Southwold Primary School

Explorify and its impacts

About Southwold Primary School

Southwold Primary School is part of the White Horse Federation Multi-Academy Trust in Oxfordshire. The school caters for 279 pupils aged between 4 and 11, with 11.5% eligible for free school meals. The most recent Ofsted inspection in 2019 gave the school a rating of 'Good'.

How science is led and taught at Southwold Primary

Science is an important part of the Southwold curriculum and is typically taught every week for at least an hour. Before the first lockdown, the school's Science Leader had begun to advocate for a more practical way of teaching science. This centred on teaching staff being supported to understand the five main enquiry types as the basis of their science teaching. These are defined by the Primary Science Teaching Trust as comparative/fair testing, research, observation over time, pattern seeking, identifying, grouping and classifying, and problem solving. This meant teachers had started moving away from a focus on written work with greater use of investigations.

The impact of the pandemic on science teaching at Southwold Primary

Science teachers were expected to continue teaching science during the pandemic in line with the science curriculum. Rather than delivering full live online science lessons during lockdowns, teachers used short sessions on Microsoft Teams to explain or introduce topics, tasks and investigations to their class. Teachers then provided work using the school's communication platform, Purple Mash, which pupils could work on independently and upload.

After the first lockdown, the school assessed which children had insufficient or inadequate IT at home and supplied these pupils with laptops. Levels of engagement improved in subsequent lockdowns as Microsoft Teams became more widely used. Teachers also increased the amount of marking and feedback they were able to provide over successive lockdowns.

Teaching science in this way, teachers found delivering practical science lessons more difficult, particularly engaging pupils in an exciting and interesting way. It was not possible to explore topics in as much depth and pupils did not take part in as many science discussions; this meant that they did not share ideas with peers or ask questions in the same way as when in the classroom. Teaching also became more knowledge based as teachers were less able to develop key scientific and enquiry skills due to the restrictions in place.

> *"We were giving them activities, but we weren't leading a science lesson. So maybe that rich questioning which we want for science is not there". (Classroom teacher)*

For the children of key workers in school, the need for social distancing meant that pupils had to sit apart and were not able to work in groups, move around the room to actively investigate or share equipment. Some teachers as a result found it easier to run investigations remotely than in the classroom although it was not without challenge. Pupils required the right equipment and some level of parental support – things which were not available equally to all pupils. Overall, this meant that the practical approach to lessons which was being implemented at the school prior to the pandemic became more difficult to maintain.

Monitoring science learning by the Science Leader was particularly difficult during the pandemic. They could not visit other classes to observe lessons and assess any gaps in knowledge across the school as they had to work within their assigned bubble. It was also harder for class teachers to assess how children were progressing as assessments were based solely on uploaded work. As a result of disruptions to normal teaching practice during the pandemic, it is likely that some pupils are likely to have developed gaps in their science knowledge when compared to their peers and/or to where they would have been after a normal year of science teaching.

How Southwold Primary uses Explorify[1]

After being introduced to Explorify at a Primary Science conference, the Science Leader shared it with the rest of the school. The resource soon became an integral teaching tool and before the pandemic the school's senior leaders had begun encouraging its use across the wider curriculum to help develop more discussions across all subjects. Prior to the first lockdown, all teachers in the school were using Explorify either in lessons or at the start or at the end of some school days to help develop ideas and discussion among pupils.

> *"Initially, we brought it in and we just said, 'Try it. Give it a go.' Then I think, as we've progressed, we've said, 'All of our lessons, or at some point during the week, you should try to use Explorify.' We have branched out with some of the other products now but...Explorify is one that lots of people come back to because it's so easy to use and it has such a range of things on there. Now we've all agreed as a staff that it will be part of our lessons." (Science Leader)*

During the pandemic the school used activities such as *Zoom In Zoom Out* and the *Odd One Out* for remote learners. Teachers shared their screen to explain the activity and children worked on it at home.

The Science Leader also used Explorify to run a virtual science club for pupils during the lockdowns as another way to maintain a focus on science learning. This was aimed at pupils who were interested in certain topics, and gave them opportunities to research and discuss these and conduct small-scale investigations. The Science Leader plans to continue a science club in school during the next academic year as a result of the enthusiastic response from pupils who took part in the virtual sessions.

Teachers are now using Explorify to help the school's COVID recovery. The resource is helpful in connecting learning activities with the natural world, which staff believe will help maintain pupils' mental health and wellbeing.

> *"As part of our recovery curriculum… in line with COVID, we've done a lot of mental health and well-being type activities. We've tied Explorify into those, so that [the children] are thinking about the world outside of school and outside of COVID to bring some normality to things." (Science Leader)*

What works well about Explorify?

Classroom teachers enjoy using the resource because of the excellent visuals and the underpinning explanations provided with each topic which make planning and teaching easier.

> *"It's colourful, it's bright. The children like it, and there are some nice activities. And beneath everything, there's a 'how to approach this in the classroom', or 'why don't you do this?' There are lots of ideas for teaching." (Classroom teacher)*

The Science Leader is increasingly using Explorify to help with assessing pupils' knowledge of a particular topic. By sharing a *Zoom In Zoom Out* activity and listening to pupil's discussions and vocabulary, their level of understanding can be monitored. Pupils explain what they see and why to demonstrate their underpinning knowledge of a topic or subject. This can help teachers plan their future lessons and tailor the support they offer pupils who need it.

> *"Since the latest lockdown, we have to use elicitation activities as a means for assessment, especially of what they already know, so that we can tailor our lessons better. One of the tools we use is Explorify." (Science Leader)*

Teachers have also been trialling the use of Explorify outside of science teaching. Explorify has been used as a reading comprehension activity, for example, with pupils encouraged to discuss the pictures and what might happen next. Feedback from teachers was that this led to better and more creative discussions. For example, early years teachers at the school have used the resource's imagery to introduce science-based pictures in class. Senior leaders are also encouraging teachers to use Explorify for morning tasks, adding further science time to the school day. These sessions aim to develop discussions around science and improve technical vocabulary among pupils. Senior leaders at the school have seen Explorify contribute to pupils developing not only scientific skills, but also their vocabulary, confidence and questioning.

[1] For more information about Explorify please visit: https://explorify.uk/

“I was an engineer before I came to education so my approach has always been quite group-based, discussion-based, science and engineering based. But as a teacher, I think it [Explorify] has just allowed that freedom and provided an easy method, it's easy to pick up and go with, to be able to deliver some of these things.” (Science Leader)

Impact of Explorify

Impact on teachers and the school

Teachers benefit from using Explorify as it helps them create a more exciting atmosphere during science lessons meaning that both pupils and teachers have more fun with science. As discussed, Explorify has also helped the Science Leader set up and deliver a science club. The club and the use of Explorify to start the school day has increased the amount of science learning pupils are exposed to at the school.

The Science Leader has also seen teachers’ awareness of science improve since using Explorify. They are approaching science differently by linking it more to the world around them rather than relying on textbooks. Explorify gives teachers the freedom to discuss topics in greater depth and to focus on group and practical work because it provides clear descriptions and topic explanations. Teachers can therefore feel confident about teaching science because they have resources they can rely on to support them.

“The teachers...they've come to me in the past about areas of Science they never knew anything about and have said that, actually, by seeing it on Explorify, it's amazing what some of these things are. So there's an impact on, maybe not necessarily the depth of their subject knowledge, but actually that they're seeing Science as a wider area.” (Science Leader)

Impact on pupils

Since using Explorify, teachers have observed pupils’ general reasoning and thinking skills improve as evidenced by the greater number of in-depth group discussions taking place. These thinking skills are being applied across the curriculum. Teachers report that Explorify encourages more idea generation and discussion amongst pupils and see children ‘bouncing’ ideas off each other more as a result of its use across the school. Explorify is also encouraging children to talk about science with their families, which has meant that pupils enjoy the subject more.

“They absolutely adore Explorify. They love taking part in it and they love the discussion. The area we live in is quite a low-tech area so actually Science isn't that high in the community but things like Explorify are stimulating those discussions and are having a really positive impact on them going away and talking to their families.” (Science Leader)

Explorify activities where there is no ‘right’ answer have helped less confident pupils and some with SEND to speak up and ‘have a go’, contributing to classes. By reducing their fear of being wrong, Explorify helps to create a more level playing field. Explorify encourages discussion as a valid way of expressing ideas and opinions; as pupils do not have to write down their answers, those with lower literacy skills are not precluded from fully participating.

“The beauty, I think, of Explorify, that it's not right or wrong and that gives those children who perhaps aren't as confident and are not the more able [to] just think 'It doesn't matter, I can just have a go at saying something.'” (Classroom teacher)

The Science Leader has recently introduced an initiative called ‘Explorify Champions’. Pupils with more knowledge of science are asked to lead discussions with the rest of the class. After initial hesitancy, pupils are now actively engaging with the discussions and growing in confidence. Pupils at all ability levels have improved their questioning skills leading to a greater level of understanding of topics among the whole class.

“As it developed...they started to ask better and better questions. Some of them, especially the older children in the school, the teachers were reporting back, they were coming up with some really good higher-order thinking questions to ask their peers.” (Science Leader)