



Cambridge Assessment International Education
Cambridge Ordinary Level

DESIGN AND TECHNOLOGY

6043/02

Paper 2 Project Theme

October/November 2019

Additional Materials: None.

READ THESE INSTRUCTIONS FIRST

This project theme should be given to candidates at the beginning of the first term in the year of the examination.



This document consists of **4** printed pages.

The theme for the project is **protection**.

You are to design and make an artefact in response to the theme

protection

Initially, you should explore the theme of **protection** widely and make a brief analysis of a number of potential design situations which interest you.

Solutions to design problems developed from the theme **protection** may be provided in many different ways and may, for example, include the following principles: mechanical; frictional; magnetic; electrical; electronic; or combinations of these principles.

You may interpret the theme of **protection** as widely as you wish. To assist but not restrict your thinking, the following topic areas, which may help you identify a related design problem from your exploration of **protection**, are offered:

- young children and babies
- valuable or delicate items
- pets and small animals
- packages, boxes and cases
- displays, showcases
- moisture, sun, wind
- carrying, transporting, moving
- pencils, pens, erasers
- earphones and charging equipment
- security of personal belongings
- heat and cold
- personal communication and entertainment devices.

From your analysis, you are to identify a design situation for which you are to design and make an artefact which provides a response to the theme **protection**.

There are two parts to the Project:

(i) Design Folio **Part A**

(ii) Design Artefact **Part B**

Part A – Design Folio

The folio is to be A3 size maximum format and should consist mainly of sketches and drawings, supplemented where necessary by notes of explanation and detail. Photographs of the finished artefact should be included where helpful. Pages should be numbered. The folio should include a list of contents referenced with page numbers and the following sections in the order given:

(i) List of contents**(ii) General analysis of the theme**

An investigation of the theme identifying several potential design problem areas.

(iii) (a) Brief

An identified design task described in general but accurate terms.

(b) Specification

A design specification. Concise itemised requirements to be met by the solution.

(iv) Generation and exploration of ideas

Exploration of a range of ideas for meeting the design specification.

(v) Development of proposed solution

Detailed development of the selected idea, including form, materials and constructions to be used, including detailed drawings and a materials list.

(vi) Final design

Drawing(s) showing the complete intended solution.

(vii) Production plan

Identified sequential stages and processes with consideration of some of the more complex tasks to be used in the construction of the solution.

(viii) Evaluation

This will be based mainly on how well the product matches the design requirements as identified in the specification. Other sections of the folio should reveal the ongoing evaluation by the candidate as the design is developed by showing the criteria for decisions made.

Part B – Design Artefact

The production of the artefact should involve a range of skills. It can be made in a single material or a range of materials including new technologies where appropriate.

Candidates should avoid large-scale tasks, which might prejudice the quality of the completed artefact.

Notes to Teachers

Support of the candidate by the teacher through advice and guidance is crucial throughout the project but the candidate is to exercise judgements and make personal decisions in the formulation and making of the design. The practical work is to be entirely that of the candidate under normal guidance of the teacher. Counselling will be necessary in helping candidates select a project suitable in scope and demand appropriate to their abilities.

Candidates are to be made familiar with the scheme of assessment, as detailed in the syllabus, at the onset of the project. The 'Teacher's Guide to Assessment', as detailed in the syllabus, should also be used to inform candidates of the various requirements for the assessment of the work.

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