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Rationale

Technologies enrich and impact on the lives of people and societies globally. Society needs enterprising students who can make discerning decisions about the development and use of technologies, develop solutions to complex challenges and contribute to sustainable patterns of living. Technologies can play an important role in transforming, restoring and sustaining societies and natural, managed and constructed environments.

The Western Australian Curriculum: Technologies describes two distinct but related subjects:

- Design and Technologies, in which students use design thinking and technologies to generate and produce solutions for authentic needs and opportunities
- Digital Technologies, in which students use computational thinking and information systems to define, design and implement solutions.

In an increasingly technological and complex world, it is important to develop knowledge and skills to analyse and creatively respond to design and/or digital challenges.

Through the practical application of technologies including digital technologies, students develop dexterity and coordination through experiential activities. Technologies motivates young people and engages them in a range of learning experiences that are transferable to family and home, constructive leisure activities, community contribution and the world of work.

Technologies provides students with authentic learning challenges that foster curiosity, confidence, persistence, innovation, creativity, respect and cooperation. These attributes are necessary when using and developing solutions to make sense of complex ideas and relationships in all areas of learning. Technologies helps students to be regional and global citizens, capable of actively and ethically communicating and collaborating.

Design and Technologies

Knowledge, understandings and skills involved in the design, development and use of technologies are influenced by, and can play a role in, enriching and transforming societies and our natural, managed and constructed environments.

The Western Australian Curriculum: Design and Technologies actively engages students in creating quality designed solutions for identified needs and opportunities across a range of technologies contexts. Students consider the economic, environmental and social impacts of technological change and how the choice and use of technologies contributes to a sustainable future. Decision-making processes are informed by ethical, legal, aesthetic and functional factors.

Through Design and Technologies students manage projects, independently and collaboratively, from conception to realisation. They apply design and systems thinking and design processes to investigate ideas, generate and refine ideas, plan, produce and evaluate designed solutions. They develop their ability to generate innovative designed

products, services and environments.

Digital Technologies

Digital systems are everywhere, mobile and desktop devices and networks are transforming learning, recreational activities, home life and work. Digital systems support new ways of collaborating and communicating, and require new skills such as computational and systems thinking. Technologies are an essential problem-solving toolset in our knowledge-based society.

The Western Australian Curriculum: Digital Technologies empowers students to shape change by influencing how contemporary and emerging information systems and practices are applied to meet current and future needs. A deep knowledge and understanding of information systems enables students to be creative and discerning decision-makers when they select, use and manage data, information, processes and digital systems to meet needs and shape preferred futures.

Digital Technologies provides students with practical opportunities to use design thinking and to be innovative developers of digital solutions and knowledge. Digital Technologies enables students to become innovative creators of digital solutions, effective users of digital systems and critical consumers of information conveyed by digital systems.