



# Back in the Game

<b>INDUSTRY FOCUS AREA:</b>	Food & Fibre
<b>VICTORIAN CURRICULUM LINKS:</b>	Digital Technologies, Science, Critical and Creative Thinking, Personal and Social Capability
<b>TECHNOLOGY USED:</b>	Virtual Reality, Robotics, Coding
<b>YEAR LEVEL:</b>	Year 7 - 10
<b>DURATION:</b>	1 Day
<b>LEVEL:</b>	Beginner
<b>MAX STUDENTS:</b>	30

## Introduction

The Food and Fibre industry is one of the most important in Gippsland with over 3600<sup>1</sup> farms generating around \$1.1 billion<sup>2</sup> per year. One of the challenges of this industry is the aging workforce with the average farmer being around 60 years old. The aging workforce and farm related accidents mean that some farmers are finding it difficult to complete parts of their everyday work. Advances in technology, especially robotics, have the potential to greatly affect this industrial sector by doing jobs that people do not want or are unable to do. This technology has already started to influence our area with autonomous agricultural drones and GPS guided, self-driving tractors already in use in Gippsland.

## Program Summary

Students will be immersed in Virtual Reality to hear stories from local farmers who have become restricted in the jobs they are able to do because of age, accident, or disability. From this experience, students will work in teams to identify a challenge and create a problem statement which will form the focus of their project. In their teams they will design, build, program, and test a solution using robotics. To conclude the day, students will present their prototype and the challenges they faced.

## Taking part in this program, students will collaboratively:

- Use the Design Thinking Process
- Experience Virtual Reality
- Identify a real-world problem and propose a solution
- Build and program a robot prototype
- Test and debug their prototype
- Present their prototype and reflect on their work

## Career Links:

Carers: Disability Workers, Physiotherapist, Community Health Worker, Occupational Therapist

Technologists: Programmers, Software Engineer, Web Developer

Designers: Electrical Engineer, Food Technologist, Product Tester, Industrial Engineer

<https://www.fya.org.au/wp-content/uploads/2016/11/The-New-Work-Mindset.pdf>

<sup>1</sup> <http://www.agriculture.gov.au/abares/research-topics/aboutmyregion/vic-latrobe#agricultural-sector>

<sup>2</sup> <http://gippsland.com/aboutus/>

