Assessment Schedule. 91638
Demonstrate understanding of complex concepts used in the design and construction of electronic environments

Final grades will be decided using professional judgement based on a holistic examination of the evidence provided against the criteria.

Issues from the Specifications

Where a candidate has provided a brief report, the report should not be penalised because of length.

Candidate work in excess of 10 pages must not be marked.

Where a candidate has used a small font markers should make a judgement about where to stop marking. This judgement should be made relative to 10 pages of Ariel font

Where work is illegible, it cannot be marked.

Digital submissions that cannot be read cannot be marked.

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrating understanding of complex concepts used in the design and construction of electronic environments involves:	Demonstrating in-depth understanding of complex concepts used in the design and construction of electronic environments involves:	Demonstrating comprehensive understanding of complex concepts used in the design and construction of electronic environments involves:
describing complex software concepts e.g. describing software flags used to show conditions within a program, such as indicating the status of a model train on a track describing microcontrollers and other complex hardware concepts e.g. describing various feedback techniques in op-amp circuits. refer to exemplar #	explaining complex software concepts e.g. explaining how interrupts are used to suspend usual program flow, such as when a second model train enters the same section of track as the first train explaining microcontrollers and other complex hardware concepts e.g. explaining how signals can be mixed such as audio in a summing op-amp circuit. refer to exemplar #	discussing complex software concepts e.g. discussing why flags are selected for a program, such as when handling requests from multiple sources in a model train system discussing microcontrollers and other complex hardware concepts e.g. discussing why multiple stages of amplification rather than a single stage is more appropriate for a pressure sensor design. refer to exemplar #

Technology Schedule Appendix 1

Markers must exercise professional judgement to decide if a report demonstrates understanding. The following appendix provides guidance for markers making this judgement.	
A report must use information to demonstrate understanding.	
Reports described wholly or substantially by one or more of the statements in the left column demonstrate understanding.	
Reports described wholly, or substantially, by one or more of the statements in the right column do not demonstrate understanding.	

Where the report is made up of both used and reproduced information the marker must decide if the report is successful against the standard when the reproduced information is ignored.

Evidence of **use** of information	Evidence of **reproduction** of information
Candidate's report describes and explains the candidate's use, in their practice, of information relating to the standard	Information is presented in isolation from the candidate's Technological experiences. It offers nothing or little to suggest the information is related to a course of instruction at level 8.
Information from the candidate's practice, research, the practice of others, and teaching is related to the candidate's technological experiences.	
The report describes experiences you would expect to come from a course of instruction derived from The Technology Learning area the NZC.	
These could include but are not limited to • testing and trialling within a modelling process • developing a conceptual statement • developing a conceptual design • development of a brief • material selection • refinement of a brief • development of a prototype • development of a one off solution • further examples may be added.	
Information from research, the practice of others, or teaching is reported in the candidate's own voice.	Information is not in the candidate's voice. The word choice, sentence structure, sentence length, punctuation and so on are not what a candidate could be expected to produce.
Referenced, complex research information unchanged by paraphrase is related to other information in a manner that unambiguously constructs meaning. (very rare)	**Unreferenced**, complex, research information is presented as though it is the candidate's own work.
Where the marker suspects a report is a deliberate attempt to deceive the report should be referred to the panel leader using the Irregular Booklet process.	