Year 9 and 10 content descriptors	Lesson 8	Lesson 9	Lesson 10+11	Lesson 12	Lesson 13	Lesson 14	son 15 Assessm	Lesson 16	Lesson 17	Lesson 18+19	Lesson 20	Lesson 21 Assessment
Design and Technology Knowledge and Understanding												
Evaluating design and technology professions and their contributions to society locally, nationally, regionally and globally	✓							✓				
Explaining how product life cycle thinking can influence decision-making related to design and technologies, for example rethinking products to provide for re-use, selecting a material for a product that has a lower carbon footprint	✓				✓			✓	✓			
Critiquing mass production systems taking into account ethics and sustainability considerations	✓				✓			✓				
Considering how creativity, innovation and enterprise contribute to how products, services and environments evolve	✓							✓		✓		
Exploring the ways commercial enterprises respond to the challenges and opportunities of technological change, for example e-commerce, and carbon footprint	✓				✓			✓	✓	✓		
Explaining the consequences of social, ethical and sustainability decisions for products, services and environments	✓				✓			✓	✓			
Predicting the impact of emerging technologies for preferred futures	✓	✓						✓	✓			
Recognising real-world problems and understanding basic needs when considering designed solutions	✓							✓	✓			
Critiquing the effectiveness of the combinations of materials, forces, energy and motion in an engineered system such as a 3D printer	✓	✓			✓				✓			
Examining emerging production technologies and methods in terms of productivity, profitability and sustainability	✓	✓			✓			✓	✓			

Critiquing the design of an existing product to identify environmental consequences of material selection					✓			✓	✓			
Justifying decisions when selecting from a broad range of technologies – materials, systems, components, tools and equipment	✓							✓	✓	✓		
Investigating emerging materials and their impact on design decisions	✓				✓				✓	✓		
Examining factors influencing the design of a product that has an explicit environmental emphasis					✓			✓	✓			
Critiquing product manufacturing processes in relation to society, ethics, and sustainability factors	✓							✓	✓			
Design and Technologies Processes and Production Skills												
Critiquing the design of new products to identify how well design ideas respond to sustainability issues					✓			✓	✓			
Producing drawings, models and prototypes to explore design ideas, for example using technical drawing techniques, digital imaging programs, 3D printers or augmented reality modelling software; producing multiple prototypes			✓	✓	✓	✓				✓	✓	
Communicating using appropriate technical terms	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
Refining technical skills and using production skills with independence to produce quality designed solutions			✓	✓	✓	✓				✓	✓	
Evaluating and justifying the use and best combination of traditional, contemporary and emerging technologies	✓	✓						✓	✓	✓		
Evaluating choices made at various stages of a design process and modifying plans when needed with consideration of criteria for success			✓	✓						✓	✓	

Reflecting on learning, evaluating processes and transferring new knowledge and skills to future design projects			✓					✓	✓	✓		
Producing, explaining and interpreting drawings; and planning production timelines using digital technologies						✓				✓	✓	
Establishing materials and equipment needs using digital technologies					✓	✓			✓			
Investigating manufacturing processes to identify strategies to enhance production	✓							✓	✓			
Links to Mathemathics												
Calculation of quantities of materials, costs and sizes					✓	✓				✓	✓	
Scaling drawings			✓	✓		✓				✓	✓	
Measurement and marking out, creating tessellated patterns			✓	✓		✓				✓	✓	
Links to Science												
Appropriate use of scientific terms	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
Calculation of quantities, measurement of materials and selection of components					✓	✓				✓	✓	
Classification of the types and properties of a range of materials					✓				✓			

Selection of materials and components based on ethical factors, taking into consideration the ecological and social footprint of materials					✓			✓	✓			
Knowledge of properties of materials to be applied when designing and making					✓				✓			