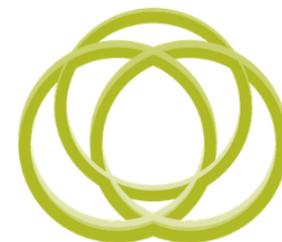


ACARA Links

Challenge Day - Year 10



science and engineering
challenge

Subject	Strand	Content Descriptions	Activity
DESIGN AND TECHNOLOGIES	Knowledge and Understanding	Explain how products, services and environments evolve with consideration of preferred futures and the impact of emerging technologies on design decisions. (ACTDEK041)	Future Power Grasping at Straws
		Investigate and make judgments on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions. (ACTDEK043)	Bridge Helter SS Hover Frenzy Turbine
		Investigate and make judgments on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions. (ACTDEK046)	Bridge Future Power Helter SS Grasping at Straws Turbine
	Processes and Production Skills	Critique needs or opportunities to develop design briefs and investigate and select an increasingly sophisticated range of materials, systems, components, tools and equipment to develop design ideas. (ACTDEP048)	Bridge Helter SS Turbine
		Develop, modify and communicate design ideas by applying design thinking, creativity, innovation and enterprise skills of increasing sophistication. (ACTDEP049)	Bridge Helter SS Hover Frenzy Stringways Turbine
		Work flexibly to effectively and safely test, select, justify and use appropriate technologies and processes to make designed solutions. (ACTDEP050)	Bridge Helter SS Hover Frenzy Turbine
DIGITAL TECHNOLOGIES	Processes and Production Skills	Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements. (ACTDIP036)	Con Comms

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The Science and Engineering Challenge



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Subject	Strand	Content Descriptions	Activity
SCIENCE	Science Understanding	Energy conservation in a system can be explained by describing energy transfers and transformations. (ACSSU190)	Bridge Helter SS Max Power Turbine
		The motion of objects can be described and predicted using the laws of physics. (ACSSU229)	Bridge Helter SS Hover Frenzy Turbine
	Science as a Human Endeavour	Advances in scientific understanding often rely on technological advances and are often linked to scientific discoveries. (ACSHE192)	Con Comms Future Power Grasping at Straws
		People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities. (ACSHE194)	Future Power Stringways Turbine
		Values and needs of contemporary society can influence the focus of scientific research. (ACSHE230)	Con Comms Future Power Grasping at Straws Helter SS Hover Frenzy Stringways Turbine
	Science Inquiry Skills	Formulate questions or hypotheses that can be investigated scientifically. (AC SIS198)	Bridge Helter SS Turbine