



# Digital Technologies Policy

## Rationale:

The Digital Technologies curriculum enables students to become confident and creative developers of digital solutions through the application of information systems and specific ways of thinking about problem solving.

Students acquire a deep knowledge and understanding of digital systems, data and information and the processes associated with creating digital solutions so they can take up an active role in meeting current and future needs.

The curriculum has been designed to provide practical opportunities for students to explore the capacity of information systems to systematically and innovatively transform data into digital solutions through the application of computational, design and systems thinking.

The curriculum also encourages students to be discerning decision makers by considering different ways of managing the interactions between digital systems, people, data and processes (information systems) and weighing up the possible benefits and potential risks for society and the environment.

## Aims:

The Digital Technologies curriculum aims to ensure that students can:

- design, create, manage and evaluate sustainable and innovative digital solutions to meet and redefine current and future needs;
- use computational thinking and the key concepts of abstraction; data collection, representation and interpretation; specification, algorithms and development to create digital solutions;
- confidently use digital systems to efficiently and effectively automate the transformation of data into information and to creatively communicate ideas in a range of settings;
- apply protocols and legal practices that support safe, ethical and respectful communications and collaboration with known and unknown audiences;
- enhance learning opportunities, and the scope of learning through the discriminate and routine use of learning technologies;
- develop digital literacy and digital technologies skills;
- develop the students' knowledge and skills necessary for using a variety of equipment and resources; and
- develop an understanding of the principles for safety, when using materials and operating equipment.

## Structure:

Digital Technologies comprises of three related strands: Digital Systems, Data and Information, and Creating Digital Solutions.

Digital Systems	Data and Information	Creating Digital Solutions
Focuses on the hardware, software and network components of digital systems. Students initially learn about a range of hardware and software, and progress to an understanding of how data are transmitted between components within a system, and how the hardware and software interact to form networks.	Focuses on the properties of data, how they are collected and represented, and how they are interpreted in context to produce information. Students learn how data are represented and structured symbolically for use by digital systems, as well as techniques for collecting, managing and organising data that is used to solve problems and create and communicate ideas and information.	Explores the interrelated processes and associated skills by which students create digital solutions. Students engage in the four processes of analysing, designing, developing and evaluating. Creating Digital Solutions requires skills in using digital systems and computational, design and systems thinking, and interacting safely by using appropriate technical and social protocols.

### **Key concepts:**

Underpinning the learning in Digital Technologies is a set of key concepts that establish a way of thinking about problems, opportunities and information systems and provide a framework for knowledge and practice.

The key concepts of abstraction, data collection, representation and interpretation, specification, algorithms and development correspond to the key elements of computational thinking. Collectively these concepts span the key ideas about the organisation, representation and automation of digital solutions and information. They can be explored in non-digital or digital contexts and are likely to underpin future digital systems and provide a language and perspective that students and teachers can use when discussing Digital Technologies.

### **Implementation:**

- A Digital Technologies coordinator will be appointed to our school to lead a team which will provide whole school direction in the use of learning technologies.
- A Digital Technologies plan that reflects and builds upon objectives detailed in DET's 'eSmart Schools' document will be developed and implemented.
- The adoption of open-ended, constructivist learning practices is central to the purpose of learning technologies in schools, and is therefore an expectation of all teachers.
- Software will be predominantly tools that facilitate learning rather than drill and practice or content based programs.
- All staff members will be required to include Digital Technologies as an integral component of their individual professional development plans.
- Technical support by means of DET funded cluster and local technicians will provide specialised expertise where required.
- The community will be kept abreast of all progress in learning technologies, will be invited to be involved in the program where practicable, and will be provided with ongoing in-service opportunities.
- All staff members will access the Victorian Curriculum online at <http://victoriancurriculum.vcaa.vic.edu.au/> and are required to use it as the basis for developing and implementing the Digital Technologies curriculum.
- Learning opportunities must be provided that cater for the identified needs of each student.
- Student progress in Digital Technologies will be reported in half and end of year academic reports.
- Budgets that provide for the needs of the Digital Technologies program will be developed by the Digital Technologies Coordinator and staff, and resourced by school council.
- Staff at Bonbeach PS will be encouraged to attend Professional Development opportunities that will align with the current School Strategic Plan, Annual Implementation Plan, and be of benefit for the students, as well as personally.

### **Policy Evaluation:**

This policy will be reviewed as part of the school's three year review cycle.

**Approved by School Council on:** 14<sup>th</sup> November 2017