## Criterion A: Inquiring and analysing

**Maximum: 8**

At the end of year 3, students should be able to:

i. explain and justify the need for a solution to a problem

ii. construct a research plan, which states and prioritizes the primary and secondary research needed to develop a solution to the problem

iii. analyse a group of similar products that inspire a solution to the problem

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

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<th>Achievement level</th>
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<td>0</td>
<td>The student <strong>does not</strong> reach a standard described by any of the descriptors below.</td>
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| 1–2               | The student:  
|                   | i. **states** the need for a solution to a problem  
|                   | ii. **states some of** the main findings of relevant research. |
| 3–4               | The student:  
|                   | i. **outlines** the need for a solution to a problem  
|                   | ii. **states** the research needed to **develop** a solution to the problem, **with some guidance**  
|                   | iii. **outlines one existing** product that inspires a solution to the problem  
|                   | iv. **develops** a **basic** design brief, which **outlines some of the findings** of relevant research. |
| 5–6               | The student:  
|                   | i. **explains** the need for a solution to a problem  
|                   | ii. **constructs** a research plan, which **states** and **prioritizes** the primary and secondary research needed to **develop** a solution to the problem, **with some guidance**  
|                   | iii. **describes** a group of similar products that inspire a solution to the problem  
|                   | iv. **develops** a design brief, which **outlines the findings** of relevant research. |
| 7–8               | The student:  
|                   | i. **explains and justifies** the need for a solution to a problem  
|                   | ii. **constructs** a research plan, which **states** and **prioritizes** the primary and secondary research needed to **develop** a solution to the problem **individually**  
|                   | iii. **analyses** a group of similar products that inspire a solution to the problem  
|                   | iv. **develops** a design brief, which **presents** the **analysis** of relevant research. |
Criterion B: Developing ideas

Maximum: 8
At the end of year 3, students should be able to:

i. develop a design specification which outlines the success criteria for the design of a solution based on the data collected

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

iii. present the chosen design and outline the reasons for its selection

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

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| 1–2               | The student: 
|                   | i. lists a few basic success criteria for the design of a solution
|                   | ii. presents one design idea, which can be interpreted by others
|                   | iii. creates incomplete planning drawings/diagrams. |
| 3–4               | The student: 
|                   | i. constructs a list of the success criteria for the design of a solution
|                   | ii. presents a few feasible design ideas, using an appropriate medium(s) or explains key features, which can be interpreted by others
|                   | iii. outlines the main reasons for choosing the design with reference to the design specification
|                   | iv. creates planning drawings/diagrams or lists requirements for the chosen solution. |
| 5–6               | The student: 
|                   | i. develops design specifications, which identify the success criteria for the design of a solution
|                   | ii. presents a range of feasible design ideas, using an appropriate medium(s) and explains key features, which can be interpreted by others
|                   | iii. presents the chosen design and outlines the main reasons for its selection with reference to the design specification
|                   | iv. develops accurate planning drawings/diagrams and lists requirements for the creation of the chosen solution. |
| 7–8               | The student: 
|                   | i. develops a design specification which outlines the success criteria for the design of a solution based on the data collected
|                   | ii. presents a range of feasible design ideas, using an appropriate medium(s) and annotation, which can be correctly interpreted by others
|                   | iii. presents the chosen design and outlines the reasons for its selection with reference to the design specification
|                   | iv. develops accurate 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 3, students should be able to:

i. construct a logical plan, which outlines 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. explain changes made to the chosen design and the plan when making the solution

v. present the solution as a whole.

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| 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. **outlines** each step in a plan that contains some details, resulting in peers having difficulty following the plan to create the solution  
|                   | 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 or plan when making the solution. |
| 5–6               | The student:  
|                   | i. **constructs** a 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. **outlines** changes made to the chosen design and plan when making the solution. |
| 7–8               | The student:  
|                   | i. **constructs a logical** plan, which **outlines** 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. **explains** changes made to the chosen design and plan when making the solution. |
Criterion D: Evaluating

Maximum: 8
At the end of year 3, students should be able to:

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

ii. explain the success of the solution against the design specification

iii. describe how the solution could be improved

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

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| 1–2               | The student:
|                   | i. describes 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. describes 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. lists the ways in which the solution could be improved
|                   | iv. outlines the impact of the solution on the client/target audience. |
| 5–6               | The student:
|                   | i. describes relevant testing methods, which generate data, to measure the success of the solution
|                   | ii. describes the success of the solution against the design specification based on relevant product testing
|                   | iii. outlines how the solution could be improved
|                   | iv. describes the impact of the solution on the client/target audience, with guidance. |
| 7–8               | The student:
|                   | i. describes detailed and relevant testing methods, which generate accurate data, to measure the success of the solution
|                   | ii. explains the success of the solution against the design specification based on authentic product testing
|                   | iii. describes how the solution could be improved
|                   | iv. describes the impact of the solution on the client/target audience. |