



**Great
Science
Share**
for SCHOOLS

In partnership with

BBC

TERRIFIC SCIENTIFIC

www.greatscienceshare.org

#GreatSciShare

THE GREAT SCIENCE SHARE FOR SCHOOLS BUNDLE

A CAMPAIGN TO INSPIRE YOUNG PEOPLE TO SHARE SCIENCE WITH NEW AUDIENCES

This bundle of information and resources offers teachers and families essential advice to support them in hosting, or being part of, a Great Science Share for Schools.

Sections include:

- | | |
|--------------------------------------------------------------------|--------|
| A. What is a Great Science Share for Schools (GSS)? | Page 3 |
| B. What makes a science share 'great'? | Page 4 |
| C. What 'science' is involved? | Page 6 |
| D. Using the Great Science Share Social Media Campaign effectively | Page 7 |
| E. Inspiration Wall | Page 8 |
| F. Frequently asked questions | Page 9 |
| Acknowledgements | |

A. What is a Great Science Share for Schools (GSS)?

GSS is a national campaign to engage young people with science and engineering which aims:

to **inspire** young people to communicate *their* science with new audiences

to **improve** the teaching and learning of science through collaboration

to **raise** the profile and value of school science for long term gain in learner outcomes



Inspiring young people into science and engineering

B: What makes a science share 'great'?

There are many different ways your science share could be great! Great could relate to how large it is, who's involved, how important people view it or how well it is supported by the whole school community.

Special: As the GSS happens in the summer term each year – the time when science can be made particularly prominent and celebrated in your school or locality. Place the date in the diary as soon as you can, and inform colleagues and parents using newsletters and websites. Great Science Shares are non-competitive events, aimed to encourage both new learners and novices to get involved.

Size: How big or small you make your Great Science Share for Schools is up to you and may change over time. Begin where you feel comfortable. Include your class, a Key Stage, the whole school, your partnership cluster schools, families, community groups and more as your Great Science Share grows year on year.

Strategic: GSS is more than a just a day, it can support the strategic improvement of science in your school or area. Think about what you want to gain from being part of it – improving the range of science investigations, developing scientific language, enhancing parental engagement etc. If you are involved in the Primary Science Quality Mark, hosting a science share could offer opportunity to demonstrate impact in a range of criteria.

Scientists: This is an ideal stimulus for scientists to be involved with young people in school. **STEM Ambassadors**, local industry or Universities offer a wide range of opportunities for scientists and engineers to visit schools or groups. Make links with these people as early as you can and involve them prior to the Great Science Share for Schools event.

Stepping out: A feature of Great Science Shares is the involvement of other disciplines that may not be traditionally linked to science. Take this opportunity to cross boundaries and invite new people to engage with the young people you work with, from the school, local community or business.

Your Great Science Share might be a:

- **Great Science Picnic** for families sharing science investigations outdoors
- **Great Science Busk** with groups of young people showcasing short science activities and busking ideas to their friends at lunchtime
- **Great Science Circus:** each classroom having a science investigation on offer, children circulate to different rooms during the course of an afternoon.
- **Great Science Playground Draw:** mark making and drawings using chalk on the playground based on a topic or theme you choose
- **Great Science Exhibition:** using posters, poetry, art and music, showcase science through artistic ways
- **Great Science Sing Off:** involve your choir and music specialists in writing and performing science songs, using knowledge and learning from science explorations and walks around your school and locality
- **Great Science Heroes Day:** follow the traditional 'own clothes day' with a twist – young people research a scientist or engineering and dress as them for the day. Challenge each other to spot who they are!
- **Great Science Bake Off:** involve families in baking cakes and buns inspired by science themes.
- **Great Science Dance Festival:** choreograph a dance to depict a scientific concept: such as changes of state, magnetism or the water cycle.



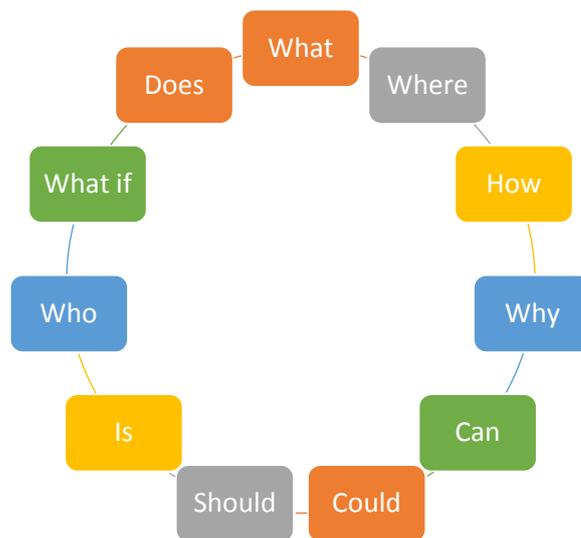
Inspiring young people into science and engineering

C: What 'science' is involved?

Science is all around us. Within each school year, young people will have experienced science in a range of places - in their classrooms, in clubs and at home. Now is the time to encourage them to choose something they particularly enjoyed, were intrigued by or want to ask more about. In a Great Science Share questions and hands-on, investigative science take centre-stage.

You may find it useful to capitalise on the science taught within your curriculum and to use the Great Science Share for Schools as an opportunity to formatively review the learning the children have understood.

Focus on scientific questions – during Great Science Shares young people ask and answer questions! We encourage you to give them chance to novel questions that they have a personal interest in. It doesn't have to be brand new and it is often useful to prepare in advance what will be showcased on the day. There are a range of question starters to inspire young people in their thinking...



*A Great Science Share investigation is...
led by young people,
about questions that interest them, and
hands on*

Inspiring young people into science and engineering

D: Using the Great Science Share Social Media Campaign effectively

The main way we can come together in the Great Science Share for Schools is using Twitter.

Using Twitter

Follow us @GreatSciShare and tweet us using the hashtag #GreatSciShare



Here is a sample of message starters you may find useful.

When you're preparing for your GSS...	When you're doing your GSS...	When you've finished your GSS
<p>We're preparing for our #GreatSciShare by...</p> <p>We've invited ___ to our #GreatSciShare on ___</p> <p>The class are feeling ___ to be involved in this year's #GreatSciShare.</p> <p>I'm feeling ___ about the #GreatSciShare because...</p>	<p>Young people are ___ to be part of the #GreatSciShare because....</p> <p>Children sharing their science questions such as... at the #GreatSciShare</p> <p>Using the theme of Space to investigate how the size of a meteorite affects the depth of a crater at our #GreatSciShare</p>	<p>We thought the #GreatSciShare was ___ because...</p> <p>A new idea I found out at the #GreatSciShare was...</p> <p>Science was ___ during the #GreatSciShare</p>



Inspiring young people into science and engineering

E: Inspiration Wall for the Great Science Share for Schools

The following ideas have been shared by teachers. They are not exhaustive of all the opportunities you could do, yet offer some inspiration to you. Focus as many on the identified campaign day.

Who's involved?	How long have you got for your Great Science Share for Schools?		
	Half an hour	Half a day	Half a term
My own class	Invite another class to visit your classroom before school, at lunchtime or after school. Challenge the children to have a science investigation they can share – e.g. identifying and classifying sweets, observing plants with a hand lens or testing materials etc.	Invite families into your class for 'Bring a parent to school afternoon'. Children lead the science investigations. Go out for a science walk... map a trail around the local area and seek out science as you go. Use a theme like plants, materials, and forces to focus attention.	Identify a pupil planning team and delegate jobs – e.g. inviting the VIPs, organising the resources, and trialling investigations. Encourage them to promote the GSS by storyboarding and filming adverts, explaining what this is about and the range of science investigations and processes that could be used. Use QR codes in school newsletters to allow parents to watch.
The whole school	On the specified campaign day launch with a science assembly. Young people could be encouraged to dress up as a Science Hero, and focus the week on reading science books as part of a Great Science Big Read. They could post reviews on the #GreatSciShare twitter feed or on the school website. Design a poster to tell others about their favourite science question!	Host a science investigation carousel in each classroom, letting classes of children move around the school to experience science in different ways. Choose a theme or topic to bring it together, or simply allow free reign. Have a science afternoon, where children are tasked to create a Science Exhibition in a key space so visitors can see their questions and ideas.	Ask each class to hold an assembly about a famous scientist over the period of the 6-week term. Each class to host lunchtime Science Pop up, showcasing their most engaging science investigation. Develop an area dedicated to science in your school library and showcase this to others on the Great Science Share for Schools day.
Another school, e.g. a high school	Host a Great Science quiz. Pupils devise a quiz sheet based on investigations they love to challenge their high school peers. Email your children's investigation ideas to your partner high school to get feedback and suggestions as to how they can work well scientifically.	Host a science investigation carousel in the high school. Primary pupils take their investigations to the high school and showcase them to older students. Spit the afternoon where high school students showcase to them.	Invite the high school staff to visit your school with ex-pupils on a week-by-week basis, working from Early Years to Year 6. Create a display board about the questions the staff and pupils raised, identifying scientific vocabulary and techniques the high school may cherry pick in their own practice. Do the same the other way round to sharing learning.
A local business or STEM industry	Ask the children to compile a list of questions that they could ask a scientist or engineering working in those locations. Tweet or email them to a local technology company and ask them if they could respond.	Task the young people to research and invite a local company or STEM Ambassador to come school for the afternoon. Ask them to take part in an introduction assembly to give a short talk about themselves and explain how they use scientific enquiry in their everyday jobs.	Invite representatives from a local company to be a VIP at your Great Science Share. Ask them to work with the children beforehand to develop a science investigation using equipment or kit from their workplace.

Inspiring young people into science and engineering

F: Frequently Asked Questions

<p>Do you have to stick to the dedicated date?</p>	<p>Each year a date is set by the GSS head quarters – this year it is Tuesday 19th June 2018. It has been shown that working towards a common date drives activity and visibility of the campaign. As much as possible try to plan your share for this date, but if all else fails it's more important that you get involved when and how you can. After all we're interested to involve as many schools and young people nationally as possible.</p>
<p>Who can be involved?</p>	<p>Any young people and their teachers from early years, primary schools, secondary schools through to FE colleges across the country.</p>
<p>What counts as science?</p>	<p>Science is above all creative, and the aim is to embrace all subjects on this special day: science, technology, engineering, computer science, design, and maths. Coming together with the arts and humanities in a shared learning experience can inspire young people to experience science in new ways.</p>
<p>How 'great' is a Great Science Share for Schools?</p>	<p>It's better to be involved than not to be! Start where you can and remember sometimes the simpler the better. There's no need to empty the science cupboard or buy expensive items of equipment. Science is all around us.</p>
<p>How do the young people share their science?</p>	<p>A range of creative strategies can be used to share: writing poems, posters, making a film, creating a dance, singing a song, drawing diagrams, giving a talk, writing a blog, building models. The choice is theirs!</p>
<p>What's my role?</p>	<p>Teachers: inform, inspire and engage young people and colleagues to support you in developing your Great Science Share for Schools. Support the young people with logistics and organisation, and encourage them by talking with them about their science investigation ideas.</p> <p>Young people: think about a hands-on science investigation you've enjoyed. It may be something you've done in school or at home. Talk about it with your teacher and friends. Try to keep it simple – complex things often become too difficult to get set up.</p> <p>Senior Leaders: offer support by giving staff some thinking and planning time. A little bit of basic budget doesn't go amiss either! See this as a great opportunity to allow science to shine in your school. Take the lead in inviting key people in that you think will make the experience special for young people.</p>
<p>How do I register I want to be involved?</p>	<p>Register your interest at any point by emailing greatscishare@manchester.ac.uk</p> <p>Access registration links at www.greatscienceshare.org to receive information, updates and branding to support your GSS.</p>

Inspiring young people into science and engineering

<p>When should I start?</p>	<p>Think about using British Science & Engineering Week in March to get young people started with their investigations. Otherwise the length of preparation time really depends on the scale of your event.</p>
<p>What if I'm not a teacher, or not based in a school?</p>	<p>STEM organisations, businesses and families can also host Great Science Shares for Schools. If you have existing links with local schools you could:</p> <ul style="list-style-type: none"> • encourage them to get involved in the Great Science Share by providing them with information • incentivise your colleagues or membership to support local schools, as a VIP at events • volunteer your time to engage with a class teacher and young people before or on the Great Science Share for Schools day • register as a STEM Ambassador • contact the Great Science Share for Schools team to see whether they have connections you could make use of • promote the campaign using your networks using social media. Include #GreatSciShare and follow @GreatSciShare • Let us know how you're involved by signing up to be part of the Great Science Share for Schools campaign at www.greatscienceshare.org
<p>Who's involved?</p>	<p>The Great Science Share for Schools has been developed by the University of Manchester's Science & Engineering Education Research and Innovation Hub. The team acknowledge the support offered by organisations and collaborators involved in the European City of Science</p> <p>2018 sponsors: BASF, Manchester City Council, The University of Manchester</p> <p>Collaborators include The Primary Science Teaching Trust and the Comino Foundation. A full list of organisations and charities that support GSS can be found at www.greatscienceshare.org</p>
<p>Further advice</p>	<p>Email greatscishare@manchester.ac.uk</p>

Inspiring young people into science and engineering

Acknowledgements



The University of Manchester

The University of Manchester's Science & Engineering Education Research and Innovation Hub's vision is to develop inspired communities, of confident and curious teachers, striving together to drive the continuous improvement of teaching and learning in science and engineering education in the UK. They are pleased to acknowledge the support of key sponsors and collaborators, as well as all the STEM organisations, charities and Trusts who are enabling the Great Science Share for Schools to be successful. www.fascinate@manchester.ac.uk

In partnership with:



Sponsored and supported by



MANCHESTER
CITY COUNCIL



Inspiring young people into science and engineering