

# Chemistry at Work – a ‘quickstart’ guide

This is a brief guide to organising a Royal Society of Chemistry (RSC) Chemistry at Work event. It gives an overview of the process. More detail can be found in *Chemistry at Work – a handbook for organisers* available from [www.rsc.org/caw](http://www.rsc.org/caw) or from the National Coordinator.

## Aims

The aims of Chemistry at Work are:

- to present a positive image of chemistry and the chemical sciences to young people at school or in college
- to show the variety of what chemists do and how chemistry can be part of some jobs where it may not have been expected
- to show that chemistry is an important part of the economy of the country
- to show that chemistry is an interesting and exciting way to earn a living
- to show that chemists are real people (and not stereotypical ‘mad’ scientists).

The events are *not* primarily careers events (although if students leave the event favourably disposed towards a career in chemistry this would be a bonus). Neither are they primarily aimed at teaching students chemistry (although if they leave the event with some extra knowledge, this, too, is a bonus).

## What is a Chemistry at Work event like?

Every Chemistry at Work event is different in detail and has its own character. The following points describe a typical event.

- It is aimed at young people at school (different events cater for different age groups from primary to secondary students, up to age 16)
- It takes place at a venue such as a school, college, university, conference centre, industrial workplace, *etc*
- It lasts from one to three days (typically one or two days)
- It takes the form of a ‘circus’ of several (typically six to eight) short (approximately 25 minute) presentations in which presenters explain how they use chemistry in their everyday work. This may then lead to a related practical activity that is linked to their work
- Ideally presentations are interactive and ‘hands on’ as much as possible
- Small groups of students (15 is an ideal number) move around the presentations accompanied by their teacher
- Each student will spend half a day at the event and experience about six presentations
- Some events finish with a talk / demonstration to all, often with a ‘wow’ factor
- It is visited by up to 300 students per day.

A CD of past Chemistry at Work events is available from the National Coordinator and potential organisers are encouraged to view these to get a feel for what an event is like.

## How are events organised?

Each event is organised by a local organiser who could be a member of the RSC, a teacher, a lecturer *etc* but is often linked with an Education Business Partnership (EBP) or STEM organisation. The local organiser, with support from the National Coordinator or Regional Coordinator, arranges a venue, contacts schools and, most importantly, contacts local organisations that use chemistry in their work to invite them to put on a presentation. Presenters come from a wide variety of organisations,

many of whom do not have, at first glance, chemistry as their core business. Examples include:

- the police and forensic science services
- the fire service
- dry cleaners
- cosmetics companies
- water companies
- hospital laboratories
- food companies
- oil companies
- car manufacturers
- pharmaceutical companies
- the armed forces

and many more.

## RSC support

The RSC supports events as follows:

- funding currently up to £800 per day (to a maximum £2400) to help cover organising expenses, including the organiser's time
- National Coordinator to offer advice
- handbook for organisers
- promotional leaflets
- CD of past events
- presenter training sessions or remote/online training/support
- contacts with RSC members locally
- contacts with existing organisers
- support on the day – teaching material, careers material, pens, signs, *etc.*

## Some statistics

The following are ballpark figures that vary from year to year.

- Number of events: 50
- Number of days: 120
- Number of students: 100 to 300 per day (about 20 000 in a year)
- Number of teachers: 5 to 15 per day (about 1000 in a year)
- Number of schools: 5 to 10 per event (about 350 per year)
- Number of organisations: 5 to 10 per event (350 in a year) (although some may participate at more than one event)
- Locations vary from Aberdeen to Penzance and Belfast to Bromley.

## Further information

The website [www.rsc.org/caw](http://www.rsc.org/caw) gives further information including a list of forthcoming events, reports of some past events and downloadable copies of the *Handbook for Organisers* and Training Materials.

## How do I organise a Chemistry at Work event?

You need – a venue, presenters, students, time.

**Venues** have included schools, colleges, universities, hotels, town halls, conference centres and even a disused supermarket and a community fire station.

**Presenters** may include mainstream chemical companies but also organisations for which chemistry is not their main business and which are situated in many areas of the country. Some examples of these are given above.

**Schools** are invited to send groups of students (each 20 students accompanied by a teacher) to spend half a day at the event and see around six presentations. Schools can be contacted through the Local Education Authority, which will have a list of addresses and may well be able to deliver letters through its own internal mailing system. Alternatively, mailing houses can supply address labels or electronic lists by postcode area.

### Applying for RSC support

Organisers of potential new events may contact the National Coordinator at any time to discuss their proposed event. If the event seems viable, the next step will normally be for an RSC member of staff to visit the Local Organiser for a face-to-face discussion – ideally at the proposed venue if this has been fixed.

The RSC normally writes to interested parties in the autumn to invite bids for RSC support for the following year, which can be made on a simple form. In the (usual) situation where there are more bids than available funding, the RSC will decide which events to support based on a number of criteria including the desirability of spreading events as evenly as possible across the UK. Local organisers will normally be informed whether their bid has been successful or not in January.

RSC support is given on the condition that the event is advertised as a joint event of the RSC and the host institution(s) so that the RSC logo (available from Joanne O'Meara, 01223 432221, [seiadmin@rsc.org](mailto:seiadmin@rsc.org)) is displayed on letters and other advertising material and is also displayed on signs (provided by RSC) at the event. In addition, 2011-12 Chemistry at Work events are also funded in part by an unrestricted grant from the Wolfson Foundation, which allows us to expand the number of events we can support. To fulfil the requirements of the Wolfson Foundation their logo must also be displayed on the front of your event booklet. Both the RSC and Wolfson logo will be sent to you by the SEIadmin team.

Events for secondary schools must be labelled 'Chemistry at Work'. If another heading is to be used at a primary school event this must be discussed in advance with a National Coordinator but the event must still be subtitled 'Chemistry at Work'. Presentations should have some link to a chemistry-based theme (the National Coordinator can often help presenters tease out the chemistry in their presentations). Except for these requirements the 'flavour' of an individual event lies very much with the Local Organiser.

### Organising a new event

Experience suggests that six months before the proposed date is a good time to start organising an event by approaching potential venues and presenters.

#### Venues

The two extremes are one large room, such as a school assembly hall, where all the presentations can be housed (with suitable partitioning) or several small rooms – one for each presentation. Commercial room hire is expensive and so a venue that is free or available at nominal cost is essential. Look for venues that have something to gain

from hosting Chemistry at Work – a university or college that wishes to attract potential students, for example, or a secondary school that might be prepared to host a primary Chemistry at Work for its intake students in post public exam periods. Schools with specialist science status also have a commitment to raise the profile of science among other schools in their area.

Issues to consider when selecting a venue include:

- does it have laboratory facilities (these are by no means essential but do allow a greater range of experimental work to be tackled)
- availability of parking for coaches / minibuses
- availability of AVAs – OHPs, blackouts, projectors, electronic white boards etc
- toilet facilities
- accessibility for students with special needs
- catering facilities – it is usual to offer lunch for presenters but this could be sandwiches or in a local cafe / pub
- a meeting point for schools to gather upon arrival.

## Presenters

Before committing to an event, it may be worth putting out informal feelers to existing contacts in the local community to see if there is likely to be a viable level of support. RSC can supply contact details for its workplace representatives – volunteers who are found in any workplace with five or more RSC members. These should be aware of the Chemistry at Work scheme. Organisers will also be put in touch with the RSC Local Section. Experience suggests that initial contact is best made by phone with a written follow-up (some organisers prefer to reverse the order of these two approaches). RSC can supply flyers that can be posted and a draft letter that can be adapted to suit various circumstances is available in the *Handbook for organisers* available for download at [www.rsc.org/caw](http://www.rsc.org/caw). A typical event will need a minimum of about six presentations; more will allow for breaks in the programme for presenters and will also give room to manoeuvre in the case of someone dropping out at the last minute.

Some companies now have ‘Science or STEM Ambassadors’ whose task it is to promote science in the community. Ambassadors may be particularly willing to attend an event (and will normally be well prepared in talking to young people).

When recruiting presenters, bear in mind that there are advantages to organisations in participating in Chemistry at Work in terms of:

- improving the image of chemistry generally
- raising their profile in the locality
- recruiting new staff
- training their existing staff (attendance at events is particularly useful if staff are working towards CChem).

Some of them will have their own agendas anyway; fire safety, crime prevention, health etc.

## Briefing / training presenters

When inviting presenters it is important to make it clear that presentations need to be tailored for young people and not just diluted adult presentations. In particular they need to be as interactive and hands-on as possible. It is essential that presentations are pitched at the right level for the target audience. The National Coordinator is happy to advise presenters. It is strongly recommended holding a training session for presenters to help them improve the quality of their presentations. Such sessions can be given by the National Coordinator or a member of the RSC Education team and lasts for one to two hours. They include a look at the content of the curriculum for

different age groups and video clips of presentations from previous events as well as 'dos' and don'ts' when giving presentations to young people. RSC certificates of attendance can be provided if required. A training session is best held around a month before the event at the actual venue and can offer the chance for presenters to see the venue and for local organisers to go through housekeeping arrangements with them.

## Schools

It is worth contacting the Local Authority (LA) for mailing lists of schools – they may be able to arrange to deliver mail through their own internal systems. LAs may have a science adviser / inspector who may be able to help spread the word about Chemistry at Work *via* meetings for heads of school science departments. It is worth circulating an early advance notice about the event as schools' calendars are often planned well ahead. Later, a second letter can be sent inviting schools to make a firm booking for a fixed number of places. Draft letters that can be amended can be found in the *Handbook for Organisers* available for download from [www.rsc.org/caw](http://www.rsc.org/caw).

Teachers of students following GCSE Applied Science courses may be particularly interested in bringing students to a Chemistry at Work event. Local science advisers should have details of these schools.

## Choosing a date

The most popular time of year for Chemistry at Work is shortly before the end of the school summer term. This is a traditional time for out-of-school activities, since secondary schools have a little timetable flexibility because public examination candidates are out of school. Other popular dates are during science or chemistry weeks (normally March and November, respectively – check dates at [www.rsc.org/chemsoc/activities/ChemistryWeek/index.asp](http://www.rsc.org/chemsoc/activities/ChemistryWeek/index.asp) and [www.britishecienceassociation.org/web/nsew](http://www.britishecienceassociation.org/web/nsew)). However, events take place successfully in most months of the year. It is important to take advice about dates to avoid clashes both nationally (eg the dates of SATs) and locally. The LA is probably the best place to enquire.

## The event booklet

Organisers are required to produce a booklet for each pupil to take away. This will include a short contribution from each presenter, describing their presentation (sample of past event booklets and further advice can be found in the *Handbook for Organisers* or from the National Coordinator. It is hoped that this will allow teachers to follow up the event in class.

## Organising a second event

RSC policy is, in general, to continue to support successful events. Second and subsequent events generally prove to involve much less work than organising an event for the first time. Experience suggests that most organisations that have participated in Chemistry at Work are willing to do so on an ongoing basis.

## Insurance

RSC puts in place insurance cover for all RSC 'badged' events. Full details of this and how it applies to all parties involved in a *Chemistry at Work* event are given in the *Handbook for organisers*. In order for the cover to be valid, Organisers must have fulfilled the requirements of the RSC's Health and Safety policy (see below).

## Health and Safety

The health and safety of all concerned with a *Chemistry at Work* event is, of course, paramount. To our knowledge there has never been an accident or incident at Chemistry at Work and we wish to maintain this record. There is a Health and Safety procedure which must be complied with for an event to be supported by RSC. This involves general advice on good practice, a simple form to be filled in concerning the venue and a further form to be filled in by the presenter(s) of any presentation which is deemed to involve any hazardous materials or activity. This last form is likely to concern only a minority of presentations. Full details of the procedure and copies of the forms are available in the *Handbook for organisers* and will also be supplied when RSC support for an event is confirmed. Advice on which activities might be considered hazardous and filling in the Risk Assessment form can be obtained from the National Coordinators. **Failure to comply with the Health and Safety procedure will mean that an event cannot receive RSC support.**

For any queries about Chemistry at Work, please contact the National Coordinator:

Dr Maria Pack  
Chemistry at Work National Coordinator

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