

## Case Study: Improving computing classes in Secondary School

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### The Challenge

Barker College already had an established computer science team, with 5 teachers who had backgrounds in information technology.

However, there were some areas they wanted to improve. They wanted engaging project ideas that could both **challenge and develop their students' coding skills**. They found it difficult to fit coding into a coherent scope and sequence. And while having teachers with expertise in different programming languages has its benefits, it was hard to choose a language that suited them all.

### The Solution

#### 1) Engaging material

Grok Learning proved to be the ideal solution in complementing the wide array of teaching expertise that Barker already offered. Malyn loved how Grok provided her with a variety of problems which kept students engaged with the material she wanted to teach.

*"The range in problems showed the wide range of application in programming skills,"* she said, with activities ranging from image manipulation to AI designed to suit students' varying interests.

She also found Grok's wide offering of challenges to be useful in making sure students stayed up to date, rewarding them with points as they completed new stages. In particular, she was very keen for Web.Comp, a website design competition where students could flex their creative muscles.

#### 2) Meeting the demands of the Digital Technologies Curriculum

The New Digital Technologies Curriculum is daunting for even the most experienced computer science teachers. Malyn found that Grok Learning's specially curated courses and challenges took much of the hassle out of creating new lesson plans and ensuring new outcomes were met.

Designed and mapped according to curriculum outcomes, Grok ensured that Malyn didn't have to worry about meeting individual outcomes through multiple activities. And even where the curriculum isn't of concern, she found that Grok Learning seamlessly and coherently linked multiple concepts together, taking the stress of fitting coding into a fluid sequence out of the teaching experience.

### 3) Making more time for what matters

With so many students taking computer science, one of the things Malyn found most impressive was Grok's auto marking, which saved huge amounts of invaluable teaching time and "*eased the burden on teachers*".

Grok lets students work at their own pace. More advanced students can take extension work using Grok's free courses, and those who are having trouble have access to 24/7 tutoring support. Malyn was delighted that this allowed her to use Grok to fit her own personal strengths, and gave her support in areas less familiar to her.

### Developing and supporting students' love for computing

Malyn's students now use what they've learned in Grok in a variety of pursuits.

One student used it to solve a number of Project Euler problems, others used it to enter into the AMT's Informatics Competition, and yet others still have used it elsewhere in the curriculum (for example, to help with maths homework).

Malyn told us that from using Grok her students have developed an increased awareness of the power of software. They have also developed impressive resource curation skills from searching for tutorials to expand their coding capabilities.

But there are less obvious benefits as well.

Malyn found that her ability to view students' code provided students with a way to "literally make visible..."soft skills" such as persistence, motivation and clear communication". Skills which are essential in creating the next generation of digital citizens.

Malyn is delighted with how Grok Learning has supported her students' love for computer science. Knowing how to use, rather than just consume technology is essential to becoming the digital citizen that the future demands.

***Grok Learning provides curriculum-aligned resources for all levels of ability. Contact us if you would like more information about how we could support your computing teaching in Primary or Secondary School.***