



Computing

Description

VCE Computing has 4 main focus areas: *Data and information* looks at how data and information can be acquired, structured, represented and interpreted to extract meaning. *Digital systems* covers both the hardware and software components as well as networks (wireless, wired and mobile) and the internet. *Interactions and impact* gives an overview of the relationships within and between information systems and the effects of these in achieving economic and social goals. *Problem Solving methodology* refers to the process used to systematically create solutions to problems, needs and opportunities. As applied in this study design the methodology comprises four stages: analysis, design, development and evaluation.

Unit Topics

Unit 1: In this unit students focus on how data, information and networked digital systems can be used to meet a range of users' current and future needs.

Data Management: students collect primary data and create a digital solution that graphically presents the findings of the investigation.

Networking: students examine the technical underpinnings of wireless and mobile networks, and security controls to protect stored and transmitted data, to design a network solution.

Web Authoring: students acquire and apply their knowledge of information architecture and user interfaces, together with web authoring skills, when creating a website to present different viewpoints on a contemporary issue.

Unit 2: In this unit students focus on data and how the application of computational, design and systems thinking skills support the creation of solutions that automate the processing of data. *Programming:* students use a programming or scripting language to create solutions.

Data Management: students develop a sound understanding of data and how software tools can be used to manipulate it to create visualisations that are clear, usable and attractive.

Database Management: students apply all stages of the problem-solving methodology to create a solution using database management software .

Skill Development

Building websites, learning a programming language, setting up a class server, managing online resources

Possible Assessment Tasks

Production of Digital solutions, short tests, oral presentation

Activities/Camps/Excursions

Carry out surveys to collect primary data.

Career Options

Computer programming, Database Management systems, Network Management, Web Page developer, Applications Developer, Games programmer