

Digital resources case study: Ros Harris

REAL LIFE CONTEXT FOR MATHS GCSE AND A LEVEL STUDENTS

'Hands on' concepts are helpful

Ros Harris is a maths teacher at an 11 to 16 secondary school in Norfolk. She previously worked at an 11 to 18 school where she taught A level maths and core maths in addition to GCSE.

“I first found the STEM Learning resources because we used to teach the Centre for Innovation in Mathematics Teaching textbooks in my last school, about five years ago, and there were a lot of relevant activities on the website like how to teach finance. I still go back to those resources now.”

“At my school now, we teach ‘maths with money’ as a topic in year nine, and I go back to those resources that I downloaded five years ago when I taught the finance module of core maths A level unit. We simplify the numbers a bit for year 9 but it is so helpful to have this bank of resources.”

“STEM Learning resources also include digital copies of the standard units activities which I go back to time and time again. There is one on the quadratic equation, there's a quadratic graph to match to, that is a great activity. Having hands on, visual representations of some of maths' trickier concepts is great for students that are still developing their understanding.”



Sharing resources

Ros has shared STEM Learning's resources with her colleagues and the PGCE students who she mentors.

“I always say to my PGCE students, “Don't reinvent the wheel; the wheel is already there, just take the activity and work with it.”

Someone else has created a wonderful resource that you can use, you just need to know how to find it.”

The STEM Learning resources really help because they're a bit more rooted in real life and the kids can see the point of the exercise.”

Adapting the resources

Ros recognises that there are useful resources beyond those that might be designed for a specific part of the maths curriculum, and often finds that activities aimed at a different learning stage are easily adapted for a younger group of students.

“I think most of the time I use the resources it is easy to find an activity if you know what you're looking for. Sometimes I come across things that I haven't used before so that's also good. Mostly I use them as they are; I don't adapt them too much. Sometimes I need to re-structure the activity, but that depends on which class I am using it with and which stage the resource is aimed at. If the resource is aimed at sixth formers, then of course, if I teach my year nines, I'm going to have to adapt it to their ability.”

Teaching beyond the curriculum

“The activities from STEM Learning are non-standard lessons, which I think is a nice thing. Not all of them, but many of the tasks are quite innovative. They're not just worksheets, like traditional teaching resources. They're different. They engage the students more and encourage them to talk about things, they make them reason. Kids are out of the habit of reasoning with each other, and they enjoy it when they get the opportunity to debate.

I'm a massive advocate of teaching to raise better human beings. Beyond your subject, we're teaching that child to grow up to be able to understand that it is important to communicate to each other. You have to listen to the other person, you have to respond. You must be able to work together, you have to listen and contribute. It's about everyone contributing to the team and not just one person leading us through this activity. Any opportunity that you get to teach those sorts of soft skills is a good one.”



Achieving maths mastery

“More and more now we are talking about mastery of maths for our children. Teaching in this way enables them to develop maths skills at their pace.

Lots of the resources on the STEM Learning website really help with that, they are very visual and hands on which suits a lot of children.”

