

**UNIVERSITY OF CAMBRIDGE LOCAL EXAMINATIONS SYNDICATE**  
**Joint Examination for the School Certificate**  
**and General Certificate of Education Ordinary Level**  
**DESIGN AND TECHNOLOGY**  
PAPER 2 Project Theme  
**MAY/JUNE AND NOVEMBER SESSIONS 2001**

**6043/2**

No additional materials are required.

**INSTRUCTIONS TO SUPERVISORS**

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

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**This question paper consists of 3 printed pages and 1 blank page.**

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

You are to design and make an artefact that incorporates an **interlocking** feature.

Initially, you should explore and make a brief analysis of a number of situations where an **interlocking** feature would improve or enhance the design of an artefact.

**Interlocking** features may be achieved in many different ways and may, for example, include the following: mechanical; frictional; magnetic; electrical; electronic; or combinations of these principles.

You may interpret the theme as widely as you wish. To assist but not restrict your thinking the following situations, which might include an interlocking feature, are suggested.

A possible focus for your project could be selected from:

- Joining items together
- Modular or repetitive designs
- Identical items which are stacked or held together
- Toys and games
- Security systems

From your analysis you are to identify a situation for which you are to design and make an artefact which incorporates an **Interlocking** feature.

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 drawings, supplemented where necessary by the written word. Photographs may be included where helpful. Pages should be numbered and a list of contents, referenced with page numbers, included. The folio should include 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 an **Interlocking** feature.
- (iii) (a) **Brief**  
An identified design task described in general but accurate terms.
- (b) **Specification**  
A design specification. Concise and precise 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 outcome 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 basis of 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 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 on pages 10 and 11, at the outset of the project. The 'Teacher's Guide to Assessment', page 9 of the syllabus, should also be used to inform candidates of the various requirements for the assessment of the work.

