

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

DESIGN AND TECHNOLOGY

6043/02

Paper 2 Project Theme

October/November 2007

No Additional Materials are required.

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.

The theme for the project is **Improving and modifying products**.

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

Improving and modifying products

Initially, you should explore and make a brief analysis of a number of design situations which interest you and where a response to **Improving and modifying products** would be appropriate. You may wish to consider researching several different existing products which provide the same/or similar solution(s) to a design problem area. Your task is to provide a new or significantly improved and modified design to an existing design problem.

Solutions to design problems developed from the theme **Improving and modifying products** 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 **Improving and modifying products** 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 **Improving and modifying products**, are offered:

- Items of furniture or storage for the home or work
- Simple kitchen utensils or storage containers
- Security or alert situations in the home
- Children's toys and games
- Items of portable or fixed lighting
- Storage and display of small items or personal collections
- Hobbies, pastimes and leisure activities
- Storage/display for items of make-up, CDs and other personal items

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 **Improving and modifying products**.

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 illustrations and diagrams supplemented where necessary by the written word. Photographs may 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 topic

Identification and brief analysis of a range of products and/or systems that incorporate a response to the theme **Improving and modifying products**.

(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) 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.

(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 of a single material or a range of materials appropriate to the product.

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 modification 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.