DESIGN AND TECHNOLOGY

Rationale/Purpose

In an increasingly technological and complex world, it is important students develop knowledge and confidence to critically analyse and respond creatively to design challenges. At Newport Gardens Primary School, we are committed to providing students with opportunities for students to learn how to use technologies to create innovative solutions that meet current and future needs. Our framework encourages students to make decisions about the development and use of technologies, consider the impacts of technological change and how technologies may contribute to a sustainable future. Where possible, the curriculum and should provide practical opportunities for students to be users, designers and producers of new technologies.

Design and Technologies

Through Design and Technologies, students get the opportunity plan and manage projects from conception to realisation. They apply design processes to investigate, generate and refine ideas, plan and manage, produce and evaluate designed solutions through the Global Digital Citizen Foundation's defined 21st century fluencies.

Digital Technology

Digital technology continues to evolve rapidly and greatly influences the way students learn, communicate, build relationships and produce work. At Newport Gardens we are committed to preparing our students for today's digital society believing it is important that we embrace available technologies, create opportunities for students to access and use the creative and collaborative potential of digital technologies and the internet in a safe and ethical manner that fosters global digital citizenship.

Guidelines - Design and Technologies aims to develop the knowledge, understanding and skills to ensure that students
- become critical users of technologies, and designers and producers of designed solutions
- can investigate, generate and critique designed solutions for sustainable futures
- use design and systems thinking to generate innovative and ethical design ideas, and communicate these to a range of audiences
- create designed solutions suitable for a range of contexts by creatively selecting and safely manipulating a range of materials, systems, components, tools and equipment
- learn how to transfer the knowledge and skills from design and technologies to new situations
- understand the roles and responsibilities of people in design and technologies occupations, and how they contribute to society.

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
- apply systems thinking to monitor, analyse, predict and shape the interactions within and between information systems and the impact of these systems on individuals, societies, economies and environments
- 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.
- work with parents and the broader community to raise awareness of student safety on the internet.
- incorporate digital technologies across curriculum areas and successfully utilise and select between functional programs that are transferable to the real world.

Implementation
Design Technology
- Design Technology will be linked with Inquiry units of learning where possible
- Student will be explicitly taught design processes through the Global Digital Citizen Foundation's defined 21st century fluencies.
- Provide students with the opportunity to explore through project based learning scenarios.
- Learning Communities will be allocated time to incorporate available facilities such as Kitchen and Garden spaces on a routine basis.
- Safety guidelines will be implemented to ensure tools and equipment are being used appropriately as per OH&S guidelines.
- Teachers will be encouraged to collaborate in planning, implementing and evaluating units of work.
- Will be taught explicitly for at least one hour per week.
- Annual school wide STEM challenges and activities as a part of National Science Week.

Digital Technology

- Students, parents and staff are expected to agree to and sign the school-wide Digital Technologies Acceptable Use Agreement. (Refer to eSmart Policy)
- Upon enrolment, parents / guardians will be asked to complete a Web Site, Internet and Photographic permission form in relation to media use of students' image, voice or work and a Digital Technologies Acceptable Use Agreement. Parents will also be asked to sign a G Suite permission form, providing their child with permission to access Google apps for school related purposes. Parents may elect to change the permission status at any time by writing to the school Principal.
- The Internet, Intranet, and e-mail facilities are not to be used for any illegal or inappropriate use and messages and web pages must not contain content that may be considered offensive or disruptive.
- Digital technologies are classified an essential tool for teaching and learning. Where relevant, they should be utilised in a way to redefine (Puentedura, 2010) practice across all curriculum areas. Teachers are expected to make full use of the digital technologies available to their learning community.
- Will be explicitly taught in all learning communities, when applicable.
- Student eHelpers and eLeaders will be elected each year to join overall student leadership program.

Evaluation

We will endeavor to regularly review and develop policies in relation Design and Technology to ensure that the children at Newport Gardens are given opportunities and be prepared for the challenges and prospects available to each of them in a 21st century world.

References

Newport Gardens Primary School eSmart Policy (2016)
Lee Crockett, 'Literacy is Not Enough', 2013
Ruben Puentedura, From Educational Technology, From Theory Into Practice, 2009.

Ratified by School Council:

To be reviewed: