
CDT: DESIGN AND COMMUNICATION

7048/02

Paper 2: School Based Assessment

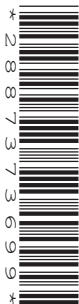
October/November 2016

INFORMATION FOR THE EXAMINATION IN 2016

No Additional Materials are required.

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.

- 1** Consider the situation where a computer company requires packaging to hold a tablet computer and its accessories.

Research:

- (a)** tablet computers and their associated accessories;
- (b)** the design and construction of existing packaging for tablet computers and their associated accessories.

Identify a suitable tablet computer and its accessories that you will design packaging for and collect some information about them.

Develop a design for a piece of packaging to hold a tablet computer and its accessories.

Produce a prototype of the packaging together 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 an existing single storey building is to be converted into a fitness club.

Research:

- (a)** possible buildings that could be converted into a fitness club;
- (b)** existing fitness clubs.

Identify:

- (a)** a suitable building and collect some information about it;
- (b)** the range of facilities that the fitness club will include.

Develop designs for:

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

Produce a model of the fitness club's internal layout and outside façade 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.

- 3 Consider the situation where people attending a music festival are to be given souvenir hats, made from card, and hand held flags.

Research:

- (a) music festivals on which you could base your work;
- (b) the design and construction of hats made from card and hand held flags.

Identify a suitable music festival and collect some information about it.

Develop designs for:

- (a) a souvenir hat made from card;
- (b) a souvenir hand held flag.

Produce prototypes of both the hat and the flag, 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 supermarket is to promote the sale of its food products by giving customers recipe cards. Each month, the supermarket will produce three new recipe cards for customers to collect and keep in a folder provided by the supermarket.

Research:

- (a) possible recipes that could be used;
- (b) the design and construction of existing folders.

Identify three recipes that will be used and collect some information about them.

Develop designs for:

- (a) three recipe cards;
- (b) a folder that will securely hold up to thirty recipe cards.

Produce prototypes of both the recipe cards and the folder, 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 bus company is to introduce a 'hop on – hop off' bus service for tourists. The bus service will follow a circular route stopping at various places of interest. The total journey time will be approximately one and a half hours. To promote the new service a leaflet and leaflet holder are required.

Research:

- (a)** possible routes the service could follow;
- (b)** the design and construction of existing leaflets and leaflet holders.

Identify a suitable route and collect some information about it.

Develop designs for:

- (a)** the leaflet, this must include a map of the route;
- (b)** the leaflet holder.

Produce prototypes of both the leaflet and the leaflet holder, 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.

- 6** Consider the situation where a family require a garden shed. The shed will be used as a workshop and to provide storage for items such as tools, garden furniture and bicycles.

Research:

- (a)** the design and construction of existing sheds;
- (b)** possible storage systems and workbenches that could be used in the shed.

Identify the items to be stored and/or used in the shed and collect some information about them.

Develop designs for:

- (a)** the internal layout of the shed;
- (b)** the external appearance of the shed.

Produce a model of the shed which shows the internal layout and external appearance of the shed along with 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 company that manufactures lighting products is to produce a range of novelty hanging lampshades for children's bedrooms. Each lampshade will be made from several pieces of thin, flexible sheet plastic joined together to form a 3D (three dimensional) flying creature. The lampshades will be packaged and sold in a flat pack to be assembled by the buyer.

Research:

- (a)** possible flying creatures on which you could base your work;
- (b)** ways in which pieces of thin, flexible plastic sheet could be joined without the use of glue.

Identify a suitable flying creature and collect some information about it.

Develop designs for:

- (a)** the lampshade;
- (b)** packaging for the lampshade.

Produce prototypes of both the lampshade and its 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 bank is to encourage children to save money by giving them money box kits. Each kit will contain card sheets on which will be printed instructions and the parts that a child needs to colour, cut out and assemble to make a money box. The money boxes will be based on a theme that will appeal to children.

Research:

- (a)** possible themes that will appeal to children;
- (b)** the design and construction of existing money boxes made from card.

Identify a suitable theme and collect some information about it.

Develop designs for:

- (a)** a kit to make a card money box;
- (b)** packaging for the kit.

Produce prototypes of both the kit and its 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.

- 9** Consider the situation where a hotel is to build a paddling pool and sandpit area for young children.

Research:

- (a) possible sites for the paddling pool and sandpit area;
- (b) possible facilities that could be included in the paddling pool and sandpit area.

Identify:

- (a) a suitable site for the paddling pool and sandpit area;
- (b) the facilities that will be included in the paddling pool and sandpit area and collect some information about them.

Develop a design for a paddling pool and sandpit area.

Produce a model of the paddling pool and sandpit 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.

- 10** Consider the situation where a toy company is to manufacture hand thrown gliders. Each glider will be made from several pieces of thin sheet material that slot together.

Research:

- (a) possible aeroplanes that you could base your work on;
- (b) the design and construction of existing hand thrown gliders.

Identify a suitable aeroplane and collect some information about it.

Develop designs for:

- (a) a hand thrown glider;
- (b) packaging for the glider.

Produce prototypes of both the glider and its 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.

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.