Embedding careers education in the Victorian Curriculum F–10

Mathematics, Level 9

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

1. Identify an existing learning activity

**Curriculum area and level:** Mathematics, Level 9

**Relevant content description:** Solve problems involving simple interest [(VCMNA304)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA304)

**Existing activity:** Understanding that financial decisions can be assisted by mathematical calculations.

**Summary of adaptation, change, addition:** Exploring earning and saving versus earning and borrowing.

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

|  |  |
| --- | --- |
| Existing learning activity | Adaptations, changes or extensions that can be made |
| Teacher introduces the concept of interest being the ‘cost’ of borrowing money, i.e., fees charged by someone who lends money to another, for the inconvenience of not having that money ‘on hand’ to meet immediate needs and wants.  Teacher provides the simple interest formula:  *I* = *PRN* where *I* is the interest, *P* is the principal, *R* is the interest rate per time period (expressed as a fraction or decimal) and *N* is the number of time periods.  Teacher uses examples to apply the simple interest formula to solve problems related to investing money at simple interest rates.  Students review examples and discuss with teacher and peers. | Teacher discusses the notion of earning money and the concept of saving versus consuming income. They initiate class discussion about consuming money we haven’t saved – how does this happen? Where does the money come from when we spend money we don’t have?  Students discuss earning, saving and spending (including credit) behaviours in class.  Teacher makes links between the money spent on credit (borrowings) and the excess savings of others, then discusses with students the concept of interest being the ‘cost’ of borrowing money, as per standard lesson. As per standard lesson, teacher provides the simple interest formula. |
| Teacher sets a range of practical problem-solving tasks associated with using simple interest calculations to make financial decisions, for example, to find the total value of a simple interest investment after a given time period or to calculate the principal or time needed to earn a particular amount of interest, given the simple interest rate.  Students work through set examples and solve problems. | Students select a job or career of interest and research the standard wage or salary of this occupation.  With teacher guidance, students calculate earnings after tax. Students record these earnings and imagine this is their income. |
| Teacher reviews set problems in class and discusses responses and answers with students.  Students share decisions with peers in class discussion and provide their mathematical reasoning for these decisions.  For example, ‘I would start with $*P* as a principal at *R* = 4% p.a. simple interest, so that in *T* months I would have a total of $*Y*.’  Teacher models several students’ responses, including working, on board to facilitate class discussion. | Teacher asks students to take 10% of their after tax ‘annual earnings’ as calculated above in their first year of work and set this as a ‘principal’ (*P*) amount, and then find current savings rate on a term deposit account at a local bank (e.g. 3% p.a. interest) and set this rate as *R*.  Students model saving 10% of their wage earnings, and calculate total savings pool with simple interest after 1, 2, 5 and 10 years.  Students record and discuss results of savings and total earnings over time. |
| Teacher collects, corrects and provides feedback on students’ worked examples. | Teacher prompts discussion on what would be the result if students either spent all their income instead of saving, and/or they borrowed money above their wage-earning capacity. How would this affect current and future income capacity? |
|  | Teacher should encourage students to consider the impact of their findings on their short- and long-term career plans by thinking about the salary they might earn in the real world in the occupation they are interested in. This activity may also prompt students to research other jobs and occupations based on average annual earnings figures. |

Considerations when adapting the learning activity

* Teachers and students need to be aware that for most savings accounts, and almost all lines of credit, interest is calculated as compound rather than simple interest. However, the simple interest demonstration begins to show students the power of accumulated savings versus the impact of spending more than we earn (borrowing).

Additional resources to help when adapting the learning activity

* [The Australian Job Index](https://www.payscale.com/index/AU/Job)
* [Australian Taxation Office, simple tax calculator](https://www.ato.gov.au/Calculators-and-tools)
* Extension opportunity: [AMSI Calculate, ‘Mrs Sim’s Dollars and Sense’](https://calculate.org.au/2016/06/17/mrs-sims-dollars-sense/)

Benefits for students

Know yourself – self-development:

* By investigating potential earnings in a career of their interest, students know themselves better by building self-awareness in terms of their interests and perceived skills.
* By examining the effects that current alternative earnings, savings and borrowing behaviours may have on their economic wellbeing in the future, students learn to adapt flexibly and grow throughout life.

Know your world – career exploration:

* By researching average earnings for a job and considering how this level of earnings might be put to use, students understand the relationship between work, society and the economy.
* By investigating remuneration, taxation, personal lending and saving interest rates, students learn to use technology to research, organise and integrate career and personal financial information.
* By using online resources to investigate remuneration and taxation rates for specific careers and occupations, students increase current knowledge of labour market trends and opportunities.

Manage your future – be proactive:

* By considering, discussing and drawing conclusions regarding the impact of borrowing and saving of income earned, students learn strategies for making informed decisions.