



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
General Certificate of Education Ordinary Level

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**CDT: DESIGN AND COMMUNICATION**

**7048/02**

Paper 2: School Based Assessment

**October/November 2010**

INFORMATION FOR THE EXAMINATION IN 2010

No Additional Materials are required.

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**READ THESE INSTRUCTIONS FIRST**

You are required to spend two semesters (terms) designing and realising possible solutions to one of the following problems. Wherever possible you should apply your chosen problem to an actual location in your local area. **Remember that this is coursework and you may seek guidance from your teacher or any other sources that may support you in developing your design work.**



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This document consists of **6** printed pages and **2** blank pages.



- 1 Consider the situation where your country is to issue a set of four commemorative coins in a presentation pack.

Research:

- (a) recent issues of commemorative coins and presentation packs;
- (b) various topics and occasions that the new set of coins could commemorate.

Identify a suitable topic or occasion that the coins will commemorate and collect some information about it.

Develop designs for a set of four coins and the presentation pack.

Produce prototypes of the coins and the presentation pack along with supporting drawings that fully communicate your designs.

Devise and use suitable techniques for testing your designs against their original specification so that they can be evaluated fully.

- 2 Consider the situation where an electronic company requires a counter top display stand to hold and promote a hand held electronic game console. The stand is to be made from card and be capable of folding flat for storage and ease of posting.

Research:

- (a) hand held electronic game consoles;
- (b) existing counter top display stands.

Identify a suitable hand held electronic game console that you will design a stand for and collect some information about it.

Develop a design for a counter top display stand to hold and promote a hand held electronic game console.

Produce a prototype of the stand along with supporting drawings that fully communicate your design.

Devise and use suitable techniques for testing your design against its original specification so that it can be evaluated fully.

- 3** Consider the situation where a race track for BMX bicycles is to be built. The track will be approximately 0.5 kilometres long and include facilities such as a small stand for spectators.

Research:

- (a)** existing BMX race tracks and the facilities that they include;
- (b)** suitable sites for the BMX race track.

Identify a suitable site for the BMX race track and collect some information about it.

Develop a design for a BMX race track.

Produce a model of the BMX race track along with supporting drawings that fully communicate your design.

Devise and use suitable techniques for testing your design against its original specification so that it can be evaluated fully.

- 4** Consider the situation where a set of six A5 size information cards is to be produced. The cards are to encourage families to actively sort their household waste and recycle or reuse as much of it as possible.

Research:

- (a)** existing ways in which household waste is recycled and reused;
- (b)** existing ways in which information cards are packaged.

Identify the content that will be included on each of the cards and collect some information about it.

Develop designs for:

- (a)** a set of six A5 size cards giving information about recycling and reusing household waste;
- (b)** packaging for the set of information cards. The packaging must allow individual cards to be easily removed and replaced.

Produce prototypes of both the set of information cards and the packaging. These should be accompanied by supporting drawings that fully communicate your designs.

Devise and use suitable techniques for testing your designs against their original specification so that they can be evaluated fully.

- 5** Consider the situation where a new café is to open in your area. The café will be located in an existing building and will be aimed at a particular age group.

Research:

- (a)** buildings in your area that could be converted into a café;
- (b)** possible target age groups that the café could be aimed at.

Identify a suitable target market for the café and collect some information about the facilities that they would like to be included in the café.

Develop designs for:

- (a)** the internal layout of the café;
- (b)** the outside façade and entrance to the café.

Produce a model of the café's internal layout and outside façade along with supporting drawings that fully communicate your design.

Devise and use suitable techniques for testing your design against its original specification so that it can be evaluated fully.

- 6** Consider the situation where a fast food outlet is to produce new packaging for its take-away meals. The new packaging will use less materials than the existing packaging but will still provide the same level of protection for the food.

Research:

- (a)** existing packaging used by fast food outlets;
- (b)** examples of existing packaging for food products where the manufacturer has reduced the amount of materials used.

Identify a take-away meal that you will base your work on and collect some information about both the meal and its existing packaging.

Develop a design for packaging a take-away meal which uses less material than the existing packaging but still provides the same level of protection.

Devise and use suitable techniques for testing your design against its original specification so that it can be evaluated fully.

- 7 Consider the situation where a new car is to be promoted by displaying it on a stand at a major motor show.

Research:

- (a) existing exhibition stands used to display cars;
- (b) cars on which you could base your work.

Identify a suitable car that you will design an exhibition stand for and collect some information about it.

Develop a design for an exhibition stand that will enable the public to view the car from various angles, but will not allow anyone to have direct access to the car.

Produce a model of the exhibition stand along with supporting drawings that fully communicate your design.

Devise and use suitable techniques for testing your design against its original specification so that it can be evaluated fully.

- 8 Consider the situation where a van or small lorry is to be converted into a motorhome (camper van) for two people.

Research:

- (a) existing motorhomes;
- (b) vans or small lorries on which you could base your work.

Identify a suitable van or small lorry that you will base the conversion on and collect some information about it.

Develop a design for a motorhome for two people.

Produce a model that shows the interior layout of the motorhome. This should be accompanied by supporting drawings that fully communicate your design.

Devise and use suitable techniques for testing your design against its original specification so that it can be evaluated fully.

- 9** Consider the situation where a sugar free chewing gum made from natural ingredients is to be introduced. The chewing gum's packaging will allow for the safe and clean disposal of the chewing gum when the user has finished with it.

Research:

- (a)** existing types of chewing gum in terms of their shape, ingredients and the problems caused by their disposal;
- (b)** existing packaging for chewing gum focusing particularly on the way individual pieces are wrapped to keep them fresh.

Identify:

- (a)** the shape and size of the pieces of chewing gum that you will base your work on;
- (b)** the way that the individual pieces will be wrapped and collect some information about it.

Develop a design for packaging to hold ten pieces of chewing gum. The packaging must incorporate a feature which allows for the safe and clean disposal of each piece of chewing gum when the user has finished with it.

Devise and use suitable techniques for testing your design against its original specification so that it can be evaluated fully.

- 10** Consider the situation where a children's pop-up book about transport is to be produced.

Research:

- (a)** the various types of transport that could be featured in the book;
- (b)** children's pop-up books and the mechanisms that they use.

Identify:

- (a)** a title for the book;
- (b)** two types of transport that will feature in the book and collect some information about them.

Develop designs for:

- (a)** the front and back covers of the book;
- (b)** two pop-up pages.

Produce a prototype of the book along with supporting drawings that fully communicate your design.

Devise and use suitable techniques for testing your design against its original specification so that it can be evaluated fully.



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