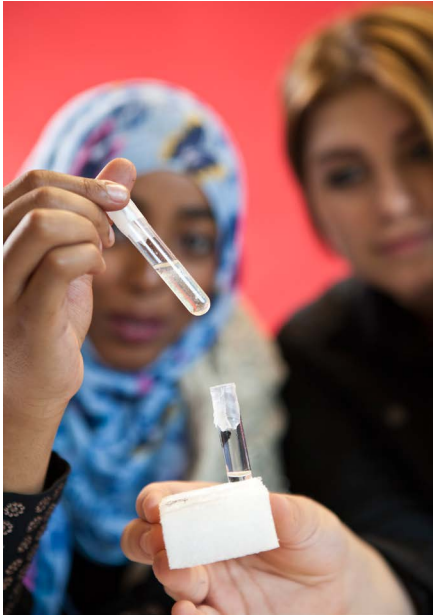
- you will need to organise a few logistical details for the meeting such as location, printing and refreshments. It is a good idea that you host the first meeting, but you could consider sharing the hosting responsibilities between schools going forward
- think about the name of your group. Some technician groups prefer not to use the term 'meeting' and instead focus on the purpose of the group. For example, 'science technician professional development network'
- you may find it useful to define a mission statement or remit for your group. This clarifies the purpose of the group and makes it easier to communicate its value quickly to others. For example; 'to provide technicians with a support and training network to promote effective technical training in schools'
- think about how frequently you want to hold meetings. Most groups that we have spoken to tend to meet three times a year (once a term)
- set meeting dates early and stick to them. Try to avoid traditionally busy times of year and get a consensus on the best dates, but remember you can't please everyone! Remind members of the group of the next meeting date at the end of each meeting
- always have an agenda and send it around in advance and ask people to comment on it. If you find that the agenda is getting too long, keep a record of suggestions and include them in the following meeting. Make sure that action points that come from it are assigned to individuals

TIP: Beware of negativity

Everyone likes to have an opportunity to moan about problems or issues at work, but keep network meetings productive and positive. Think about assigning time over tea and coffee when people arrive to chat, then stick to the agenda when the meeting officially starts.

Example agenda

1. Tea and coffee, informal chat (15 min)
2. Attendees and apologies. Quick introductions – name, school, specialism (5 min)
3. Review action points from previous meeting (10 min)
4. Health and safety and trouble-shooting (15 min)
5. Continuing Professional Development (CPD) slot (1 hour)
6. Good practice sharing/ what's new (30 min)
7. Next time (date, time, location, content) (5 min)
8. Possible evaluation (could give a happy tick sheet during meeting to gather impact of meeting)



Keeping the network going

Once you have started a network the next big step is to keep it going and improve on it. Create momentum by thinking about new, exciting and relevant CPD based on the needs of the group.

The following are some hints and tips to help you keep network meetings well attended:

- think about communication between meetings. Should it all be by email or could you set up a Facebook or LinkedIn group to make informal discussion easier? Make sure there is a loose presence of the group outside of the meetings
- you should consider an informal 'mini group' to help plan and run the network, as this can help it continue if you move on
- make sure the meeting is relevant. This can be achieved by an annual needs analysis of group members. Ask people to send you feedback or set up a simple survey
- make sure members feel they have ownership of the group – ensure that suggestions are acted upon and that everyone has a chance to determine the content of the meetings
- CPD should be relevant to your work and, if possible, be delivered by others in the group. This can be daunting for some but you could lead by example and deliver a session in the first meeting. One way to encourage people to get involved is to include a 'show and tell' session. This could be for an hour with slots for group members to share practical experiments, interesting equipment or new ideas. You could also consider running a session on 'delivering CPD to others' to build the groups' confidence
- try asking equipment suppliers to deliver sessions for free. They can demonstrate their equipment and provide technical support
- other sources of CPD include professional bodies such as; the Royal Society of Chemistry, the Association for Science Education and the Institute of Physics. More details are included on page 10 of this booklet
- you could consider paying someone to deliver CPD – it will be cheaper for all of your schools if you share the cost and deliver it locally
- topics for CPD can include practical work in all three subjects, technical procedures, health and safety, curriculum changes and troubleshooting experiments

TIP: Collect evidence

To ensure continued support for the network think about how you can provide evidence that demonstrates its benefits. For example, collect examples of new schools you have connected with, record ideas and techniques you have learnt in the meetings, and note down any equipment lending that has been facilitated through the network. You could write a quick summary of the successes of the network for senior leaders at the end of the first year. Even if you've had some problems explain how you will address these.

Sources of support

Lots of organisations can help you create a good quality technician network. Some offer advice, others offer resources and some can send people out to your group.

Association for Science Education

www.ase.org.uk

A society for anyone working in science education. Field officers can be asked to attend meetings to talk about the work of the ASE and the RSciTech award for technicians.

CLEAPSS

www.cleapss.org.uk

A membership organisation providing practical and health and safety advice for science in schools. They run CPD for technicians. They maintain a list of technician networks across the country, so if you do start a group or already run one, please contact CLEAPSS to add your group to the list.
www.cleapss.org.uk/technicians/technician-networks

Institute of Physics

www.iop.org

A society for physics including physics education. They can provide support through their network of outreach physicists (the Stimulating Physics Network).

National Science Learning Network

www.sciencelearningcentres.org.uk

Providers of CPD for science technicians and teachers. They may be able to provide speakers to deliver CPD sessions at technician meetings.

National STEM Centre

www.nationalstemcentre.org.uk

The National STEM Centre houses the UK's largest online collection of STEM teaching and learning resources.

Preproom

www.preproom.org

News and information website for science technicians.

Royal Society of Chemistry

www.rsc.org

Society promoting chemistry and chemistry education.

SciTech

www.sciencetechnician.com/scitech_joining.asp

Email discussion group for science technicians. This can be a good way to promote a new network group.

School Science Technicians Facebook Group

www.facebook.com/groups/schoolsciencetechnicians/

An online community group for school science technicians. A place to discuss ideas, ask for advice and promote your network.

Society of Biology

www.societyofbiology.org

A society for the promotion of biology and biology education.

STEMNET

www.stemnet.org.uk

Organisation supporting STEM education with initiatives including the STEM Ambassadors and STEM Clubs programmes.

Techknow

www.techknow.org.uk

News and information website for science technicians.

Science equipment suppliers

Many suppliers have reps that will visit schools and technician groups.

Universities

Most science departments will have an outreach department and dedicated staff looking to engage with local schools.

Funding the network

When setting up and continuing to run a network, there are various sources of support and funding you can explore.

The majority of networks share hosting responsibilities. If the group always meets at one school, an annual fee for group membership could be introduced to cover the costs. You may find that your school is happy to pay for and host the network meetings because of the recognition the school will get.

Most schools are happy to pay the minimal costs associated with running a network, but if schools are reluctant to contribute consider other funding options:

- some equipment suppliers sponsor local groups, so it's worth asking them for funding for refreshments. They may also provide discounts to group members
- some groups still have access to local authority funds. It's worth talking to them to find out
- there are a few groups that are self-financing where the technicians personally pay to be members, but this is best avoided. Everyone should have the opportunity to join a local network

“ We have a good relationship with one of our local science equipment company reps. They help promote the forum to their customers and they often attend our meetings and provide technical support. ”

Case Study 1:

Nottingham Academy – networking within an academy chain

Karen Curzon is senior technician at Nottingham Academy. Below she explains how and why she set up a cross-subject technician network within Greenwood Dale Foundation Trust Academy chain.

"Technician departments are small, some have little experience and some only have one member of staff. Communication with other technicians is therefore critical but often difficult to manage without support. Sometimes we all want to check that what we are doing, or are being asked to do, is ok. A real benefit of a technicians' network is realising you are not alone. Knowing your concerns are the same as others can be a great comfort.

The Academy chain I work for contains 10 secondary schools located across England. As additional academies joined the group, I found my technical advice was requested more and more. I'm an experienced technician, but I was not the only technician able to answer these queries. This prompted me to develop closer links with technicians in the other academies.

We now have a technician group that is run by us for us. Technicians from all practical disciplines are involved. Our membership is predominantly science and design technology but also includes technicians from art, photography and media. As our curriculum expands to include more vocational subjects, so will our membership.

I knew the technicians in my own academy and also a few others within other academies in the group. With a little work I was able to contact several others and I discovered there were many who agreed that a network for technicians, with the opportunity to get together to discuss common issues, would be useful. Using this information we organised an initial meeting and got the ball rolling.

All technicians have been encouraged to attend at least one meeting and it is anticipated that all technicians will be in a position to attend a meeting if they wish. As each academy organises their technician support differently, it was suggested that representatives from each academy (covering different disciplines) attended each meeting.

Meetings rotate between different academies and take place during the day to give those who travel, or have after school commitments, an opportunity to attend.

At our first meeting we were unsure what people wanted but it almost ran itself: following initial introductions and a tour of practical areas we stopped for coffee. This gave everyone a chance to ask questions and it was a constant flow of:

- how do you...?
- do you have...?
- how do you get this to work...?

Once initial relationships were formed we diverted back to an agenda. Someone volunteered to lead the meeting to help make sure the discussions remained relevant, positive and professional. Several questions posed during the meeting formed the agenda for the next meeting.

Since the network began other technicians have expressed an interest in helping and we formed an organisational group. The ultimate intention is for no one individual or academy to have ownership but rather for the group to be run by, and for, the individuals within it. Everyone is encouraged to have input.

During the first year we gathered contact details and information from the network members, for example; qualifications, hobbies, exam boards, and specialisms. It was amazing to find out what skills people had.

Each academy nominated a 'named contact' to help keep their academy's details up to date, bring items to the agenda and feedback from meetings. We also produced a code of conduct and a list of aims and outcomes. In the network we have a great mix of members; different ages, disciplines, areas of expertise, seniority level and team sizes.

We share information about the network's successes with management to demonstrate the future benefits of the group and this consolidates their support.

The network gives us all the chance to discuss whatever we wish and we share good practice. Someone always knows how an odd bit of kit works and we have someone to contact who can lend us something at the last minute. Experienced technicians are acting as coaches and mentors for inexperienced and lone technicians.

The benefits began almost immediately after the first meeting. The benefits we've gained make this network a valuable and cost effective way for the academies trust to deliver CPD."

Karen Curzon RSciTech

Senior Technician

Nottingham Academy

Part of the Greenwood Dale Foundation Trust group of academies

“ The ultimate intention is for no one individual or academy to have ownership but rather for the group to be run by, and for, the individuals within it. ”

Case Study 2:

South Gloucestershire Technicians' Forum - networking in a local area

Susan Haslam, specialist technician at Bradley Stoke Community School, describes her experience of running the South Gloucestershire technicians forum.

"The forum was started by the Local Authority (LA) several years ago. At this time, it was a way for the LA officer to communicate council services such as H&S and curriculum advice, so the meetings centred on these topics. Following the paring back of the councils' secondary school support, the forum changed to be run for science technicians by science technicians; this has allowed us to tailor it to our needs.

Attendance is free, with different schools volunteering to host the group and cover the cost of refreshments. The forum meets three times a year (once in each term), the meetings last two hours in the afternoon, starting with refreshments and informal chat. The day of the week that the meeting is held changes in order to accommodate part-time workers.

There are 19 secondary schools in the South Gloucestershire LA including two special schools, and an FE college. Typically we have 20 technicians representing about 15 schools at the termly meetings. The group visits a different school each meeting – seeing each other's prep rooms and sharing operational ideas are strengths of the group. Items for the agenda are requested one month prior to meeting and the finalised agenda is circulated one week before the meeting but items are welcome on the day.

Technicians at the hosting school are encouraged to take a lead; chairing, taking notes or sharing expertise. Some recent workshop topics have included; special needs science, school curriculum, microbiology and gel electrophoresis. Each meeting includes an open discussion about 'tricky experiments and good practice', some recent discussions have included the effective storage of electrical leads and a comparison of student balances. The forum is also used for equipment swaps e.g. Giant African Land Snails and unwanted desiccators.

Communication between meetings is through email, and many queries are often solved in this way. We have a good relationship with one of our local science equipment company reps. They help promote the forum amongst their customers and they often attend our meetings and provide technical support. They don't push sales in the meetings as they know this can put people off.

The group is run by a committee of four technicians with a mix of ages, experience and genders. The group is always looking to improve, expand and update the network. Ideas from the wider group are always considered.

New ideas being developed include:

- a directory of members including information about the exam boards schools use, individual specialisms and shareable equipment
- the possibility of swapping technicians for a day in order to see another prep room in action or to learn a specific technique
- a summer social based at a science education centre e.g. our local Science Learning Centre"

Susan Haslam
Specialist Technician
Bradley Stoke Community School

If this guide has helped you create a local network please let us know by getting in touch with the National Science Learning Centre using enquires@slcs.ac.uk.

Spread the word to other schools around the UK and help encourage more local school technician networks. An electronic copy of this booklet is available on the National STEM Centre eLibrary. Get in touch with us if you'd like further printed copies.

We would like to thank the following senior technicians for their input into this guide:

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