



Cambridge International Examinations
Cambridge Ordinary Level

CDT: DESIGN AND COMMUNICATION

7048/02

Paper 2 Design Project

October/November 2017

INFORMATION FOR THE EXAMINATION IN 2017

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.

- 1** Consider the situation where a company that manufactures watches requires packaging for a watch and four interchangeable straps.

Research:

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

Identify a watch 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.

Produce and evaluate a range of design proposals for a piece of packaging to hold a watch and four straps.

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 for the watch and straps.

Produce a working drawing of the packaging for the watch and straps.

Produce a comprehensive plan for making a prototype of the packaging for the watch and straps.

Produce a prototype of the packaging for the watch and straps. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the packaging for the watch and straps. Suggest and justify any appropriate improvements.

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- 2** Consider the situation where a nine-hole novelty golf (sometimes known as ‘mini golf’ or ‘crazy golf’) course is to be built in a local park or other open space.

Research:

- (a)** the design and construction of existing novelty golf courses;
- (b)** possible sites for the novelty golf course.

Identify a suitable site for the novelty golf course and collect some information about it.

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

Produce and evaluate a range of design proposals for:

- (a)** the layout of the nine-hole novelty golf course;
- (b)** two of the holes for the novelty golf course.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make models of your designs for the two holes for the novelty golf course.

Produce working drawings of:

- (a)** the layout of the nine-hole novelty golf course;
- (b)** the two holes for the novelty golf course.

Produce a comprehensive plan for making the models of the two holes for the novelty golf course.

Produce models of the two holes for the novelty golf course. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully both the layout and the two holes you have designed for the novelty golf course. Suggest and justify any appropriate improvements.

- 3** Consider the situation where a 10-kilometre fun run is to take place to raise money for local charities. Each person who completes the run will receive a medal in a presentation box made from card.

Research:

- (a)** the design and construction of existing medals and presentation boxes made from card;
- (b)** possible sponsors of the fun run.

Identify a suitable sponsor and collect some information about them.

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

Produce and evaluate a range of design proposals for:

- (a)** a medal;
- (b)** a presentation box made from card for the medal.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make prototypes of your designs for both the medal and its presentation box.

Produce working drawings of:

- (a)** the medal;
- (b)** the presentation box for the medal.

Produce a comprehensive plan for making prototypes of both the medal and its presentation box.

Produce prototypes of both the medal and its presentation box. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully both the medal and its presentation box. Suggest and justify any appropriate improvements.

- 4 Consider the situation where a toy company is to manufacture elastic band powered vehicles.

Research:

- (a) the design and construction of existing elastic band powered vehicles;
- (b) possible vehicles on which you could base your work.

Identify a vehicle 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.

Produce and evaluate a range of design proposals for an elastic band powered vehicle.

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 elastic band powered vehicle.

Produce a working drawing of the elastic band powered vehicle.

Produce a comprehensive plan for making a prototype of the elastic band powered vehicle.

Produce a prototype of the elastic band powered vehicle. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the elastic band powered vehicle. Suggest and justify any appropriate improvements.

- 5 Consider the situation where a company that manufactures computer games and accessories requires a point of sale display stand for a hand held controller, complete with a charging cable and rechargeable battery pack.

Research:

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

Identify a hand held controller 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.

Produce and evaluate a range of design proposals for a point of sale display stand to hold a hand held controller, complete with a charging cable and rechargeable battery pack.

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 for the hand held controller, complete with a charging cable and rechargeable battery pack.

Produce a working drawing of the point of sale display stand for the hand held controller, complete with a charging cable and rechargeable battery pack.

Produce a comprehensive plan for making a prototype of the point of sale display stand for a hand held controller, complete with a charging cable and rechargeable battery pack.

Produce a prototype of the point of sale display stand for the hand held controller, complete with a charging cable and rechargeable battery pack. 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 for the hand held controller, complete with a charging cable and rechargeable battery pack. Suggest and justify any appropriate improvements.

- 6** Consider the situation where a local conservation group is to produce and sell 'bug hotels'.

Research:

- (a)** the design and construction of existing 'bug hotels';
- (b)** the purpose, effectiveness and siting of existing 'bug hotels'.

Identify methods of encouraging 'bugs' to nest, hibernate and feed in your 'hotel' and collect some information about them.

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

Produce and evaluate a range of design proposals for a 'bug hotel'.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions you will use to make a prototype of your design for the 'bug hotel'.

Produce a working drawing of the 'bug hotel'.

Produce a comprehensive plan for making a prototype of the 'bug hotel'.

Produce a prototype of the 'bug hotel'. Use photographs and notes to record the making process.

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

- 7 Consider the situation where a stage set for an outdoor music concert is required.

Research:

- (a) the design and construction of existing stage sets for outdoor music concerts;
- (b) possible music concerts that you could base your work on.

Identify a suitable music concert that you will base your work on and collect some information about it.

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

Produce and evaluate a range of design proposals for a stage set for an outdoor music concert.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make a model of your design for a stage set for an outdoor music concert.

Produce a working drawing of the stage set for an outdoor music concert.

Produce a comprehensive plan for making a model of the stage set for an outdoor music concert.

Produce a model of the stage set for an outdoor music concert. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully the stage set for an outdoor music concert. Suggest and justify any appropriate improvements.

- 8** Consider the situation where a company requires a promotional desk tidy to send to its customers. The desk tidy will be made from card and will be in a 'flat packed' form so that it can be easily posted.

Research:

- (a)** the design and construction of existing desk tidies made from card and the types of product they are designed to hold;
- (b)** possible companies on which you could base your work.

Identify a suitable company 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.

Produce and evaluate a range of design proposals for a desk tidy made from 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 your design for a desk tidy.

Produce a working drawing of the desk tidy.

Produce a comprehensive plan for making a prototype of the desk tidy.

Produce a prototype of the desk tidy. Use photographs and notes to record the making process.

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

- 9** Consider the situation where a band or singer is to release a limited edition CD and DVD. A piece of packaging is required which will hold a CD, a DVD and a booklet containing photographs of the band or singer.

Research:

- (a)** the design and construction of existing packaging for limited editions of CDs and DVDs;
- (b)** possible bands and singers that you could base your work on.

Identify a suitable band or singer that you will base your work on and collect some information about them.

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

Produce and evaluate a range of design proposals for:

- (a)** packaging for a limited edition CD and DVD;
- (b)** a booklet of photographs.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make prototypes of your designs for both the packaging for the limited edition CD and DVD and the booklet of photographs.

Produce working drawings of:

- (a)** the packaging for the limited edition CD and DVD;
- (b)** the booklet of photographs.

Produce a comprehensive plan for making prototypes of both the packaging for the limited edition CD and DVD and the booklet of photographs.

Produce prototypes of both the packaging for the limited edition CD and DVD and the booklet of photographs. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully both the packaging for the limited edition CD and DVD and the booklet of photographs. Suggest and justify any appropriate improvements.

- 10** Consider the situation where an existing single-storey building is to be converted into an indoor soft play facility for children aged between 3 and 10 years old.

Research:

- (a)** possible buildings that could be converted into an indoor soft play facility for children aged between 3 and 10 years old;
- (b)** existing indoor soft play facilities.

Identify:

- (a)** a suitable building and collect some information about it.
- (b)** the range of soft play equipment that the facility will include.

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

Produce and evaluate a range of design proposals for:

- (a)** the internal layout of an indoor soft play facility for children aged between 3 and 10 years old;
- (b)** the outside façade and entrance to an indoor soft play facility.

Carry out tests and trials to establish the construction and joining methods, materials and dimensions that you will use to make a model of your design for an indoor soft play facility which shows both its internal layout and outside façade.

Produce working drawings of:

- (a)** the internal layout of the indoor soft play facility;
- (b)** the outside façade and entrance to the indoor soft play facility.

Produce a comprehensive plan for making a model of the indoor soft play facility which shows both its internal layout and its outside façade and entrance.

Produce a model of the indoor soft play facility which shows both its internal layout and its outside façade and entrance. Use photographs and notes to record the making process.

Use the specification points and appropriate user testing to evaluate fully both the indoor soft play facility's internal layout and its outside façade and entrance. Suggest and justify any appropriate improvements.

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