Levels 9 & 10 Overview of units

Can offer different units every other year.

Digital Learning and Teaching Victoria
Digital Technologies case studies project

	Unit 1	Unit 2	Unit 3	Unit 4
Title / theme	Web Design	School Network	Coding	Creative Computing
Summary / intention	Students explore HTML, Dreamweaver and other web-authoring avenues. Students identify the problem and work through the problem solving methodology to create a solution to that problem.	Students investigate the components of our school network. Students explore network security in detail as well as investigation the back end database.	Students used micro:bits and block coding to develop their coding skills. They revised coding basics, loops, decisions and branching.	Students looked at data and information and stored data in a structured way using database software. They then design forms, queries and reports to search and present the data.
Approximate number of hours	26	26	26	26
Assessment piece or pieces	Webpages / HTML, Word Press and a Website Project including analysis, design, develop and evaluate.	School Network Audio Back End Database Project including Form design and creation	Mini Assessments with progress points checking against tutorials	Creating a database based on a case study
Hardware and software tools used	Laptops, WordPress, Adobe Dreamweaver	Code.org Internet Widget	MakeCode Microsoft micro:bits	Access Database

Curriculum Content Descriptions addressed:

DIGITAL SYSTEMS

VCDTDS045: Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems.

DATA AND INFORMATION

VCDTDI046: Analyse simple compression of data and how content data are separated from presentation.

VCDTDI047: Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements.

VCDTDI048: Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data.

VCDTDI049: Manage and collaboratively create interactive solutions for sharing ideas and information online, taking into account social contexts and legal responsibilities.

CREATING DIGITAL SOLUTIONS

VCDTCD050: Define and decompose real-world problems precisely, taking into account functional and non-functional requirements and including interviewing stakeholders to identify needs.

VCDTCD051: Design the user experience of a digital system, evaluating alternative designs against criteria including functionality, accessibility, usability and aesthetics.

VCDTCD052: Design algorithms represented diagrammatically and in structured English and validate algorithms and programs through tracing and test cases.

VCDTCD053: Develop modular programs, applying selected algorithms and data structures including using an object-oriented programming language.

VCDTCD054: Evaluate critically how well student-developed solutions and existing information systems and policies take account of future risks and sustainability and provide opportunities for innovation.

	Unit 1	Unit 2	Unit 3	Unit 4
DIGITAL SYSTEMS	☐ VCDTDS045	☒ VCDTDS045	☒ VCDTDS045	☐ VCDTDS045
DATA AND INFORMATION	☐ VCDTDI046	☐ VCDTDI046	☐ VCDTDI046	☐ VCDTDI046
	☒ VCDTDI047	☐ VCDTDI047	☐ VCDTDI047	☐ VCDTDI047
	☐ VCDTDI048	☐ VCDTDI048	☐ VCDTDI048	☒ VCDTDI048
	☐ VCDTDI049	☐ VCDTDI049	☐ VCDTDI049	☐ VCDTDI049
CREATING DIGITAL SOLUTIONS	☐ VCDTCD050	☐ VCDTCD050	☐ VCDTCD050	☐ VCDTCD050
	☐ VCDTCD051	☒ VCDTCD051	☐ VCDTCD051	☒ VCDTCD051
	☐ VCDTCD052	☐ VCDTCD052	☐ VCDTCD052	☐ VCDTCD052
	☐ VCDTCD053	☐ VCDTCD053	☐ VCDTCD053	☐ VCDTCD053
	☐ VCDTCD054	☐ VCDTCD054	☐ VCDTCD054	☐ VCDTCD054