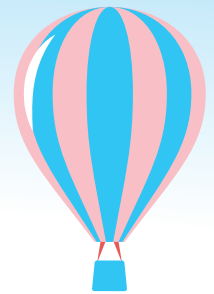




CASE STUDY: KALIANNA SCHOOL BENDIGO



Kalianna School Bendigo teacher Seamus Curtain-Magee found that his students learned much more than just coding by taking part in the 2017 Australian STEM Video Game Challenge.

'It was a powerful example of what project-based, cross-curriculum learning can look like if you run with it,' Mr Curtain-Magee said.

Mr Curtain-Magee has been teaching coding and design for several years at Kalianna, a specialist school catering for students with mild to moderate intellectual disabilities in which each student has an Individual Education Plan with curriculum-mapped goals. He found that, even in this unique educational setting, the Challenge aligned with curriculum requirements in Digital Technologies and Maths in particular. However, he was surprised by the unexpected benefits students received in other areas, such as literacy and '21st century skills' like creativity and teamwork.

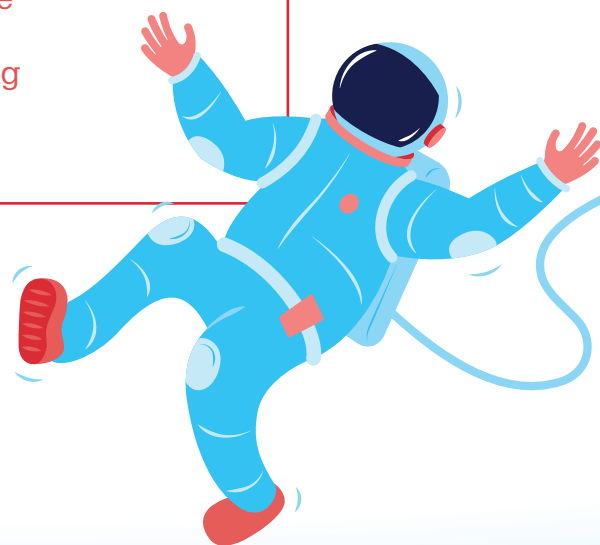
'The game development document is a great example of a text written for a specific audience for a specific purpose, and putting it together took about as much effort as the game itself,' he said. 'The design process also involves creativity and social/interpersonal learning – other areas that the Victorian Curriculum addresses.'

Mr Curtain-Magee said that, while their win was a huge achievement, the act of completing the project on time and sharing it with their peers, friends and families almost meant more to the children.

'There was a lot of enthusiasm for the project in the beginning,' Mr Curtain-Magee said. 'Our students love computer games, but the sheer scale of the undertaking was something that they weren't all prepared for.'

'Establishing and sticking to a realistic timeline was a huge challenge.'

'The four students who completed the competition demonstrated amazing resilience in seeing such a challenging project through to the end.'



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Teams of up to four students must work together to complete all stages of their project – from planning through to testing – so communication and collaboration are key to success in the Australian STEM Video Game Challenge.

'One of the huge benefits of the project was how it showed the students how different people working in different areas all contribute to a project together,' Mr Curtain-Magee said. 'Our artists and level designer, for example, had to work together to ensure our game sprite didn't float in mid-air.'

In 2017, teams were asked to address the theme of 'Reaction' and Kalianna's entry, *Gizma's Adventure*, follows the adventures of a new robot unable to read emotions that must learn to recognise and understand feelings. It was built using Scratch and won the Years 9–12 open platform category.

Research shows that people learn best when they are actively working on meaningful projects and Mr Curtain-Magee said that having something physical to show for their work was 'enormously beneficial' for the students at Kalianna.

Asked if Kalianna School Bendigo was planning to take part in this year's Challenge, Mr Curtain-Magee said interest levels from students was high.

'Since the competition in 2017, I've had about a dozen students approach me to say they want to try it,' he said. 'Given the volume of requests, I can't really say no, can I?'



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