Embedding career education in the Victorian Curriculum F–10

Design and Technologies – Engineering principles and systems, 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 and levels:** Design and Technologies – Engineering principles and systems, Levels 9 and 10

**Relevant content description:** Develop project plans to plan and manage projects individually and collaboratively taking into consideration time, cost, risk and production processes ([VCDSCD064](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD064))

**Existing activity:** Creating a production timeline to ensure efficient and safe sequences to make a design project such as an obstacle-avoiding robot.

**Summary of adaptation, change, addition:** Revising a timeline from the perspective of a project manager.

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 introduces/refreshes students’ knowledge of types of timelines and their benefits.  Students generate a timeline for a design project either of their choosing or as assigned by teacher. With teacher support if required, students identify the steps of the project from beginning to completion. They identify which steps need to be completed to move to the next step, and which steps can be completed concurrently. They analyse the safety requirements of each step, how much time is needed, any tools and materials required at each step, and any variables that may impact each stage. | Teacher leads a discussion about situations where timelines, with clear stages/workflows, are necessary in the workplace, such as in a project management setting. The following prompts cam be used for discussion:   * Whose job is it to create a project timeline? * What skills do they require? * What qualifications do project managers have? * What does a project manager do other than create timelines? * What sort of jobs/projects need project managers/timelines? (Consider both large examples, such as construction, setting up/overhauling a business and government projects, and small examples, such as small businesses creating products, a book in the publishing process, people packing goods for delivery.)   Students analyse their design projects from the perspective of a project manager (PM). They consider if the steps they have identified are the most efficient and cost-effective ways to proceed, and revise if necessary. |
| Students generate a Gantt chart or another form of timeline to show how the steps of the project will proceed. | Students analyse their timelines from the perspective of a PM, considering factors such as time needed for each stage in detail. They list stakeholders needed at each round and confirm their availability for the dates in the timeline, adjusting as needed. |
| Students get approval from teacher to implement processes mentioned in the timeline. Work on the design project will then begin. | Students reflect on how acting as a PM changed how they approached the planning of their design project. They identify what skills they developed and successes or challenges throughout the project. Students consider how they overcame hurdles and what they might do differently in the future. Students discuss what they learnt about the role of the PM and where else these skills might be useful. They use insight gained to add to career planning resources, such as an e-portfolio. |

Considerations when adapting the learning activity

* Prior to executing this activity, students must have researched a design idea.
* Teacher may want to plan an extra lesson to enable students to present the timeline to the class.
* Teacher may wish to familiarise themselves with answers to the questions mentioned in the activity.
* Throughout the activity, teacher can encourage students to see themselves as having project management skills, able to be used for their further schooling and career pathways.

Additional resources to help when adapting the learning activity

* [Office Timeline](https://www.officetimeline.com/online)
* Visme, [Timeline maker](https://www.visme.co/timeline-maker/)
* Lucidchart, [Why you should choose the project manager career path](https://www.lucidchart.com/blog/project-manager-career-path)

Benefits for students

Know yourself – self-development:

* Students identify areas of success and challenge, and build critical and creative thinking skills to overcome unforeseen problems.

Know your world – career exploration:

* Students experience the work of a project manager throughout the development and production of a design project.
* Students enhance their knowledge of ICT by using digital tools to create project timelines.

Manage your future – be proactive:

* Students learn to make informed decisions by analysing and revising their project steps and timelines to explicitly ensure their projects best utilise time and resources.
* Students develop skills to plan and manage further study and their careers by carefully analysing information and creating timelines.