

It's all about the 'Team'!



Dawn McCann and Tina Whittaker reflect on the impact of building an effective team to create a successful Great Science Share for Schools in Stoke-on-Trent, during its 10th anniversary year.

GSSfS 2025 was an incredibly exciting opportunity for Stoke-on-Trent schools, indicating a significant shift from individual school-based science shares. The aim was to inspire pupils and connect teachers in collaborative professional development by removing isolated working. Drawing on the central vision we created a dedicated Stoke Great Science Share team including Hillside Primary School, Port Vale Football Club (PVFC) and Science Across the City (SATC) and focused on collaborating, innovating, and capacity-building in our local schools. Throughout the article we've considered the key learning points that emerge from the Stoke experience!

What guided the thinking of the Stoke GSSfS team?

The Stoke GSSfS team sought to enable teacher development by active participation, collaboration, and reflection on science learning. Focus was given to identifying and questioning assumptions about how children learn in science and exploring STEM aspirations locally in the region. This approach responds directly to the Education Endowment Foundation guidance (2023) that recommended that there was need to strengthen science teaching through effective teacher professional development. The team were also aware of Ofsted's independent review (2023) of schoolteachers' professional development that found that many teachers lack regular allocated time for development and rarely had enough time to reflect on their own learning or apply it in practice.

What did it take to make a great GSSfS team?

A collaborative team of educators and community stakeholders came together to give due regard to this question. For authentic team togetherness, the first and essential step was to confirm that everyone shared similar beliefs and values. The 2025 GSSfS theme, Connected Science, sparked early interest for both the lead collaborators, Science Across the City (SATC), and Port Vale Football Club (PVFC). We quickly realised that these shared commitments to improvement of educational outcomes would drive us towards empowering our local community.

With this in mind, the next step was translating this organisational commitment to actions, and this brought together people with diverse and complementary skills, knowledge and experience. We have likened creating a great GSSfS team to what it takes to have a great football team – something particularly apt as our venue was Port Vale Football Club stadium. As in any football team, success relies on thinking about how '*the whole is greater than the sum of the parts*' and that each individual or group involved has a part to 'play'. Roles and demands were multifaceted, and all contributed to a great team outcome.

Table 1 is our reflection to consider roles and responsibilities of great teams and compare the similarities between football and GSSfS teams. We took inspiration to create this as our GSSfS event was based at Port Vale Football Club, so the links to the game were fresh in our minds!

Key learning point: GSSfS operates on a range of levels, and, when working at scale across a Local Authority or region, it benefits from clear roles and responsibilities being outlined and understood from the outset.

What difference did a team approach make?

Each team member brought their own expertise, yet what truly elevated the process was mutual knowledge exchange. Co-creating the GSSfS experience developed professional respect, awareness and new understanding

Table 1 Analogous comparison between roles & responsibilities towards success in GSSfS and football team structures

How do the roles of a great GSSfS team compare with a great football team?		
Great Science Share role	Description of the role and responsibility	Football team role equivalence
Great Science Share for Schools Campaign creators (The University of Manchester)	Vision and values setting, outlining protocols, providing guidance and a sense of community.	A National Body, e.g. the Football Association
Great Science Share for Schools organisational/local champion(s)	Knowledge of local vision and need, strong connections of partnerships that will enable success. Local strategy.	Club/Foundation e.g. Port Vale Football Foundation and Science Across the City
Great Science Share for Schools leader(s)	Deep local knowledge, networks and ability to co-ordinate action, knowledge of tactics and training that have happened before and that can bring about success.	Manager/local specialists and leaders e.g. Primary Science Advisory Teachers/Community School Improvement/Outreach officers
Local schools, science subject leaders, teachers and/or educators	Defining the 'game' – working together to strategise the curriculum or extra-curricular offer – the training and activities that engage and develop learning and enhance players' development.	Full team/squad
Pupils	Involvement in the learning activities, active participation, investment in the game/learning process. Showcase learning and progress of talent.	Football players
Audience including peers, other teachers, organisations and VIPs e.g. The City Lord Mayor, trainee teachers, local authority school improvement officers, cultural group representatives	Offer encouragement, advocacy, recognise, reward, celebrate, care, show passion.	Club mascot and supporters

as idea sharing and idea refining called on each other's insights and informed new perspectives. We tackled a range of challenges, such as how to best recruit schools, safety management, ensuring teachers recognised the curriculum relevance and how we effectively communicated our activity for maximum engagement.

What kept us cohesive was a clear shared vision of wanting to host a high-quality science event that would inspire and engage pupils from across the city and strengthen city-wide connections. Securing an inspirational venue was a crucial early win, and this undoubtedly was a valuable and generous offer from the football club. Then with venue and team secured, our plan for our 2025 GSSfS event was ready to launch.

Key learning point: Clear roles, defined goals, and regular communication ensured a coordinated approach.

What did it take to train teachers – our 'players' – for a great GSSfS?

Engaging science leaders and local science influencers from schools across the city drew on the strong, existing network established through Science Across the City (an established school-improvement that ran for three years). Response from schools and science leaders was swift and well-received, resulting in 15 school sign-ups within two weeks.

Key learning point: Where possible, we used existing local networks, which meant the opportunity built on current practice and supported ongoing development for the schools.

Having a local science leader (Dawn McCann of Hillside Primary School) was pivotal to enabling professional learning across multiple schools. As

a teacher herself and coach to science leaders, Dawn brought quality of knowledge and deep professional understanding when engaging teachers in webinars, virtual drop-in sessions and face-to-face meetings. She actively drew on the resources on the GSSfS website to support her role.

'Using the GSSfS Guided Enquiries was a new style of science teaching to me, but something I will definitely be using in the future.' Science leader

Dawn was key to providing responsive feedback that stimulated teachers to reflect on and improve suggested questions and investigation plans that their pupils would share at the GSSfS.

'I found the suggested online resources from the GSSfS website useful in supporting questioning when coming up with our own enquiries – something I will definitely be using again!' Lead science teacher (PSTT Fellow)

The existing trust, rapport and relationships that were notable in Stoke's science leaders group allowed reflections to focus on maximising pupil engagement through good investigative methodology. Asking questions to investigate focused on localised and personalised contexts with teachers being comfortable to seek advice, consider alternatives and advice given to them.

Key learning point: Having a local teacher in 'the thick of it' had a powerful impact on teacher development.



What were the highlights of the Stoke GSSfS?

The dedicated training to prepare the teachers and children led to the event being filled with great science. Pupils had their own table spaces allocated to each school, where they explained the way they collected data and improved investigations for accuracy and reliability. They talked about the graph plotting they had done to represent evidence gathered through hands-on experiences.

'The children were doing great work. Their enthusiasm, curiosity and confidence were such a joy to witness.' Gary Morris, PVFC

Children demonstrated that they were scientists, that they were passionate about their science and that they could ask good questions of the evidence generated. Enquiry themes included sport science fitness, stadium green sustainability, animal and plant biology.

The unique setting at the football club inspired investigation questions such as, 'What is the impact of leg length on the distance a football is kicked?', and 'How does the shape of a bird's beak affect the way it collects seeds from the newly reseeded football pitch?'

'We thoroughly enjoyed every minute. It was amazing! I have been busy this morning creating a science share display to share our afternoon with the rest of the school!' Local science subject leader



The diversity of investigations allowed children to actively participate, creating a vibrant atmosphere of scientific exploration and peer learning. The venue not only provided a memorable experience but also broadened the scope of enquiry, demonstrating how context can enrich science education.

The Lord Mayor and Lady Mayoress of the City also attended, enthusiastically engaging with the science activities and celebrating the achievements of local pupils. Staff from Port Vale Football Club played a vital role throughout the day, helping to create a welcoming and well-organised environment. This broad representation not only enriched the experience for participating schools but also laid the groundwork for future collaborations that will continue to strengthen science education across the city.

What happens next as a result of a great GSSfS?

Following the event, feedback was collected. We asked teachers if they would attend a future GSSfS and 100% responded positively with a 'Yes'!

Notably, one local business expressed an interest in hosting a future Great Science Share event, demonstrating the ripple effect of this year's success. In addition to being a success in itself, Stoke-on-Trent's GSSfS at PVFC has already proved to be much more than a nice day out for team members involved.

'I felt that I developed a deeper understanding of a successful science share, secured understanding of successful enquiry questions and it reinforced successes across the city.' Local science leader

'Having seen a Great Science Share in action, I am now inspired to be a part of leading an event in 2026.' Staffordshire Science leader

Planning is already underway for an even more successful science share in 2026. We aim to build on our achievements by further developing partnerships and expanding opportunities for our teachers, children and host venues with plans emerging for pupils in their first year at secondary school so that this can enable more teachers and children to develop new understanding by listening to each other across different age phases.

The final whistle

Our final whistle is to assert that GSSfS had a powerful impact on professional learning. GSSfS does rely on collaboration working across different groups, nationally and locally. Teachers defining the 'game'; working with local leaders to decide what training and activities are needed to engage the 'players' – the pupils – in this great science sharing event. Stoke demonstrated this effective team ethos that was well coordinated and collaborative, and ultimately will continue to promote their success towards an even better 2026!

REFERENCES

Education Endowment Foundation (2021) *Effective professional development: guidance report*. <https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/effective-professionaldevelopment>

Education Endowment Foundation (2023) *Improving primary science: guidance report*. <https://eef.li/primary-science>

Guskey, T. R. (2002) Does it make a difference? Evaluating professional development. *Educational Leadership*, 59(6), 45–51. www.ascd.org/el/articles/does-it-make-a-difference-evaluating-professional-development

Ofsted (2023) *Independent review of teachers' professional development in schools: phase 1 findings*. www.gov.uk/government/publications/teachers-professional-development-in-schools-phase-1-findings

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