ST ALBERT’S CATHOLIC SCHOOL
DESIGN & TECHNOLOGY POLICY

Introduction
Design and Technology education creates technologically literate learners who critique, design and make products, processes and systems. There are four clear and interconnected phases of any technology—the intentions at its conception, its design, its manufacture and its consequences (which often interact with those of other technology).

Rationale
At St Albert’s Catholic School we believe that Technology involves the creation of products, processes and systems to solve perceived problems or meet perceived needs. Design is integral to the creation of new technologies and involves changing one set of circumstances into another. Designing can be complex, drawing on established and new values, skills, techniques, knowledge and thinking to achieve particular goals.

Technology is very much concerned with procedural knowledge (know-how) and there are many valuable techniques to be learned through critiquing, designing and making. It is a dynamic and diverse Learning Area, the content of which is very much determined by local contexts and the needs of children and students.

Aims
At St Albert’s Catholic School the Design and Technology Learning Area aims to develop in all students:

- ethical, critical, enterprising and futures dispositions towards their own and other people’s designed and made products, processes and systems;
- capacities to identify and critique the values underlying the intentions, design, manufacture and consequences of any technology;
- capacities to consider and respond to the needs of diverse cultures in relation to developing technologies;
- broad-ranging design skills to create innovative solutions to design briefs and problems;
- broad-ranging techniques for manipulating materials to create products, processes and systems;
- skills in communicating their thinking, ideas and plans for products, processes and systems;
- capacities of responsible management and duty of care towards themselves and others when designing, making and using;
- capacities to apply their technology learning to other Learning Areas, to life in the wider community, virtual community, and in accessing further education and training.

Methodologies
Technological literacy can be viewed as having three dimensions, all of which are equally valid and important. All children and students benefit from all dimensions of technological literacy and must not be constrained in their learning to one aspect alone. There are three dimensions and they are operational, cultural and critical.
The **operational**, through which learners develop skills and competencies, at a technical level, to use materials and equipment in order to make products and systems (they learn to use and do).

The **cultural**, through which learners contextualise their learning in the world of designed and made products, processes and systems. They recognise the interdependence of technologies with people at home, in further education and training, at work and at play, and they apply their technical learning in practical ways to realise designs and solve practical problems (they learn through technology).

The **critical**, through which learners are empowered to take a full and critical role as autonomous citizens in technological societies. They are able to make refined judgements about the worth of the intentions and consequences of technological products, processes and systems on themselves and others. They reflect on technologies and take subsequent personal and civic action in the light of this reflection (they learn about, and how to be with, technology).

**Scope**

The Design and Technology Learning Area is articulated through three strands. These reflect the processes of thinking and doing that constitute a quality education common to any technology (e.g. agriculture, architecture, information technology and communication technology, electronics, engineering, food, genetics, media, robotics, textiles, viticulture).

The **three strands are:**

1. Critiquing;
2. Designing;

These three strands are interdependent and none of them is predominant. Each strands reads alongside each other, they do not constitute a sequential process. They interrelate to support rich understandings. A quality Technology education weaves the three into a dynamic and holistic learning experience for all students. Each strand is organised around Key Ideas.

Through design and technology, learners demonstrate and further develop their skills, knowledge and understandings in literacy, numeracy and information and communication technologies.

Learners develop and use operational skills in literacy to understand, analyse, critically respond to and produce appropriate spoken, written, visual and multimedia communications in different contexts. They pose critical questions to challenge the intentions and consequences of technology in diverse contexts.

Learners develop and use operational skills in numeracy to understand, analyse, critically respond to and use mathematics in different contexts. These understandings relate to measurement, spatial sense, patterns and algebra and data and number.

Learners develop and use operational skills in information and communication technologies to critically design and construct texts, search for and sort information, and communicate with others.
Assessment and Reporting

We will use the following strategies for assessment in Technology:

- observation;
- anecdotal records;
- written work and responses to specific question;
- oral presentations;
- multimedia presentations;
- discussions;
- questioning;
- tasks/open ended tasks, projects and research;
- group work;
- drama presentation;
- visual response (the arts);
- ICT tasks;
- genre choices and correct language used;
- building models;
- web quests;
- self reflection;
- peer assessment;
- cloze activities;
- investigations;
- design modifications;
- critiquing;
- making/designing;
- appropriate application of range of technologies.

Reporting

Information concerning student achievement can fall into four main categories, which are:

1. curriculum outcomes;
2. the teacher’s judgments about the students performance;
3. the student’s perceptions of own performance;
4. future actions to be taken as a result of the assessment.

Assessment information needs to be reported to:

- the students so that they know whether they are meeting learning goals;
- the parents/caregivers so that vital information relevant to a student’s learning is accessible;
- outside agencies as required.

Reporting to parents about student learning can be done in a variety of ways, including:

- information sessions;
- written reports;
- interviews;
- open days;
- student learning records;
- sample work folders.
Evaluation

Evaluation is an ongoing process. Information for use in evaluation may be gathered through: student assessment; teachers’ own reflection on their teaching practices; written records such as questionnaires, logs and diaries, submissions or records of meetings; and discussion with general staff members, teaching staff (including any specialist teachers involved), parents and other community members.

Teachers need to gather, organise and interpret information in order to make judgments about the effectiveness and appropriateness of:

- curriculum overviews and plans;
- teaching programs;
- teaching strategies;
- assessment strategies;
- resources;
- staff development programs.

Time Allocation

This curriculum area can be integrated with other curriculum areas. A minimum of one hour is required each week.

Signed:

Chairperson School Board: Justine Fogden…………………

Principal: Jason Mittiga……………………

Date: September 2011   Review Date:   September 2014
<table>
<thead>
<tr>
<th>Strand</th>
<th>At Standard 1, towards the end of Year 2, the child</th>
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</thead>
<tbody>
<tr>
<td><strong>Critiquing</strong></td>
<td>1.1 Makes judgments about the significance of different characteristics of products, processes and systems made by themselves and others. [T] [KC1]</td>
</tr>
</tbody>
</table>
| **Designing**  | 1.2 Demonstrates an initial variety of design practices and recognises design as a tool for change. [F] [T] [C] [KC6]  
                  1.3 Shares a variety of ways of communicating their design ideas and thinking. [T] [C] [KC2] |
| **Making**  | 1.4 Acts confidently through using materials and equipment to make products, processes and systems. [T] [KC7]  
                  1.5 Explores current and alternative uses of materials and equipment in creating products, processes and systems. [F] [C] [KC1]  
                  1.6 Understands the importance of simple organisation and safety issues in terms of their consciousness of people and fairness. [Id] [In] [KC1] |

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<thead>
<tr>
<th>Strand</th>
<th>At Standard 2, towards the end of Year 4, the student</th>
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<tbody>
<tr>
<td><strong>Critiquing</strong></td>
<td>2.1 Identifies a range of ways in which the design of everyday products, processes and systems is related to those who use them. [In] [T] [KC1]</td>
</tr>
</tbody>
</table>
| **Designing**  | 2.2 Develops a range of design skills and uses them to effect change. [F] [T] [KC3]  
                  2.3 Uses a range of communication forms and technologies, as a means of self-reflection and to describe their design ideas, thinking and planning. [T] [C] [KC2] [KC7] |
| **Making**  | 2.4 Demonstrates effective use of a broad range of materials and equipment, and reflects on their personal interaction with resources they use. [Id] [T] [KC7]  
                  2.5 Identifies the characteristics of a range of materials and equipment, and explains the relationship of those characteristics to designed and made products, processes and systems. [In] [C] [KC2]  
                  2.6 Identifies the reasons for managing resources effectively and for working in personally and socially safe and responsible ways. [Id] [In] [KC1] |
<table>
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<tr>
<th>Strand</th>
<th>At Standard 3, towards the end of Year 6, the student:</th>
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<tbody>
<tr>
<td>Critiquing</td>
<td>3.1 Describes the significance to diverse groups of people of the various criteria used in the design of particular products, processes and systems. [In] [T] [KC2]</td>
</tr>
<tr>
<td>Designing</td>
<td>3.2 Understands and uses the relationship between different design skills to become better designers. [F] [In] [KC1]</td>
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<tr>
<td></td>
<td>3.3 Selects appropriate communication forms and technologies to document and convey clearly design ideas, thinking and organisation. [T] [C] [KC2]</td>
</tr>
<tr>
<td>Making</td>
<td>3.4 Demonstrates skills and confidence in creating products, processes and systems which respect personal and collective identities. [Id] [T] [KC6]</td>
</tr>
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<td></td>
<td>3.5 Investigates the characteristics of materials and equipment used in design and production in order to achieve sustainability. [F] [In] [KC7]</td>
</tr>
<tr>
<td></td>
<td>3.6 Identifies and articulates a range of responsible strategies for managing resources and working safely. [F] [In] [C] [KC2] [KC3]</td>
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<tr>
<th>Strand</th>
<th>At Standard 4, towards the end of Year 8, the student:</th>
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<tbody>
<tr>
<td>Critiquing</td>
<td>4.1 Explains the decisions and choices made in designed and manufactured products, processes and systems and identifies alternative possibilities. [In] [T] [KC2] [KC6]</td>
</tr>
<tr>
<td>Designing</td>
<td>4.2 Integrates design skills to create personal strategies for designing culturally and socially defensible products, processes and systems. [F] [In] [KC6]</td>
</tr>
<tr>
<td></td>
<td>4.3 Demonstrates skills in using a broad range of recognised communication forms and technologies to convey design thinking. [T] [C] [KC1]</td>
</tr>
<tr>
<td>Making</td>
<td>4.4 Effectively uses, in personally and interpersonally appropriate ways, a range of skills that achieve consistent production outcomes. [Id] [T]</td>
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<td></td>
<td>4.5 Evaluates materials and equipment in order to meet principles of function, aesthetics and sustainability. [F] [In] [KC1]</td>
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<tr>
<td></td>
<td>4.6 Analyses and applies the principles of good resource management, sustainability and duty of care in their design and making practice. [F] [In] [KC3]</td>
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Design and Technology Content Scope:

**R-2 Early Years Band**  
**Design and Technology**

<table>
<thead>
<tr>
<th>Strand</th>
<th>Scope Key Ideas</th>
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| Critiquing  | *Children develop understanding about people, diversity and the technological world, and learn to question by assessing their own and others’ products, processes and systems.  
(T) (KC1)                                                                                                                     |
| Designing   | *Children recognise and use different ways of thinking, planning and preparing that are helpful in achieving and presenting their designs. They learn that by designing it is possible to effect change.  
(F) (T) (KC1)(KC2)(KC3)                                                                                                        |
|             | *Children use different strategies, including using a range of technologies, for successfully reflecting on, communicating and expressing to others their design ideas and thinking.  
(Id) (T)(C)(KC1)(KC2)(KC6)(KC7)                                                                                               |
| Making      | *Children develop confidence in their capacity to use materials and equipment to make products, processes and systems and, in so doing, reflect on how they work.  
(T)(KC1)(KC6)(KC7)                                                                                                              |
|             | *Children analyse and explain the uses and potential of equipment to make products, processes and systems and in so doing, reflect on how they work.  
(T)(KC1)(KC2)(KC7)                                                                                                              |
|             | *Children analyse the importance of organisation and safety rules, in order to use resources well and consider the personal and social responsibilities involved when working with others.  
(In)(C)(KC1)(KC4)                                                                                                               |
## Primary Years Band Year 3-5
### Design and Technology

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<tr>
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<th>Scope Key Ideas</th>
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<tbody>
<tr>
<td>Critiquing</td>
<td>*Students identify relationships between people, diversity and everyday products, processes and systems. They investigate design characteristics, which shape, and are shaped by, these relationships and suggest why the particular design criteria may have been used. (In)(T)(KC1)(KC2)</td>
</tr>
</tbody>
</table>
| Designing | *Students learn a range of specific design skills, which help them to design more effectively and develop their thinking and capacity to effect change. (F)(T)(KC3)  
*Students reflect on their own work by clarifying and communicating their design ideas and they’re thinking and planning for products, processes and systems.  
*Students use effective design communication methods, including appropriate digital and electronic technologies (T)(C)(KC2)(KC7) |
| Making    | *Students learn techniques and demonstrate competence in using a broad range of materials and equipment for making products, processes and systems. They reflect on how they work with the equipment and materials they use and, in so doing, improve their practice. (Id)(T)(KC7)  
*Students identify, explain and value the characteristics and uses of a range of materials and equipment, they use this knowledge when critiquing their own and others’ designs for products, processes and systems. (In)(C)(KC1)(KC2)  
*Students understand, give reasons for, and manage equipment and resources responsibly and effectively, and work in ways which respect diverse personal and social identities (Id)(In)(KC3)(KC7) |

## Middle Years Band Year 6-7
### Design and Technology

<table>
<thead>
<tr>
<th>Strand</th>
<th>Scope Key Ideas</th>
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<tbody>
<tr>
<td>Critiquing</td>
<td>*Students analyse and explain the design decisions and thinking implicit in products, processes and systems made by themselves and others. They develop as initial understanding of the competitive nature of the world. (In)(T)(KC1)(KC2)</td>
</tr>
</tbody>
</table>
| Designing | *Students understand and value the combining of different design skills in order to create personal strategies to become better designers of culturally, environmentally and socially defensible products, processes and systems. (F)(In)(KC6)  
*Students use a full range of communication skills and techniques in the design field, including information and communication technologies, to document and communicate effectively their design thinking, ideas and proposals. (T)(C)(KC2)(KC7) |
| Making    | *Students demonstrate skills in creating products, processes and systems that achieve consistent production outcomes. They apply these skills in enterprising and empowering ways to personal and group situations. (In)(KC4)(KC6)  
*Students apply their knowledge of the characteristics of materials and equipment to meet criteria related to function, aesthetics, sustainability and production. (F)(In)(KC3)(KC6)  
*Students describe and communicate principles of good resource management and duty of care, and integrate them into socially and environmentally sustainable designing and making practice. (F)(In)(C)(KC2)(KC3) |