Embedding career education in the Victorian Curriculum F–10

Digital Technologies, Levels 5 and 6

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:** Digital Technologies, Levels 5 and 6

**Relevant content description:** Explain how student-developed solutions and existing information systems meet current and future community and sustainability needs [(VCDTCD034)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTCD034)

**Existing activity:** Identifying data storage and access for existing information systems.

**Summary of adaptation, change, addition:** Evaluating access and storage of user data as developers of students’ own digital solutions.

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 discussion about identifying the purpose of information systems that students and their families commonly use.  Teacher elicits and lists features of those information systems. | Teacher introduces students to the work of software developers and why businesses need to collect and use data (i.e. developers help businesses build information systems; businesses collect data to contact customers, deliver goods, and refine marketing and products).  Students select an information system that they or their family commonly use, and collaboratively categorise the system’s purpose (e.g. for work, entertainment or communication).  Teacher guides students to evaluate the features of information systems that request or store data from users and explore patterns in each category. For example, shopping sites may request a delivery and billing address, while gaming sites may request a user’s age. |
| With teacher guidance, students identify data that information systems collect about users. | Teacher guides student reflections about the necessity of data collection, and which aspects of the information system rely on different categories within the data. For example, user age range affects viewing classifications or location data determines access to a site or program.  With teacher support, students are encouraged to consider what kinds of roles would use different categories of data. For example, personal data such as name, contact details and address are essential for people packaging items in a warehouse for delivery, whereas information given about a person’s age, gender and location could inform how a marketing department tailors advertising and promotions. Students reflect on which data that they consider private and which they consider public. |
| Teacher facilitates discussion and review about any data collected by student-created digital solutions, such as games tracking a high score or quizzes storing a user’s name and score. | Teacher and students collaboratively develop criteria for evaluating the collection of data in their own projects, based on their evaluation of existing information systems. Teacher guides students to investigate whether the data could identify a user (e.g. displaying student name compared with displaying a username, displaying a photo compared with displaying an avatar), and whether such data is protected from public access by features such as a username and password. |
|  | Students reflect on the skills they have used to store and protect the data from their student-created digital solutions. They compare this experience to real-world data-storage. Teacher may introduce career pathways to software development and data protection with students. |

Considerations when adapting the learning activity

* Teachers will need to have conducted a project that involves students gathering data from either each other (such as a program that tracks students’ nightly reading) or an external source. This provides students with a project that collects data to evaluate the security of their data storage, such as password protection and user retrieval.
* When used at the evaluation stage of student-created digital solutions or as a formative assessment task during the development phase, this activity may be useful to assist in developing student understanding of data storage and security.

Benefits for students

Know yourself – self-development:

* Students’ exploration of data that current information systems collect can assist in developing their understanding about online privacy. This is an important element of ongoing digital literacy, and their awareness of how they present themselves online.

Know your world – career exploration:

* Evaluating their own digital solution places students in the situation where they consider which data is necessary for their solution to be effective
* Students investigate how the collection and storage of data is involved in a wide range of industries, and ranging from stock data (product codes, suppliers and quantities) to employee data (personal information, hours worked, wages). This will give them insight into aspects of the world of work.
* By exploring the various uses of data gathered through information systems, students will gain insight into the wide range of career opportunities in this growth industry.

Manage your future – be proactive:

* Students reflect on the collection and storage of data as tools that assist businesses to make decisions. This raises their awareness of the opportunities available for work and learning in that field.
* By evaluating and adapting their own data storage and protection in the context of the work of software developers, students experience work.