Embedding career education in the Victorian Curriculum F–10

Design and Technologies – Food and fibre production, Levels 9 and 10

An existing learning activity linked to a particular learning area or capability in the Victorian Curriculum F–10 can be easily adapted to incorporate career education, enriching students’ career-related learning and skill development.

1. Identify an existing learning activity

**Curriculum area, sub-strand and levels:** Design and Technologies – Food and fibre production, Levels 9 and 10

**Relevant content description:** Work flexibly to safely test, select, justify and use appropriate technologies and processes to make designed solutions [(VCDSCD062)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD062)

**Existing activity:** Modifying production processes to respond to unforeseen challenges or opportunities, for example, climate change.

**Summary of adaptation, change, addition:** Investigating ways farmers are tackling climate change and acting as advisors to make recommendations for farmers.

2. Adapt the learning activity to include a career education focus

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| Existing learning activity | Adaptations, changes or extensions that can be made |
| Teacher leads students in discussion about climate change in Australia.  Teacher explains what climate change is and how agriculture affects climate change. Students list the impacts agriculture has on climate change. | Teacher introduces students to agriculture advisor careers, including:   * agronomist (soil pest and disease advice) * botanist (plant advice) * animal scientist (animal advice) * animal nutritionist (animal feed advice) * soil scientist (test soil nutrients, carbon, etc.) * climate analyst (measures and forecasts weather).   Teacher shows students the [Career Harvest](https://www.careerharvest.com.au/) website and the general tasks, personal requirements and qualifications these careers entail. |
| Students investigate the ways farmers are tackling their contribution to climate change. | Students are allocated a farm case study from the [Australian Farm Institute](http://www.farminstitute.org.au/calculators/case-study-videos) website. In groups, students watch the video and list the options provided for the farm to tackle climate change (three options are given during the video).  The students need to decide which of the options provided is viable using a sustainability Venn diagram. This involves looking at the economic, environmental and social sustainability of a project. For support on what sustainability means and how to make a Venn diagram, refer to the ‘Sustainability fact sheet’ in ‘Additional resources’. |
|  | After completing the three Venn diagrams, students need to come to a consensus as a group to decide which option is best for the farmer to tackle climate change. Students should imagine they are ‘advisors’ and explain to the farmer why they think the project should or should not go ahead. They need to decide on what sort of advisors they are, and present their decision from that advisor’s perspective. |
| Students present one way that farmers are tackling their contribution to climate change to the class. | Students present their advice to their classmates as if the classmates are the farmer. They provide a quick farm background and then the options and their reasons for their choice.  By the end of this task, students have made decisions from the perspective of an advisor; they have provided advice as an advisor would in a work context; and they have been given an insight not only to the possible advisor careers within the food and fibre industries, but also the tasks they would perform. |

Considerations when adapting the learning activity

* Teacher may need to research agriculture advisor careers to provide accurate information to students at the start of the activity.
* Teachers may need to watch case studies before allocating them to students to gain understanding of stories and group students according to the number of case studies available.

Additional resources to help when adapting the learning activity

* Cool Australia, ‘[Sustainability fact sheet](https://prod-media.coolaustralia.org/wp-content/uploads/2014/10/06163810/Sustainability-secondaryupdated-logo.pdf)’
* [Career Harvest](https://www.careerharvest.com.au/)
* Meat and Livestock Australia, ‘[Making Australia’s red meat industry carbon neutral](https://www.youtube.com/watch?v=-Ca7FhrHkgU&feature=youtu.be)’
* Meat and Livestock Australia, ‘[Greenhouse gas mitigation](https://www.mla.com.au/research-and-development/Environment-sustainability/greenhouse-gas-mitigation/)’

Benefits for students

Know yourself – self-development:

* Students work in teams and cooperate with others to reach a consensus on how sustainable the farmer’s approach is, developing their communication and teamwork skills.
* Students may need to be flexible and change their way of thinking when they receive new information regarding agriculture and climate change.

Know your world – career exploration:

* By researching the roles of agricultural advisors, including tasks, experience and education required, students better understand work and a variety of career pathways.
* Students gain an understanding of how society is affected by the economy and the work people are doing when they complete the Venn diagrams.

Manage your future – be proactive:

* Students will need to think critically and creatively to analyse information to help the ‘farmer’ make informed decisions in this role play.
* Students will better understand the effects of climate change on the future work, and learn to embrace the changes that need to be made to combat those effects.