



Cambridge Assessment International Education
Cambridge Ordinary Level

CDT: DESIGN AND COMMUNICATION

7048/02

Paper 2 Design Project

October/November 2019

INFORMATION FOR THE EXAMINATION IN 2019

READ THESE INSTRUCTIONS FIRST

You are required to spend two terms designing and realising possible solutions to **one** of the following design situations. Wherever possible you should apply your chosen design situation to an actual location in your local area. **Remember that this is coursework and you may seek guidance from your teacher in developing your design work.**



This document consists of **11** printed pages and **1** blank page.

2

- 1** Consider the situation where a local conservation group is to build an observation hide from which visitors can view wildlife.

Research:

- (a)** the design and construction of existing observation hides
- (b)** possible sites for the observation hide.

Identify a suitable site for the observation hide and collect some information about it.

Use the results of your research to help you write a detailed specification for an observation hide.

Produce and evaluate a range of design proposals for an observation hide.

Carry out tests and trials to establish the construction methods, materials and dimensions that you will use to make a model of the observation hide.

Produce a working drawing of the observation hide.

Produce a comprehensive plan for making a model of the observation hide.

Produce a model of the observation hide. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the observation hide. Suggest and justify any appropriate improvements.

3

- 2** Consider the situation where a company that manufactures confectionary products (sweets, chocolates etc.) is to produce a range of chocolate animals. Each animal will be individually packaged in a box made from card.

Research:

- (a)** the design and construction of existing packaging made from card which is used to hold chocolate products
- (b)** possible animals on which you could base your work.

Identify an animal on which you will base your work and collect some information about it.

Use the results of your research to help you write a detailed specification for a chocolate animal and its packaging.

Produce and evaluate a range of design proposals for:

- (a)** a chocolate animal
- (b)** packaging made from card to hold the chocolate animal.

Carry out tests and trials to establish construction methods, materials and dimensions that you will use to make a model of the chocolate animal and a prototype of the packaging.

Produce working drawings of both the chocolate animal and the packaging.

Produce a comprehensive plan for making a model of the chocolate animal and a prototype of the packaging.

Produce a model of the chocolate animal and a prototype of the packaging. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully both the chocolate animal and the packaging. Suggest and justify any appropriate improvements.

- 3** Consider the situation where a company that manufactures toys is to produce a puppet theatre. The puppet theatre will be made in flat pack form from a thin sheet material.

Research:

- (a)** the design and construction of existing puppet theatres
- (b)** possible sheet materials from which the puppet theatre could be made.

Identify a suitable sheet material and collect some information about how the parts of the puppet theatre could be joined together and easily taken apart.

Use the results of your research to help you write a detailed specification for a puppet theatre.

Produce and evaluate a range of design proposals for a puppet theatre.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make a prototype of the puppet theatre.

Produce a working drawing of the puppet theatre.

Produce a comprehensive plan for making a prototype of the puppet theatre.

Produce a prototype of the puppet theatre. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the puppet theatre. Suggest and justify any appropriate improvements.

- 4 Consider the situation where a manufacturer of electronic accessories requires a point of sale display stand for a set of headphones with an adjustable headband.

Research:

- (a) possible headphones on which you could base your work
- (b) the design and construction of existing point of sale display stands for headphones.

Identify a set of headphones on which you will base your work and collect some information about them.

Use the results of your research to help you write a detailed specification for a point of sale display stand to hold a set of headphones.

Produce and evaluate a range of design proposals for a point of sale display stand to hold a set of headphones.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make a prototype of your design for the point of sale display stand to hold a set of headphones.

Produce a working drawing of the point of sale display stand.

Produce a comprehensive plan for making a prototype of the point of sale display stand.

Produce a prototype of the point of sale display stand. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the point of sale display stand. Suggest and justify any appropriate improvements.

- 5** Consider the situation where a camp site for up to twenty tents is to be built in your local area.

Research:

- (a)** possible areas where the camp site could be built
- (b)** existing camp site facilities.

Identify:

- (a)** a suitable area where the camp site could be built and collect some information about it
- (b)** the range of facilities that the camp site will include.

Use the results of your research to help you write a detailed specification for a camp site.

Produce and evaluate a range of design proposals for a camp site.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make a model of the camp site.

Produce a working drawing of the camp site.

Produce a comprehensive plan for making a model of the camp site.

Produce a model of the camp site. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the camp site. Suggest and justify any appropriate improvements.

- 6 Consider the situation where your school or college requires a design for a soapbox which will be entered in a soapbox derby to be run by a local charity to raise funds.

Research:

- (a) the design and construction of existing soapboxes
- (b) possible themes on which the design of the soapbox could be based.

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

Use the results of your research to help you write a detailed specification for a soapbox.

Produce a range of design proposals for a soapbox.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make a model of the soapbox.

Produce a working drawing of the soapbox.

Produce a comprehensive plan for making a model of the soapbox.

Produce a model of the soapbox. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the soapbox. Suggest and justify any appropriate improvements.

- 7** Consider the situation where a board game aimed at encouraging people to save energy in the home is to be produced. The board game will be called 'Save It'.

Research:

- (a)** the design and construction of existing board games and their packaging
- (b)** different types of energy used in the home and ways in which they are wasted.

Identify ways in which energy could be saved in the home and collect some information about them.

Use the results of your research to help you write a detailed specification for a board game called 'Save It' and its packaging.

Produce a range of design proposals for:

- (a)** a board game called 'Save It'
- (b)** packaging for the board game.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make prototypes of both the board game and its packaging.

Produce working drawings of:

- (a)** the board game
- (b)** packaging for the board game.

Produce a comprehensive plan for making prototypes of both the board game and its packaging.

Produce prototypes of both the board game and its packaging. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully both the board game and its packaging. Suggest and justify any appropriate improvements.

- 8** Consider the situation where a toy company that manufactures train sets is to produce a range of kits for making model buildings that can be used with train sets. The parts to make each building, along with instructions, will be printed on card so that the user can colour, cut out and assemble the model.

Research:

- (a)** the design and construction of existing kits for making model buildings
- (b)** possible buildings on which you could base your work.

Identify a suitable building and collect some information about it.

Use the results of your research to help you write a detailed specification for a kit for making a model building.

Produce a range of design proposals for a kit for making a model building.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make a prototype of the kit for making a model building.

Produce a working drawing of the kit for making a model building.

Produce a comprehensive plan for making a prototype of the kit for making a model building.

Produce a prototype of the kit for making a model building. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the kit for making a model building. Suggest and justify any appropriate improvements.

- 9** Consider the situation where a company that manufactures clocks is to produce a range of novelty clocks for children. The clocks will be made from foam board.

Research:

- (a)** the design and construction of existing clocks made from foam board or other sheet materials
- (b)** possible themes that would appeal to children on which you could base your work.

Identify a suitable theme and collect some information about it.

Use the results of your research to help you write a detailed specification for a child's novelty clock.

Produce and evaluate a range of ideas for a child's novelty clock.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make a prototype of the child's novelty clock.

Produce a working drawing of the child's novelty clock.

Produce a comprehensive plan for making a prototype of the child's novelty clock.

Produce a prototype of the child's novelty clock. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the child's novelty clock. Suggest and justify any appropriate improvements.

- 10** Consider the situation where a company that manufactures cameras requires packaging for a camera complete with a battery charger and an SD card.

Research:

- (a)** cameras on which you could base your work
- (b)** the design and construction of existing packaging for cameras.

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

Use the results of your research to help you write a detailed specification for packaging to hold a camera complete with a battery charger and an SD card.

Produce and evaluate a range of design proposals for packaging to hold the camera complete with a battery charger and an SD card.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make a prototype of the packaging to hold the camera complete with a battery charger and an SD card.

Produce a working drawing of the packaging to hold the camera complete with a battery charger and an SD card.

Produce a comprehensive plan for making a prototype of the packaging to hold a camera complete with a battery charger and an SD card.

Produce a prototype of the packaging to hold a camera complete with a battery charger and an SD card. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the packaging to hold a camera complete with battery charger and an SD card. Suggest and justify any appropriate improvements.

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 Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

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