



How to...

Organise a Partnership Science Fair

Aims

- Children develop independent learning skills, follow their own line of enquiry and build confidence.
- Children share their love of science with parents so that parents better appreciate the value of the subject – developing science capital.
- Children develop communication skills through sharing what they have learned with others.
- Encourage child accomplishment by offering public recognition and rewards – let talented young scientists appear in the spotlight.
- Support children in applying what they've learned in other curriculum areas such as English and maths.



Introduction

An annual Science Fair is an effective collaborative enrichment project for partnerships. It provides substantial outcomes for children as well as an effective way to bring the partnership together.

Science Fairs are launched in unison across partnership schools and then pupils complete their Science Fair projects at home over a fixed length of time. Some pupils work independently and some in pairs. Participating schools encourage the involvement of parents to support the growth of science capital.

Children present their projects on free-standing project boards, made from supermarket boxes and wrapping paper which offers an opportunity for children to demonstrate their skills in age appropriate written reporting and data analysis.

A partnership can agree on a theme for their Science Fair or leave it entirely open so that there is a real opportunity for child-driven enquiry. Every school in the partnership holds its own annual Science Fair, inviting parents/carers

and governors to engage with the children as they talk with enthusiasm about their projects and learning. This is a fantastic celebration of science in the school that is completely pupil-centred and keeps science high-profile in schools. Partnerships can then collaborate with local universities or secondary schools to organise a Regional Science Fair at some point after.

At the Regional Science Fair ten selected projects from each of the schools are brought together for a partnership celebration of great primary science. This event is a fantastic opportunity for the children to share their projects with an unfamiliar audience and, in many cases, to share their work with subject specialists. In universities, professors, lecturers and PhD researchers all volunteer a couple of hours of their time to speak to the children about their projects and the children are rewarded for their efforts.

If you are interested in running a Science Fair for your partnership, this 'How to....' guide should be helpful in getting you started.

Dates & Location

Once your partnership has decided to run a Science Fair the first thing you need to agree on is the date and location for your Regional Science Fair. If you already have links with a local university, an Outreach Officer from one of the science faculties will be the best person to help you with arrangements. If there is no local university, why not try a large secondary school or college in the area?

Once you know when the Regional Science Fair will be, individual schools can set dates for their own School Science Fairs, which will need to take place at least a few days before so that the projects that are going to the Regional Final can be selected, parents can be informed and relevant permissions sought. The Science Fair will need to be launched in schools about six to seven weeks

before the School Science Fair to allow children time to work on their projects at home before they need to be submitted.

Some partnerships like both the School and Regional Science Fair to be in British Science Week (www.britishtscienceweek.org); they launch the competition in schools in January so that projects are ready in time. Other partnerships are restricted by when the lecture theatre space is available in the universities – this may not be until the Christmas, Easter or Summer holidays. You could run your Science Fairs as part of the Great Science Share (www.greatscienceshare.org) during the summer term so that your partnership can be part of a national celebration of primary science.

Promote & enlist

Before you kick off your Science Fair competition you need to create a presentation that the schools can share during their launch assemblies. This will include key information about the project and rules for the competition that all partnership schools agree on.

This information should also be shared with parents and carers through the weekly newsletter and/or social media. A poster campaign around school will also help raise the profile of the competition.



Support learners

If it is the first year that you are running a Science Fair, pupils and parents may feel a little bit lost. There are a number of different ways that you could help with this.

You could run an after school club across the half term for 12-15 enthusiastic children who want to participate so that they get informal guidance and support – then you know that you will have at least 12-15 projects for your first Science Fair. This is a great way to support children from disadvantaged backgrounds who might not have the resources at home to complete a project, as well as ensuring that science is featured in your out of hours provision.

Alternatively, schools could have an informal drop-in session at lunchtime for children to run their ideas past a teacher and make sure they are on the right lines. Some schools like to run a family learning event one evening

Key information to include in promotional material

- **Theme (if you have one) or ideas to inspire.**
- **Type of projects allowed:**
 - Practical enquiry to answer a big question, or
 - Research project to find out more about an area of science.
- **Identifying a problem and coming up with a solution.**
- **Presentation – how to make a project board and present your project.**
- **Success criteria – how projects will be judged (scientific content, communication and presentation).**
- **Deadlines for submission.**

where parents and children come together to find out more about Science Fair projects and try many small practical activities that they could develop into an enquiry – this is a great way for demonstrating how children can carry out science enquiries at home with little or no expense.

Some Ogden primary schools make the Science Fair projects a compulsory home learning project for all pupils over the half term and all other homework tasks go on hold to give them enough time. Others decide to focus on one class who will do their entire Science Fair projects in school through science and English lessons to ensure that they have a core of quality projects to make their Science Fair a success.

Decide whatever best suits your school's circumstances and the time you have to dedicate to the project.

School Science Fair

There is no right or wrong way to set up your school Science Fair but the following arrangements have worked very well for many of the schools already participating in Science Fairs.

After lunch, the participating children set up their projects in the school's hall – some may need longer than others as they might have demonstrations to set up. Projects are arranged on table tops with plenty of space for visitors to walk between the projects.

Top Tip: *there is always at least one project that gets messy so make sure you have a cleaning bucket to hand with plenty of paper towels.*

Science co-ordinators can then plan a timetable for the rest of the classes to come and visit the Science Fair for a fixed length of time – this is a great opportunity for children who have not participated to talk to children about their projects and become inspired to participate in future years. It is also a chance for the pupils who have done projects to practice their presentation to a familiar audience that they are at ease with before the parents arrive.

Regional Science Fair

The judging takes place over the morning. A team of judges will need to be prepared in advance so that they are clear on the success criteria and how to grade the presentations that they look at – partnerships find that it is useful to prepare a scoring template for judges to use. Criteria can include scientific knowledge, communication skills, enthusiasm, presentation or originality. Partnerships suggest that the same judge speaks to all the children from the same school.

In the case of partnerships with many schools, it sometimes works well to send half of the children off on tours of campus with volunteer undergraduates while the other half are speaking to judges. This helps keep the children occupied and gives them a privileged insight into university life and what it is like to be a university student, raising aspirations.

It is really valuable to book a photographer for the event as it helps to record what happened and you can share images with parents/carers, governors and the press. Remember to make sure that you seek photography consent from everyone attending.

Children bring packed lunches and drinks, some bring books and card games for while they are waiting for the judges.

Top tip: *it is great to have refreshments such as tea and coffee set up for judges and teachers.*

As the judging panel often needs time to deliberate when selecting winners of categories, it is a good idea to

After school, the parents/carers are invited to come into the hall to look at all the projects and talk to the children about their work. Why not make it a fantastic community event by having refreshments available or games and quizzes for visitors to participate in? Some schools like to include a science show or science buskers at this event to make it even more memorable. During the Science Fair, science co-ordinators should ask for help from others in making decisions as to which ten projects should represent their school at the Regional Science Fair. School governors and other teachers can help or perhaps you could enlist the support of some guest judges from local STEM industries or colleges.

Keep your school Science Fair a positive experience for all by giving all participants a certificate and maybe a small treat for their hard work and achievements. The experiences of other schools suggest it is better to inform children who will be representing the school at the Regional Science Fair after the event so that others do not go home disappointed.

have a keynote speaker for after lunch. The children love a great science talk or show where they learn something new in an entertaining way and universities often have outreach officers or academics who already present at community learning events and will have something appropriate.

After the talk, the prizes are given out – for example in the Leamington Spa Partnership all participants get a certificate and a medal for making it to Regional Finals to represent their school, then 1st, 2nd and 3rd trophies are given out to Upper Key Stage 2, Lower Key Stage 2, KS1 and EYFS. Children who attend Regional Science Fairs receive a variety of rewards including certificates, medals and trophies or science kits. Some partnerships get donated prizes, such as family tickets, from local science museums. Some find that local STEM companies will sponsor a prize.

Remember, there is no right or wrong way of running this kind of competition, so be creative and develop a model that best suits your school/partnership.

Ogden Partnerships who already run Science Fairs can use their shared funding to pay for transport to the university or other venue, and reduce costs by sharing coaches with multiple pickups along the way. The travel arrangements are usually put in place as soon as the date for the Regional Science Fair is agreed. Children normally arrive at universities for a 10am start.



Planning

Set dates and location

Decide when you want your Science Fair to take place and set dates for the Regional Science Fair - British Science Week or the Great Science Share are good national events to link in with.

Get in touch with the venue for your Regional Science Fair (university, large school/college etc) to confirm the dates and how many children/teachers you will be bringing.

Set date for the School Science Fairs and get them on the school calendar and shared with teachers, governors and parents - this will need to be before the Regional Science Fair.

Promote and enlist

Create a presentation for all schools to use in their launch assembly along with other promotional materials such as posters and leaflets to send home.

Science Coordinators lead a whole school assembly to launch the Science Fair. This should happen 6-7 weeks before you want the projects in school.

Information is shared with parents through the weekly newsletter, Facebook, Tweets etc

Support learners

Provide support for children, especially if this is the school's first Science Fair. Some schools choose to make the projects optional; others like to make it a compulsory homework project over the half term.

You could run a Science Fair afterschool club to support children as they work on their projects. Some schools run workshops for parents and children to provide inspiration and help with planning.

In schools where there are difficulties with children completing projects at home they choose to run their Science Fair projects as an activity in class - an afternoon a week over half a term.

Preparation for School Science Fair

Ask for all Science Fair projects to be brought into school a week before the event so you know how many you have.

Work out how many tables you need and how you wish to lay out the school hall. Make sure you have refreshments for your judges.

Enlist the help of the PTA with providing refreshments for parents - potential fundraising opportunity.

School Science Fair

Give children time to set up their projects and prepare without feeling rushed.

Create a timetable for classes in the school to visit the Science Fair across the afternoon so that non-participating children get to see and hear about the projects.

Promote the event well with parents, encourage children to bring parents in at the end of the school day.

Preparation for Regional Final

Organise a team of judges and prepare them so they are clear on the criteria and the time they should spend talking to each child.

Arrange a keynote speaker or short science show. If you are at a university try to get some undergraduate volunteers to take the children and their teachers on tours.

Ensure that you have enough certificates and/or trophies/prizes.

Regional Science Fair

Prepare judges to ask questions and be clear on success criteria for selecting winners in each category. Make sure every child gets to share their project with a judge.

Provide refreshments for teachers and judges. Plan appropriate spaces for children to eat lunch and have bin bags available for any rubbish.

Book a professional photographer for the event and seek photographic permissions from all children and adults attending.