Criterion A: Inquiring and analysing

Maximum: 8

At the end of year 10, students should be able to:

i.   explain and justify the need for a solution to a problem for a specified client/target audience

ii. identify and prioritize primary and secondary research needed to develop a solution to the problem

iii. analyse a range of existing products that inspire a solution to the problem

iv. develop a detailed design brief, which summarizes the analysis of relevant research.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1–2	The student: i. states the need for a solution to a problem for a specified client/target audience ii. develops a basic design brief, which states the findings of relevant research.
3–4	The student: i. outlines the need for a solution to a problem for a specified client/target audience ii. outlines a research plan, which identifies primary and secondary research needed to develop a solution to the problem, with some guidance iii. analyses one existing product that inspires a solution to the problem iv. develops a design brief, which outlines the analysis of relevant research.
5–6	The student: i. explains the need for a solution to a problem for a specified client/target audience ii. constructs a research plan, which identifies and prioritizes primary and secondary research needed to develop a solution to the problem, with some guidance iii. analyses a range of existing products that inspire a solution to the problem iv. develops a design brief, which explains the analysis of relevant research.

Achievement level	Level descriptor
7–8	The student: i. explains and justifies the need for a solution to a problem for a client/ target audience ii. constructs a detailed research plan, which identifies and prioritizes the primary and secondary research needed to develop a solution to the problem independently iii. analyses a range of existing products that inspire a solution to the problem in detail iv. develops a detailed design brief, which summarizes the analysis of relevant research.

Criterion B: Developing ideas

Maximum: 8

At the end of year 10, students should be able to:

i. develop design specifications, which clearly states the success criteria for the design of a solution

ii. develop a range of feasible design ideas, which can be correctly interpreted by others

iii. present the chosen design and justify its selection

iv. develop accurate and detailed planning drawings/diagrams and outline the requirements for the creation of the chosen solution.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1–2	The student: i. lists some basic design specifications for the design of a solution ii. presents one design, which can be interpreted by others iii. creates incomplete planning drawings/diagrams.
3–4	The student: i. lists some design specifications, which relate to the success criteria for the design of a solution ii. presents a few feasible designs, using an appropriate medium(s) or annotation, which can be interpreted by others iii. justifies the selection of the chosen design with reference to the design specification iv. creates planning drawings/diagrams or lists requirements for the creation of the chosen solution.
5–6	The student: i. develops design specifications, which outline the success criteria for the design of a solution ii. develops a range of feasible design ideas, using an appropriate medium(s) and annotation, which can be interpreted by others iii. presents the chosen design and justifies its selection with reference to the design specification iv. develops accurate planning drawings/diagrams and lists requirements for the creation of the chosen solution.

Achievement level	Level descriptor
7–8	The student: i. develops detailed design specifications, which explain the success criteria for the design of a solution based on the analysis of the research ii. develops a range of feasible design ideas, using an appropriate medium(s) and detailed annotation, which can be correctly interpreted by others iii. presents the chosen design and justifies fully and critically its selection with detailed reference to the design specification iv. develops accurate and detailed planning drawings/diagrams and outlines requirements for the creation of the chosen solution.

Criterion C: Creating the solution

Maximum: 8

At the end of year 10, students should be able to:

i.   construct a logical plan, which describes the efficient use of time and resources, sufficient for peers to be able to follow to create the solution

ii.   demonstrate excellent technical skills when making the solution

iii. follow the plan to create the solution, which functions as intended

iv.   fully justify changes made to the chosen design and plan when making the solution

v.   present the solution as a whole.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1–2	The student: i. demonstrates minimal technical skills when making the solution ii. creates the solution, which functions poorly and is presented in an incomplete form.
3–4	The student: i. constructs a plan that contains some production details, resulting in peers having difficulty following the plan ii. demonstrates satisfactory technical skills when making the solution iii. creates the solution, which partially functions and is adequately presented iv. outlines changes made to the chosen design and plan when making the solution.
5–6	The student: i. constructs a logical plan, which considers time and resources, sufficient for peers to be able to follow to create the solution ii. demonstrates competent technical skills when making the solution iii. creates the solution, which functions as intended and is presented appropriately iv. describes changes made to the chosen design and plan when making the solution.
7–8	The student: i. constructs a detailed and logical plan, which describes the efficient use of time and resources, sufficient for peers to be able to follow to create the solution ii. demonstrates excellent technical skills when making the solution. iii. follows the plan to create the solution, which functions as intended and is presented appropriately iv. fully justifies changes made to the chosen design and plan when making the solution.

Criterion D: Evaluating

Maximum: 8

At the end of year 10, students should be able to:

i.   design detailed and relevant testing methods, which generate data, to measure the success of the solution

ii. critically evaluate the success of the solution against the design specification

iii. explain how the solution could be improved

iv. explain the impact of the solution on the client/target audience.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1–2	The student: i. designs a testing method, which is used to measure the success of the solution ii. states the success of the solution.
3–4	The student: i. designs a relevant testing method, which generates data, to measure the success of the solution ii. outlines the success of the solution against the design specification based on relevant product testing iii. outlines how the solution could be improved iv. outlines the impact of the solution on the client/target audience.
5–6	The student: i. designs relevant testing methods, which generate data, to measure the success of the solution ii. explains the success of the solution against the design specification based on relevant product testing iii. describes how the solution could be improved iv. explains the impact of the solution on the client/target audience, with guidance.
7–8	The student: i. designs detailed and relevant testing methods, which generate data, to measure the success of the solution ii. critically evaluates the success of the solution against the design specification based on authentic product testing iii. explains how the solution could be improved iv. explains the impact of the product on the client/target audience.