

## Matt Hill

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### Keywords:

Automate a railway crossing through online simulation using robotics and coding

### Learning areas:

Digital & design technologies

## Tinker Time

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Learn how to use Snap and block coding to automate a railway crossing using an online simulator. Participants will also learn how to use components of the Hummingbird robotics kit.

### Participants will:

- Learn about the hummingbird robotics kit
- Use the online simulator to code a range of equipment such as Servos, motors and LED'S
- Use block coding to automate the railway crossing

Matt's interest in STEM began as a school student where he was heavily involved in his school's Energy Breakthrough team. Since school, Matt has worked in a number of areas, most recently as a teacher in the P-Tech Program at Federation College delivering digital media classes. For many years Matt worked in sport development, predominantly working with schools running PE classes, training teachers, and developing program resources.

### Preparation materials:

Don't worry if these files look weird when you open them, delegates will be instructed how to use them during the workshop.

Snap! Coding Website: <https://snap.berkeley.edu/snap/snap.html>

Hummingbird Simulator.xml [https://butterfly-puma-9je7.squarespace.com/s/R\\_24bEmHcnA8sODqv\\_Hummingbird-Simulator.xml](https://butterfly-puma-9je7.squarespace.com/s/R_24bEmHcnA8sODqv_Hummingbird-Simulator.xml)

Railway Crossing simulator .xml <https://butterfly-puma-9je7.squarespace.com/s/Railway-Crossing-Simulator.xml> 5