

### Criterion A (Inquiring & Analysing)

## A1: Design Need

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

## Command Terms

**Explain** Give a detailed account including reasons or causes.

**Justify** Give valid reasons or evidence to support an answer or conclusion.

**Outline** Give a brief account or summary.

**State** Give a specific name, value or other brief answer without explanation or calculation.

	Level Descriptor	Task-Specific Clarification
1–2	The student <b>states</b> the need for for a solution to a problem.	<i>The problem you’ve chosen is stated simply or suggests only a direct use of the challenge you’ve been given.</i>
3–4	The student <b>outlines</b> the need for a solution to a problem.	<i>The problem you’ve chosen is described adequately, but with little connections to an authentic application.</i>
5–6	The student <b>explains</b> the need for a solution to a problem.	<i>The problem you’ve chosen is described fully, including a connection to an authentic application and audience.</i>
7–8	The student <b>explains</b> and <b>justifies</b> the need for a solution to a problem.	<i>The problem you’ve chosen is described fully, including a connection to an authentic application and audience. The need for this problem to be solved is also fully explored.</i>

## Guiding Questions

<b>q1</b> What is the problem for which you will be designing a solution?
<b>q2</b> Why does that problem require a solution?
<b>q3</b> Who might benefit most from it being solved?
<b>⚠ Do <i>not</i> describe a potential solution to the problem.</b>

## A2: Research Plan

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

### Command Terms

**Construct** Display information in a diagrammatic or logical form.

**Develop** Improve incrementally, elaborate or expand in detail. Evolve to a more advanced or effective state.

**Prioritize** Give relative importance to, or put in an order of preference.

**State** Give a specific name, value or other brief answer without explanation or calculation.

### Qualifiers

**...independently...** No additional help is needed to develop the research plan.

**...some of...** The research described is missing or incomplete.

**...with some guidance...** Some additional help is needed to develop the research plan.

	Level Descriptor	Task-Specific Clarification
1–2	The student <b>states some of</b> the main findings of relevant research.	
3–4	The student <b>states</b> the research needed to <b>develop</b> a solution to the problem, <b>with some guidance</b> .	
5–6	The student <b>constructs</b> a research plan, which <b>states</b> and <b>prioritizes</b> the primary and secondary research needed to <b>develop</b> a solution to the problem, <b>with some guidance</b> .	
7–8	The student <b>constructs</b> a research plan, which <b>states</b> and <b>prioritizes</b> the primary and secondary research needed to <b>develop</b> a solution to the problem <b>independently</b> .	

### Guiding Questions

### A3: Existing Products

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

#### Command Terms

**Analyse**

**Describe**

**Outline**

	Level Descriptor	Task-Specific Clarification
1–2		
3–4	The student <b>outlines one existing</b> product that inspires a solution to the problem.	
5–6	The student <b>describes</b> a group of similar products that inspire a solution to the problem.	
7–8	The student <b>analyses</b> a group of similar products that inspire a solution to the problem.	

#### Guiding Questions

## A4: Design Brief

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

### Command Terms

#### Develop

#### Outline

	Level Descriptor	Task-Specific Clarification
1–2		
3–4	The student <b>develops</b> a <b>basic</b> design brief, which <b>outlines some of the findings</b> of relevant research.	
5–6	The student <b>develops</b> a design brief, which <b>outlines the findings</b> of relevant research.	
7–8	The student <b>develops</b> a design brief, which <b>presents the analysis</b> of relevant research.	

### Guiding Questions

**Criterion B (Developing Ideas)**

**B1: Design Specifications**

**B2: Design Ideas**

**B3: Chosen Design**

**B4: Detailed Plans**



**Criterion C (Creating the Solution)**

**C1: Implementation Plan**

**C2: Technical Skills**

**C3: Product Development**

**C4: Changes**

**Criterion D (Evaluating)**

**D1: Testing Methods**

**D2: Evaluation**

**D3: Future Improvements**

**D4: Impact Analysis**