



# 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*