Cambridge
O Level

Cambridge International Examinations
Cambridge Ordinary Level

CDT: DESIGN AND COMMUNICATION **7048/02**

Paper 2: School Based Assessment **October/November 2015**

INFORMATION FOR THE EXAMINATION IN 2015

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.**

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

CAMBRIDGE
International Examinations

1 Consider the situation where your school or college is to build a storage facility for up to fifty bicycles which are used daily by students. The facility will need to protect the bicycles against theft, vandalism and the weather.

Research:

(a) the design and construction of existing storage facilities for bicycles;

(b) possible sites for the storage facility for bicycles.

Identify a suitable site for the storage facility for bicycles and collect some information about it.

Develop a design for a storage facility for up to fifty bicycles.

Produce a model of the storage facility for bicycles 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.

2 Consider the situation where a toy company is to produce a 3D jigsaw puzzle based on the theme of dinosaurs.

Research:

(a) the design and construction of existing 3D jigsaw puzzles and their packaging;

(b) dinosaurs on which you could base your work.

Identify which dinosaurs you will include in the puzzle and collect some information about them.

Develop designs for:

(a) the 3D jigsaw puzzle;

(b) packaging for the 3D jigsaw puzzle.

Produce prototypes of both the 3D jigsaw puzzle and its 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.

3 Consider the situation where a zoo or wildlife park is to produce a range of animal masks for children. Each design, along with instructions on how to make it, will be printed on card so that a child can colour, cut out and assemble the mask.

Research:

(a) the design and construction of existing animal masks and their packaging;

(b) possible animals on which you could base your work.

Identify a suitable animal and collect some information about it.

Develop designs for:

(a) an animal mask;

(b) packaging for the mask.

Produce prototypes of both the animal mask and its 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.

4 Consider the situation where a toy company is to produce a play house in the form of a rocket. The play house will be made from corrugated cardboard.

Research:

(a) possible rockets that your work could be based on;

(b) non-permanent ways of joining pieces of corrugated cardboard together.

Identify a suitable rocket and collect some information about it.

Develop a design for a rocket play house made from corrugated cardboard.

Produce a prototype of the rocket play house 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.

5 Consider the situation where a public barbeque area is to be built.

Research:

(a) possible sites for the public barbeque area;

(b) facilities that will need to be included in the public barbeque area.

Identify:

(a) a suitable site for the barbeque area;

(b) the facilities that will be included in the public barbeque area and collect some information about them.

Develop a design for a public barbeque area.

Produce a model of the public barbeque area 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 car company is to produce a calendar. The cover of the calendar will feature an original photograph that you have taken.

The page for January will feature a drawing that you have produced by hand.

The page for February will feature an original drawing that you have produced using a computer.

Research:

(a) possible car companies on which you could base your work;

(b) the design and construction of existing calendars and their packaging.

Identify a suitable car company and collect some information about it.

Develop designs for:

(a) the calendar's cover and pages for January and February;

(b) packaging for the calendar so that it can be sent by post to the company's customers.

Produce prototypes of both the calendar and is 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.

7 Consider the situation where a sports company requires designs for the packaging for a skateboard and the graphics to go on the skateboard.

Research:

(a) skateboards on which you could base your work;

(b) the design and construction of existing packaging for skateboards.

Identify a skateboard on which you will base your work and collect some information about it.

Develop designs for:

(a) the graphics to go on the skateboard;

(b) packaging for the skateboard, this must include a way of carrying the packaging and an illustration of the skateboard complete with the graphics that you have designed.

Produce a prototype of the packaging 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.

8 Consider the situation where a football club is to sell 2D articulated models of its players to the club's fans. The models will be made mainly from card. Each model will hang in the back window of a car and move as the car is driven along.

Research:

(a) possible football clubs on which you could base your work;

(b) ways in which 2D card models of footballers could be articulated.

Identify a suitable football club and collect some information about its players and the kit they wear.

Develop designs for:

(a) a 2D articulated model of a footballer to hang in the back window of a car;

(b) packaging for the model.

Produce prototypes of both the 2D model of a footballer and its 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.

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9 Consider the situation where a sports club requires an information and membership pack along with an introductory page for its website.

Research:

(a) possible sports clubs on which you could base your work;

(b) the design and construction of existing information and membership packs.

Identify a suitable sports club and collect details about what the club would like included in the information and membership pack.

Develop designs for:

(a) an information and membership pack for a sports club;

(b) an introductory page for the sports club's website.

Produce a prototype of the information and membership pack along with a computer printout of the introductory page for its website. 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.

10 Consider the situation where a visitor centre is to be built at a local tourist attraction or place of interest.

Research:

(a) possible sites for the visitor centre;

(b) existing visitor centres and the facilities that they include.

Identify:

(a) a suitable site for the visitor centre;

(b) the facilities that will be included in the visitor centre and collect some information about this.

Develop designs for:

(a) the internal layout of the visitor centre;

(b) the external appearance of the visitor centre.

Produce a model which shows the visitor centre's internal layout and external appearance 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.

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