

Digital resources case study: Karen Fox

INSPIRATION TO SUPPORT PRACTICAL WORK AND STEM CLUBS

Videos enhance learning

Karen Fox is a biology technician in a large secondary comprehensive school where she supports science teaching by making practicals more accessible for pupils. She also helps to run the school's STEM Club.

Karen previously spent many years working in the pharmaceutical industry. When she started working at the school, the head of department recommended she attend a course at the National STEM Learning Centre which Karen found to be incredibly helpful. During the course, she was introduced to STEM Learning's website and the wide range of digital resources it offers. She now regularly uses them to support the teaching of practical science and the STEM Club.

When looking for a resource, Karen particularly appreciates the filters that allow her to narrow down her search. She also finds videos on the website to be very helpful as they provide step-by-step guidance on how to use equipment such as microscopes.

"I usually go on to their website and just search for things. I can download resources and save them on my computer. I've got an amazing video that STEM Learning created on [how to use a microscope](#). It's a step-by-step guide. So, either the teacher can watch it so they know how to teach the students, or they can let the class watch a little clip on how to focus microscopes. The video gets shared quite a lot by me, and I encourage any new members of staff to watch it too."



Practicals at home

During the COVID-19 pandemic, when the school was unable to hold its usual taster days for year 11 students, Karen found a photosynthesis experiment on the STEM Learning website that could be done with household items. The experiment was a success and helped to keep students engaged in the subject while learning from home.

"STEM Learning shared a really nice photosynthesis experiment, one that could be done with things you'd find at home. They could use grass instead of our plants. They could use nail varnish remover instead of acetone. The students said they enjoyed the experience. We would not have been able to do that had I not been able to find something on the STEM Learning website that was suitable for home use."

Perfecting demonstrations

Karen also uses the STEM Learning resources to save time when a teacher requests a specific experiment which is unfamiliar to her. Using the resources she is able to find out about the experiment and build her confidence so she can demonstrate it to the teachers if required.

"Sometimes I'll go in and demonstrate it for the teacher. When I first started doing it, I was so nervous, I didn't know what they needed to know. So I would go and look it up on the STEM Learning website, watch a video and practise. I would use STEM Learning as a teaching resource for me to have the confidence to go into the class, and then do it for the kids. They quite often come and knock on my door and say they really enjoyed the practical. That is rewarding."

STEM Learning has also been instrumental in the success of the school's STEM Club, which Karen helped to set up. She often uses the website to find new ideas for the club, and Karen highlights that anything that comes with a video is useful, as it provides an excellent opportunity for students to visualise the experiment or concept.

Karen keeps a record of all the teaching materials that have been successful in the past. She prints them and adds them to her filing system, making notes about how she could modify them in the future. While she does reuse these materials, she also searches for new resources to keep her teaching fresh and engaging.

Karen is committed to inspiring students to pursue careers in science: "At the end of the day, if just one kid in our school picks an A level science subject, does well in GCSE science, or they go on to do science in the future then it is all worthwhile. Studying any subject is not always easy, but it's fun and relevant. I'd love them to think that."



Training with STEM Learning

Recently, Karen attended a technicians training course organised by STEM Learning to improve her skills in supporting post-16 students.

"I've just recently been back to the National STEM Learning Centre to do training on supporting post-16 students, which was fantastic. It was three days of biology, physics and chemistry. I like talking to other technicians and sharing ideas. STEM Learning is very highly thought of within the technician community."

