RATIONALE

At St Joseph’s School, the domain of Design, Creativity and Technology emphasises engagement in designing, creating and evaluating processes, products and technological systems using a range of materials as a way of developing creativity and innovation. Creativity in this domain can be described as applying imagination and lateral and critical thinking throughout design and development processes. Innovation is an outcome of the broad exploration of ideas, materials/ingredients, and technical processes that can occur when individuals are involved in investigating, designing, producing, analysing and evaluating their own and others’ products and/or systems.

Design is a vital step in transforming ideas into creative, practical and commercial realities by optimising the value of products and systems. Designing and its application involve planning and organising production, and evaluating products in a real context. Contexts may relate to; for example, what we grow, eat, wear, build, make, our health and safety, and how we travel and spend our leisure time. Designers consider problems, needs, wants and opportunities and respond to them by developing a range of ideas, which are developed into products or systems.

Development of capability in this domain includes the ability to use, manage, assess and understand design, creativity, technology, and their relationship to innovation. In more detail, this involves students:

- posing problems and actively identifying needs, wants, opportunities and areas for improvement
- gathering information and building knowledge about the nature of needs, wants, opportunities and areas for improvement and the best routes to take towards designing a solution
- developing and using design and technology skills, knowledge and processes, including proposing, experimenting, learning from results and synthesising, to create new and/or improved products and/or systems
- using tools, equipment, materials/ingredients and systems components safely and creatively to make quality products and/or systems
- understanding that design, creativity and technology leads to innovation
- assessing the outcomes of design and technology processes, and the resulting products and technological systems in relation to environmental, social and economic factors.

This domain involves experiential, practical and applied knowledge as well as theoretical understanding. It requires students to be autonomous and creative problem-solvers, as individuals and as members of a team. Students combine an understanding of design, functionality, aesthetics, social, cultural, economic and environmental issues, and industrial practices with practical skills. As they do so, they reflect on and evaluate past and present design and technology, its uses and effects.

The Design, Creativity and Technology domain focuses on development of students’ skills in managing and manipulating materials and resources using a range of tools and equipment to make functional physical products or systems.
BELIEF STATEMENTS

We believe that children develop knowledge and skills in the area of Design, Creativity and Technology best when:

- They are immersed in and surrounded by technological experiences.
- They learn and are able to use technologically oriented language.
- They are supported by a classroom environment enriched with visual displays.
- They are supported by a range of appropriate concrete materials.
- They are given frequent opportunities to use and practice the processes of investigating, designing, producing and evaluating.
- They receive numerous technological demonstrations.
- They are guided towards new understandings through a variety of approaches and strategies.
- They are expected to use technological understandings flexibly and imaginatively.
- They are given frequent opportunities to use and practise their technological skills and understandings in a broad range of real life situations.
- They are encouraged to use approximations and to take risks in their encounters with technological experiences.
- They receive positive responses for their efforts.
- They receive constructive feedback from teachers and peers.
- They are actively engaged in the learning process.

AIMS

Through St. Joseph’s School Design, Creativity and Technology Program we support our vision of providing a Curriculum which is “rich and broad…giving children a breadth of knowledge and wide array of skills which will ensure that they are confident, thinking and active members of our Australian Society”.

Furthermore we are moving towards:

- Meeting the needs of the children in appropriate and interesting ways, conducive to understanding which promotes the academic and language experience and competence, alongside necessary life skills,
- Developing in individuals an appreciation of themselves and providing opportunities for self-expression,
- Involving the children in group activities where they learn co-operation with and respect for others.

Design, Creativity and Technology Education at St Joseph’s School aims to encourage students to:

- Build on their experiences, interests and aspirations in Design, Creativity and Technology
- Find and use a variety of technological information and ideas
- Develop a repertoire of relevant vocabulary
- Explain phenomena using technical language and conventions
- Show how ideas and practices in Design, Creativity and Technology are conceived
- Take responsibility for designs, decisions, actions and assessments.
- Explain their proposals and plans
- Take risks when exploring new ideas and practices
- Be open-minded and show respect for individual differences when responding to technological challenges.
- Develop a range of skills which will make them competent users of a range of equipment and resources.
- Develop an understanding of issues relating to safety when using equipment and resources.
- Develop an orientation to the future and to change.
Design, Creativity and Technology Policy

- Develop a 3D perspective to learning
- Relate to and find a balance between knowledge and application.
- Relate to and find a balance between theory and application.
- Develop a body of knowledge and repertoire of skills in safely using a variety of equipment and resources
- Develop a systematic and creative approach to technological solution
- Encounter personal enrichment and develop self-esteem
- Develop an enhanced ability to cope in society

Hence through the Design, Creativity and Technology Process of Investigating and designing, Producing, Analysing and evaluating, the students will be learning about:

MATERIALS (what it is made of)

INFORMATION (collecting and organising data to create a useful product)

SYSTEMS (input results in output)

STRATEGIES

A variety of teaching styles will be employed in order to cater for the fact that children learn in different ways and respond to different strategies.

These strategies include:
- Providing teacher directed activities / appropriate modelling.
- Observing real events.
- Conducting tests on materials, models etc.
- Manipulating technological equipment.
- Concept mapping.
- Drawing / making diagrams and models.
- Group discussion/ sharing ideas.
- Searching for visual and other clues.
- Reading books and organising and analysing the contents.
- Watching videos.
- Using CD Rom Design, Creativity and Technology.
- Going out on excursions to gain first hand experience.
- Listening to and interviewing guest speakers.
- Conducting surveys.
- Brainstorming.
- Listing questions and statements.
- Classifying key words, facts, pictures, objects etc.
- Representing statistics, test results and information using graphs and other forms of visual representation.
- Preparing factual texts.
- Following and preparing procedural texts.
- Constructing consequence wheels.
- Preparing oral and visual presentations.
- Engaging in the processes of investigating, designing, producing and evaluating

STANDARDS
Design, Creativity and Technology Policy

Through the Integrated Curriculum, provision is made for the teaching of Design, Creativity and Technology Education according to the standards set by VELS. Topics, Units of Work and Activities are planned according to our Scope and Sequence.

ASSESSMENT

Children’s progress and skill development will be determined through:
- Observation of individual attitudes / skill development at various stages of process
- Levels of co-operation / collaborative work
- Levels of accomplishment
- Levels of initiative / input / participation
- Ability to reach learning outcomes as detailed under the Materials, Information and Systems strands in Investigating, Designing, Producing and Evaluating as recorded in the Design, Creativity and Technology Curriculum and Standards Framework (B.O.S. 1995)

Many sources of information are used to assess student learning in Design, Creativity and Technology. These include:
- A diary or log of thoughts and plans
- Description and analysis of techniques
- Sketches and drawings of ideas and products
- Lists of information sources and ideas
- Recordings of interviews and “on-the-job” conversations
- Photographic and video records of activities and outcomes
- Summaries of tests carried out and processes used
- Working models
- Folios of designs and finished work
- Documented and researched appraisal outcomes
- Design specifications and modifications
- Oral presentations and reports
- Self-assessment sheets

REPORTING

Report on individual children’s programs and progress is made available to parents and relevant parties as appropriate, regularly throughout the year. Opportunities for reporting take place through:
- Twice yearly written reports
- Curriculum nights
- Formal and informal parent/teacher interviews
- Parent education sessions
- Formal/informal displays.

RECORDING

The Integrated Curriculum Planning Sheet is used to document the domains, dimensions, outcomes and learning experiences covered in each class program. The overall program is monitored through the Scope and Sequence.
EVALUATION

The evaluation of our Design, Creativity and Technology program and policy will consist of the following components:

• Further professional development for staff which examines current practice in the light of most recent theories of Design, Creativity and Technology learning.
• A critical examination of the current policy, its relationship to other policies and in the light of information gained from the components in the evaluation process.
• A full review of the planning process used within our Integrated Curriculum.