



ST JOHN FISHER CATHOLIC SCHOOL

Science and Technology Policy

INTRODUCTION

St John Fisher Catholic School is a K-6 learning environment in which the children are arranged according to multi-aged learning groups of K/1, 1/2, 3/4, Year 5 and Year 6. Students in Early Stage One/Stage One will participate in a three-year learning cycle and students in Stage Two and Stage Three will participate in a two-year learning cycle (see Appendix 2 of this policy). The units of work within these cycles are organised so as to expose the students to a variety of learning experiences across all of the six learning strands of the *Science and Technology K-6 Syllabus and Support Document*. Units of work will be designed so as to enable students to experience the outcomes through the learning processes of investigating, designing and making, and the use of a range of technologies. Learning experiences will be planned and selected so that they allow students to explore and develop outcomes encompassing knowledge and understanding, skills, and values and attitudes.

PURPOSE/RATIONALE

Through application of this policy, Saint John Fisher Catholic School aims to:

- ensure that each student is given the opportunity in Science and Technology to attain concepts, skills, knowledge and understandings as defined by the *Science and Technology K-6 Syllabus*;
- provide a quality education and promote a desire for excellence among teachers and students within the area of Science and Technology;
- provide opportunities for students to explore, use and become familiar with a range of everyday technological instruments;
- develop a desire to be active participants in our scientific and technological society;
- encourage students to make a positive contribution and to care for their environment.

AIM

The teaching of content from the *Science and Technology K-6 Syllabus* aims to "...develop students' competence, confidence and responsibility in their interactions with science and technology leading to:

- an enriched view of themselves, society, the environment and the future;
- an enthusiasm for further learning in science and technology." (*Science and Technology K-6 Outcomes and Indicators*: Board of Studies NSW2000, page 6).

BELIEFS ABOUT TEACHING AND LEARNING

The teaching staff of Saint John Fisher Catholic School believe that:

- Science and Technology content should be interesting and stimulating for the students;
- learning activities should be hands-on, wherever possible, and incorporate a range of investigating, designing, making and knowledge building tasks within each unit of work;
- Science and Technology programs should present students with open-ended tasks that cater for all student abilities;
- students should participate in a combination of individual, small group and large group activities in each unit of work;
- the teaching content of Science and Technology units should be relevant to the lives of the students.

RELIGIOUS DIMENSION

Learning experiences within the Science and Technology curriculum area allow students to develop their awareness and appreciation of the wider world and all of the natural wonders within. The students are given the chance to explore the natural phenomena of their world, as created by God, as well as the aspects that have been discovered and built by humans for the benefit of humankind. It is envisaged that students will develop a respect for, and a commitment to, caring for God's beautiful environment as a result of their learning within the curriculum area of Science and Technology.

OUTCOMES

As a consequence of this policy it is envisaged that:

- students will come to appreciate Science and Technology as an essential and relevant part of life;
- students will be inspired and motivated to participate in learning activities with the curriculum area of Science and Technology;
- teachers will implement balanced Science and Technology programs which include exposure to all six strands of the *Science and Technology K-6 Syllabus* (Built Environments, Information and Communications, Living Things, Physical Phenomena, Products and Services and Earth and its Surroundings) in each learning stage;
- teachers will plan a variety of learning activities that will develop the students' knowledge, skills and understandings across the six strands of Science and Technology through investigation, design and make and the use of technology.

REQUIREMENTS

- teachers will program Science and Technology according to the NSW Board of Studies *Science and Technology K-6 Syllabus* document, the NSW Board of Studies *Science and Technology K-6 Outcomes and Indicators* document and the requirements within this policy statement;
- learning activities within individual programs should allow modification for those students with learning difficulties, as well as extension for those students who are talented in the curriculum area of Science and Technology;
- Science and Technology may be taught as a stand-alone curriculum area or within an integrated program, but with an expectation of a minimum of one hour of specific Science and Technology content per week. Alternatively the program may be taught as a block over a short period of the school term, for example three half days in one week;
- content from the *Science and Technology K-6 Syllabus* must be taught within each school term of the year;
- teachers will take into account the requirements of the Occupational Health and Safety Guidelines when planning and conducting Science and Technology activities.

REFERENCES

- Saint John Fisher Catholic School's Vision Statement.
- Diocese of Broken Bay Vision Statement
- NSW Board of Studies (1993): *Science and Technology K-6 Syllabus*.
- NSW Board of Studies (1998): *Science and Technology K-6 Outcomes and Indicators*

EVALUATION

The respective class teachers will evaluate the suitability of the units of work within each stage at the end of each cycle year. Any modifications that will be required are to be passed on to the Science and Technology Key Reference Teacher within the school.

This Science and Technology Policy will be reviewed by the Science and Technology Key Reference Teacher/School Executive Committee in 2005.

APPENDIX A

List of Resources

Saint John Fisher Catholic School Intranet Site.

This web page contains links to a copy of this policy, current units of work, programming templates and evaluation samples. It also contains links to resources on the World Wide Web, such as the Board of Studies Site, the Broken Bay Diocese Science and Technology Site, and relevant links to units of work (e.g. Bureau of Meteorology).

The Broken Bay Diocese Science and Technology Site (<http://sjb.nsw.edu.au/~hession/>)

This site contains units of work that have been produced and published by teachers within the Diocese of Broken Bay. Teachers are able to retrieve and use these units of work as their program for the term if it is applicable.

Science and Technology K-6 Students Work samples CD ROM.

This CR ROM contains units of work and student work samples. Teachers are able to retrieve and use these units of work as their program for the term if it is applicable.

APPENDIX B

Scope and Sequence of Science and Technology Units

The following units of work have been arranged according to a three-year cycle (Early Stage 1/Stage 1) and a two-year cycle (Stage 2 and Stage 3), so as to allow the students to have learning experiences across all six content strands of the *Science and Technology K-6 Syllabus* without

The strand symbols are as follows: BE (Built Environments), IC (Information and Communication), LT (Living Things), PP (Physical Phenomena), PS (Products and Services) and ES (Earth and Its Surroundings)

| EARLY STAGE 1/STAGE 1 | | | |
|------------------------------|---|--|---|
| Strand | Cycle A (2000, 2003) | Cycle B (2001, 2004) | Cycle C (2002, 2005) |
| BE | | House of Bricks | |
| IC | | Let' Communicate | |
| LT | | What's Alive (see also Living Things) Sense of Direction | |
| PP | | | Toy World (see also Moving Things) |
| PS | What's for Lunch (see also Good Tucker and The Food We Eat) | | Kid's Care Getting About |
| ES | Air Water A Place in Time | | Light and Sound |

| STAGE 2 | | |
|----------------|--|---|
| Strand | Cycle A (2000, 2002,2004) | Cycle B (2001, 2003, 2005) |
| BE | Indoor, Outdoor | |
| IC | | Sounds Great |
| LT | A Look Inside Mini Worlds or Australian Plants and Animals (see also Wildlife Rescue) | |
| PP | Stuck on You | Making It Easy (see also Simple Machines) or Out and About |
| PS | | Material World |
| ES | | Cycles In Our World |

PLEASE NOTE: The Stage 3 topics that are prefaced by the symbol (C) are **compulsory units of work** that must be taught within that year cycle. The remainder of units for the year may be selected from any of the other topics within that year's cycle.

| STAGE 3 | | |
|----------------|--|--|
| Strand | Cycle A (2000, 2002, 2004) | Cycle B (2001, 2003, 2005) |
| BE | Alternative Energies | (C) The Best Place to Live (Zoo/Human Habitats & Enclosures) |
| IC | (C) Visual Ventures | Way Out Communication |
| LT | (C) Environment Matters (see also Environment Matters 2) | A Change for the Better |
| PP | Sailing, Sinking, Soaring Light Up My Life | (C) Electrical Circuits (see also Switched On) |
| PS | | (C) Food for the Tucker Box |
| ES | (C) Out In Space | What's The Weather? Sun Safe |