



Ysgol Mynydd Bychan

Using Explorify to improve pupils' speaking skills and teachers' confidence

About Ysgol Mynydd Bychan Primary

Ysgol Mynydd Bychan is a primary school in Cardiff, Wales. The school is a one-form entry with 237 pupils aged 3 to 11 currently enrolled and plans to expand to a two-form entry school in September 2025. The percentage of pupils eligible for free school meals is 4.6%, which is below the national average of 22.2%. Welsh is spoken at home by 8.9% of pupils and 3.4% of pupils speak English as an additional language. All nursery children through to and including Year 2 pupils receive their lessons in Welsh. From Year 3 onwards, pupils are taught English, however, all subjects except for English are taught in Welsh. The school received a positive inspection following the most recent Estyn visit.

How science is led at Ysgol Mynydd Bychan

In Wales, science is taught under the Area of Learning and Experience (AoLE) title "Science and Technology". As part of the AoLE, weekly science lessons with cross-curricular learning are encouraged. Following the Covid-19 pandemic, the science leader wanted to raise the profile of science at Ysgol Mynydd Bychan and improve the science subject knowledge and confidence of early career teachers (ECTs). To achieve this aim, the school decided to work towards the Primary Science Quality Mark, which they received in June 2024. This process

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How Ysgol Mynydd Bychan uses Explorify¹

All Explorify activities are available in Welsh, which is a key strength in the context of Welsh speaking schools that often need to translate materials. Ysgol Mynydd Bychan began using Explorify in 2023 after the science leader was introduced to it at a local cluster networking event. Teachers report using the resource in a variety of ways in both science lessons and extracurricular clubs to inspire pupils and to bring science to life. They also use Explorify to encourage pupils to use scientific vocabulary during class discussions, and to build their scientific understanding. As Ysgol Mynydd Bychan is a Welsh-speaking school, lessons must be delivered in Welsh. The science leader particularly values the Welsh resources in Explorify as this reduces the time teachers spend on lesson preparation.

“Having a resource like Explorify in Welsh is like gold dust for us because, so often, you’ll come across this brilliant resource and it’s only in English and you think, ‘Oh, I want to use it,’ but we’re also having to battle our way through trying to ensure that children are immersed in the Welsh language.” **Science Leader**

Explorify is typically used by teachers as a retrieval tool at the start of science lessons, and before or after breaktimes, to refresh pupils’ knowledge in a simple, fun, and quick way.

“If you do electricity in Year 2 and maybe you don’t touch it again until Year 5, well, it’s quite nice to just, ‘Oh, I’m just going to keep this science knowledge you’ve acquired in Year 2, fresh, alive, quickly now in a 2-minute before playtime, fun way.” **Science Leader**

has provided a framework for the development of a school improvement plan: a vision for science leadership and a programme of professional development to enhance science teaching and wider opportunities. The school is particularly focused on improving pupils’ oracy skills and embedding Welsh across the curriculum, including in science.



Teachers also use Explorify, in particular the *Zoom In, Zoom Out* activities, in their extracurricular science club, where children are introduced to practical activities and scientific equipment such as microscopes and stethoscopes. For example, children were introduced to the heart with the *Listen, what can you hear?* Explorify activity of the sound of a beating heart. This encouraged the children to be inquisitive and ask probing questions during group discussions. This activity has since been adapted for the nursery class where once children had ascertained that the audio clip was a heartbeat, they used stethoscopes to see if they could find their own heartbeat.

When a practical activity is too complicated or expensive to provide for the children, the school uses Explorify videos and the supporting visual materials to introduce pupils to a range of interesting practical scientific activities at no cost to the school.

“Explorify bridges that gap sometimes between not having a big, costly experiment every week.” **Science Leader**

Impacts of Explorify at Ysgol Mynydd Bychan

Improved oracy skills of pupils

Explorify supports pupils at Ysgol Mynydd Bychan to develop their oracy skills. Activities such as *Zoom In*, *Zoom Out* images and the *What just happened?* videos provide visual clues which help to develop children's thinking skills and by not providing an immediate answer, stimulate discussions and encourage children to apply reasoning skills. Teachers can assess their pupils' explanations about what they can see.

"I've noticed that children are asking a lot more questions. The videos don't always explain everything to you, which inspires inquisitiveness around a certain topic that children might be asking, 'Why is that?' There is one example, the duckling that falls off the side of the mountain and it's fine and pupils are fascinated, 'Why is that duckling safe? Why has it not been hurt?'"

Science Leader

One of the key benefits of the Welsh version of Explorify for the school is that it encourages children to confidently talk about science, whilst also enhancing their Welsh vocabulary skills. This is particularly important for those children who do not speak Welsh at home.

"Having those resources in Welsh just gives them even more of an enriched experience of being able to use the correct vocabulary in Welsh, as well. Because a lot of these children would only hear it in English, a lot of our children come from English homes, that neither parent speaks Welsh."

Classroom Teacher

Teachers at the school describe how Explorify supports pupils to take more ownership of their learning. This, in turn, has a positive impact on their motivation and confidence, and their ability to think independently. A particular strength of the interactive activities is that they give children the confidence to lead question and answer sessions during science lessons. This in turn has a positive impact on children's listening skills and their ability to appreciate other pupils' opinions.

"What I sometimes do with my Year 3s, I'll offer an Explorify activity as a debate. It's bringing in those oracy skills and enabling children to say their opinion and accept others' opinions in a polite way." **Classroom Teacher**

Explorify activities such as *Zoom In*, *Zoom Out*, and *Listen, what can you hear?* that do not require written responses are particularly beneficial for pupils with additional learning needs at the school. The accessible and fun nature of the activities removes the fear of getting the answer wrong and encourages them to engage and contribute to class discussions more readily.

"Children with additional needs may not be confident giving an answer in maths, English or Welsh lessons. When they see Explorify, they don't see it as a right or wrong answer, and they're willing to share whatever they think. And sometimes, what they can't write down on a piece of paper, they can say to you and they can explain to their peers what they think or what they have heard. And sometimes they're the best answers."

Classroom Teacher

Increased confidence and improved subject knowledge of Early Career Teachers (ECTs)

Explorify contributes to increased confidence to teach science and enhanced scientific subject knowledge for ECTs at Ysgol Mynydd Bychan. They report that the clear explanations and prompts provided in the Explorify support resources reduces fear and anxiety about their ability to teach science. The support resources have broadened teachers' horizons about the power of science and how it can capture pupils' imagination. This has helped ECTs to plan and deliver more meaningful and engaging science lessons, particularly when introducing new topics.

"Explorify opened our eyes to what science is. I would say science had been the subject that I feared the most in terms of, I'm not very confident in the subject, it's not something that I'd naturally gravitate towards. Having Explorify as a base and being able to make sure you are using the correct vocabulary; you are doing the right thing and the actual lessons are having an impact."

Classroom Teacher



ECTs further describe how Explorify enables them to view science as a practical and fun subject that does not need to be delivered in the traditional way. By being more imaginative in their delivery of science lessons, they report that pupils find science more engaging and enjoyable.

"I think it's given us as teachers the confidence of 'Actually, a science lesson doesn't necessarily mean sitting down and writing, it's also being experimental, moving around the classroom.' You know, using pictures, using different resources, I think that's also made the children fall in love with science a bit more."

Classroom Teacher

For further details about Explorify and its impact a full independent evaluation report can be found [here](#).