There is strong emphasis throughout on equity issues

In the implementation of this policy, emphasis will be given to:
- applications in all schools that support improvement in, and greater student access to, the school curriculum;
- increased student and teacher access to computer use;
- computer applications in Special Education and other special populations of students;
- Senior Secondary Computing Studies;
- curriculum support applications in schools.

Principles
The Education Department specifies that the following principles be followed:
- be congruent with sound educational practice, supporting learning opportunities appropriate to the social, emotional physical and intellectual development of individual children;
- encourage the use of the technology for a clearly understood purpose that has meaning to the students;
- assist students in learning how to learn to use future computer technology;
- be monitored to ascertain the impact on students' learning, students' perceptions of themselves in relation to computers, and students' perceptions of their future;
- be evaluated, and the information gained should guide the development of additional soundly-based educational applications;
- take account of the different experiences that students gain from computers out of school;
- relate the use of computers in the curriculum with the use of computers in school administration and outside the school;
• provide parents with information about the educational possibilities and limitations of computers, their actual and planned use in the school, and seek advice from parents with expertise to contribute.

For computers to be successfully integrated into schools, software must meet standards of excellence, and be:

• consistent with soundly based learning theory for the intended user group;
• gender inclusive;
• suitable for use in the multicultural environment of the school;
• consistent with good visual ergonomic practice;
• easy to use.

Angle Park Computing Centre is the Department’s software centre, and its products, under the Satchel name, are widely known and used Australia-wide.

Syllabi
There are no defined syllabi for other than Senior Secondary. There is therefore a wide range of computing activities from Junior Primary to Junior Secondary, depending on a school’s own focus, its resources, and staff interest and expertise. Word processing and publishing, database creation and use, graphics and music packages, Logo and Lego Logo, HyperCard, communications, CD-ROM: all are in use throughout the state.

At Senior Secondary level, the syllabi are presently in a state of flux, with the South Australian Certificate of Education (SACE) scheme beginning in 1992 at Stage 1, formerly known as Year 11. Stage 2, the former Year 12, begins in 1993.

SACE Stage 1 Computing
The Stage 1 Computing subject, within the Technology Broad Field of Study, has emphasis on skills and knowledge and understanding, as well as the literacy component common to all SACE subjects. Within a school, the course can be tailored to suit the available resources, and the abilities and experience of the students.

Twelve modules make up the course, with two modules per semester:

Foundation:
The Foundation Module underpins all further learning in computing. It is broadly based, and covers a range of skills and concepts which are important in computing.

The module is a ‘preferred’ module, that is, it, or at least its content, is regarded as essential to success in the other modules. Students who have had an introduction to computing in the earlier years of school may omit this module.

Spreadsheets:
This module, a preferred module, is concerned with the implementation of given algorithms for the processing and presentation of data using a spreadsheet package.

Databases:
The third of the preferred modules, the module is concerned with the processing and presentation of data using a database package.

Data Processing Applications:
This module is concerned with the processing and presentation of data using an application package. The module gives the opportunity to experience an application package other than spreadsheets or databases (eg. HyperCard applications, project management application, presentation software)

Spreadsheet Extension:
This module is concerned with the design and implementation of algorithms for the processing and presentation of data using a spreadsheet package. It assumes prior completion of the Spreadsheets module.

Database Extension:
This module is concerned with using multiple linked files for the processing and presentation of data using a database package. Prior completion of the Database module is assumed.

Data Processing Applications Extension:
This module is concerned with using data structures or modules for the processing and presentation of data using an application package. Prior completion of the Data Processing Applications module is assumed, and use of the same package is expected.

The Nature of Programming:
This module is concerned with the design and representation of algorithms and the production of modular programs using a structured programming language.

Program Design:
This module is concerned with the design and implementation of algorithms for the processing and manipulation of numeric and string data types or lists using a structured programming language. Prior completion of the Nature of Programming module, or equivalent experience, is assumed.

Introduction to Computer Hardware:
This module is concerned with the historical development of computer hardware and the understanding of the nature and function of contemporary computer systems.

Using Communications Technology:
This module is concerned with the principles, use and impact on society of computer based communications technology.

SACE Stage 2/Year 12 SAS Computing Studies
The Year 12 SAS (School Assessed Subject) Computing Studies Course has been in use since 1986, when it replaced a course in effect for the previous four years. It is due for reaccreditation at the end of 1992, and proposed changes are currently being discussed.

The course is flexible, to cater for students with varying abilities and expertise, and can be approached from principally practical or mainly theoretical directions, or any combination. Student work is moderated. There are nine modules in the syllabus, with any four making up a one year course, any two, a semester length course. The modules are:

Computer Concepts:
This module introduces students to the
basic elements of the modern computer system and is designed for students who have not previously undertaken subjects in Computer Science. It deals with the essential components of a computer, its internal logic, and data representation.

Introduction to Computer Architecture:
Introduction to Computer Architecture caters for students who wish to gain a greater understanding of the internal architecture of the modern computer. The Computer Concepts module, or an equivalent, is a prerequisite, and the module deals with Boolean logic and its implementation in hardware.

Introduction to Programming:
A module for students who wish to develop skills associated with programming in a high-level computer language which supports structured programming, and to understand methods of problem-solving as used by the computing profession. The module covers the analysis, design, code, validate model of programming, and may be taken with Logo, Pascal or a structured Basic.

Programming in Pascal:
Programming in Pascal is designed to be undertaken by students who have not previously studied Pascal and who are interested in learning the basic elements of this modern computer language. The module extends many of the concepts and practices covered in the module Introduction to Programming. The emphasis is on problem solving and algorithm design, but more advanced students may progress as far as file operations.

Computer Applications:
This module, probably the most popular, is intended to be of value to students who seek to use the computer as a tool in their work. The packages studied are word processors, electronic spreadsheets and simple file management systems. Over the years, word processing skills have come to be taken for granted, and the emphasis has increased on the other two aspects. The two most used packages are Microsoft Works, both on MS-DOS and Macintosh, and the Satchel Forté package for MS-DOS machines, which allows the concepts of relational databases to be explored.

Databases and Communications:
Databases and Communications caters for students who wish to gain a greater understanding of information technology. The module introduces the database technologies which are implemented through computers, and emphasises the efficient use of those technologies. Various forms of database are studied, together with the use of set theory and query languages. The communications part of the module deals with both technical and practical aspects of computer communication.

Information Systems:
In this module students interested in the use of computers in the business environment will be able to examine the business applications of computer technology and the methods used by business systems analysts to describe problems and structures. Accounting and stock control systems and the like, and their development, form the main content of the module.

Implications:
Implications is designed for students who wish to study the impact of the information technologies on society. In practice, it is often studied in parallel with the Computer Applications module, and examines aspects of privacy, security, computer crime, effects on employment, economic aspects, and so on. Artificial Intelligence is briefly considered.

Computing Studies Project:
The Computing Studies Project will enable students to put into practice the skills mastered in the other modules of the course. Skills developed should be further enhanced and it will give students an even greater scope for creativity in this subject.

Other Subjects
Also at Senior Secondary level are the subjects Business Mathematics and Professional Typing, both of which have computing components.

Resources
The Department publishes a number of policy and rationale documents.

They are available from The Orphanage Shop, The Orphanage Teachers Centre, 181 Goodwood Road, Millswood SA 5034. SACE syllabus documents are supplied by SSABSA, 60 Greenhill Road, Wayville SA 5034.

Schools Computing Policy
This statement sets out the policy of the Education Department of South Australia in respect to the role and use of computers in schools, and describes the priorities for the support of schools computing activities. (Quotations in this article come from this document.)

Code: W1543 $5.95

Schools Computing Rationale Statement
This document, developed by specialists in educational computing, provides schools with background information for developing policy and practice in computer use. It is an excellent informative resource for administrators, teachers and parents.

Code: W1594 $7.50

Computing in the Senior Secondary School
This document is part of a series about schools computing and the development of computer literacy. Nineteen topics are described and, by selecting from these topics, courses for senior secondary students can be developed.

Code: W1593 $8.95

Computing 8-12: Computers and Humanities
Computer use in History and other humanities subjects, by an experienced classroom teacher.

Code: WIN 0019 $5.95

Computing R-7: Using Computers in the Primary School
An overview of computer use at primary level, with description of successful projects, and useful ideas.

Code: WIN 0017 $7.95

Technology/Computing R-7: Straining the Brain
A look at problem solving, using computers and other technologies.

$7.95

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