**Year 5 & 6 Band Level Technologies Overview Suggestion By Joanne Villis  
SUBJECT: Design and Technologies**

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| **STRAND: Knowledge and understanding** | | | **STRAND: Processes and production skills** | | |
| **CONTENT DESCRIPTOR** | **YEAR 5 TOPIC** | **YEAR 6TOPIC** | **CONTENT DESCRIPTOR** | **YEAR 5 TOPIC** | **YEAR 6 TOPIC** |
| Investigate how people in design and [technologies](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Technologies) occupations address competing considerations, including sustainability in the design of products, services and environments for current and future use [(ACTDEK019)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEK019) |  | Smoke alarms | Critique needs or opportunities for designing, and investigate [materials](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Materials), components, tools, equipment and processes to achieve intended [designed solutions](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Designed%20solutions) [(ACTDEP024)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEP024) | Google Sketch Up Minecraft | Google Sketch Up  (passive solar house) |
| Investigate how forces or electrical energy can control movement, sound or light in a designed [product](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Product) or system [(ACTDEK020)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEK020) |  | Circuits Passive Solar Heating | Generate, develop, communicate and document design ideas and processes for audiences using appropriate technical terms and [graphical representation techniques](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Graphical%20representation%20techniques) [(ACTDEP025)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEP025) | Google Sketch Up Minecraft | Google Sketch Up  (passive solar house) |
| Investigate how and why food and fibre are produced in [managed environments](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Managed%20environments) [(ACTDEK021)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEK021) | Healthy eating Food past and present | Wool Production Bread Production | Apply safe procedures when using a variety of [materials](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Materials), components, tools, equipment and techniques to make [designed solutions](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Designed%20solutions) [(ACTDEP026)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEP026) |  |  |
| Investigate the role of food preparation in maintaining good [health](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Health) and the importance of food safety and hygiene [(ACTDEK022)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEK022) | Healthy eating Food past and present |  | Negotiate criteria for success that include consideration of sustainability to evaluate design ideas, processes and solutions [(ACTDEP027)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEP027) | Google Sketch Up Minecraft | Google Sketch Up  (passive solar house) |
| Investigate [characteristics](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Characteristics) and properties of a range of [materials](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Materials), [systems](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Systems), components, tools and equipment and evaluate the impact of their use [(ACTDEK023)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEK023) | Camp food preparation scenario Soil |  | Develop [project](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Project) plans that include consideration of [resources](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Resources) when making [designed solutions](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Designed%20solutions) individually and collaboratively [(ACTDEP028)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDEP028) | Google Sketch Up Minecraft | Google Sketch Up  (passive solar house) |

**SUBJECT: Digital Technologies**

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| **STRAND: Knowledge and understanding** | | | **STRAND: Processes and production skills** | | |
| **CONTENT DESCRIPTOR** | **YEAR 5 TOPIC** | **YEAR 6 TOPIC** | **CONTENT DESCRIPTOR** | **YEAR 5 TOPIC** | **YEAR 6 TOPIC** |
| Investigate the main components of common [digital systems](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Digital%20systems), their basic functions and interactions, and how such [digital systems](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Digital%20systems) may connect together to form networks to transmit [data](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Data) [(ACTDIK014)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDIK014) | Parts of a computer  Inside a computer  Data storage | Augmented Reality (AR) | Acquire, store and validate different types of [data](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Data) and use a range of commonly available software to interpret and visualise [data](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Data) in context to create information [(ACTDIP016)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDIP016) |  | Spreadsheets (Xcel) |
| Investigate how [digital systems](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Digital%20systems) use whole numbers as a basis for representing all types of [data](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Data) [(ACTDIK015)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDIK015) | Coding | Coding | Define problems in terms of [data](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Data) and functional requirements, and identify [features](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Features) similar to previously solved problems [(ACTDIP017)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDIP017) | Coding Scratch | Hackety Hack |
|  | | | Design a user interface for a digital system, generating and considering alternative designs [(ACTDIP018)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDIP018) | Scratch | Kodu |
| Design, modify and follow simple algorithms represented diagrammatically and in English involving sequences of steps, [branching](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Branching), and [iteration](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Iteration) (repetition) [(ACTDIP019)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDIP019) | Scratch | Kodu |
| Implement [digital solutions](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Digital%20solutions) as simple visual programs involving [branching](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Branching), [iteration](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Iteration) (repetition), and user input [(ACTDIP02](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDIP020) | Scratch | Kodu |
|  | | | Explain how developed solutions and existing [information systems](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Information%20systems) are [sustainable](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Sustainable) and meet local community needs, considering opportunities and consequences for future applications [(ACTDIP021)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDIP021) |  | Lights |
|  | | | Manage the creation and communication of ideas and information including online collaborative projects, applying agreed ethical, social and technical [protocols](http://www.australiancurriculum.edu.au/Glossary?a=T&t=Protocols) [(ACTDIP022)](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACTDIP022) | Online Safety | Online Safety |

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