



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY

0445/11

Paper 1 Product Design

October/November 2015

1 hour 15 minutes

Candidates answer on the pre-printed A3 Answer Sheets.

Additional Materials: Standard drawing equipment and coloured pencils.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces on **both** printed Answer Sheets.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, glue or correction fluid.

Answer **one** question.

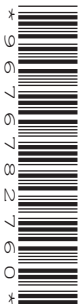
Write/draw your answers in the spaces provided on the Answer Sheets.

You may use a calculator.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.

The total of the marks for this paper is 50.



This document consists of **4** printed A4 pages and **2** A3 Inserts.

Answer **one** question only on the pre-printed A3 Answer Sheets provided.

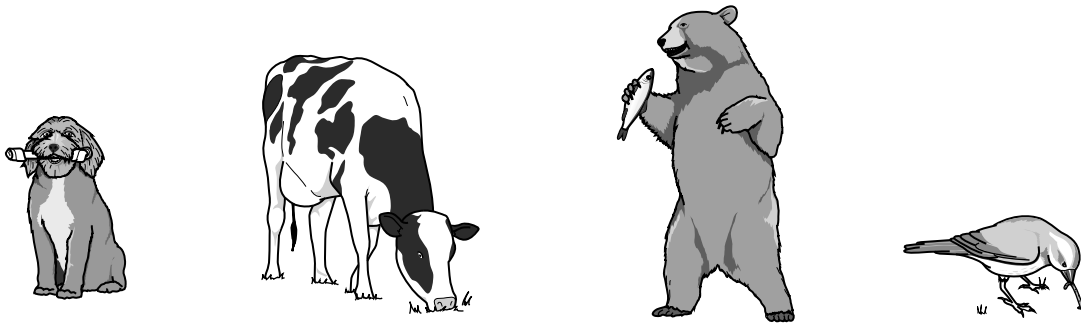
- 1 Small pets often need to be moved from one place to another such as when being taken to the veterinary surgery for treatment.



Design a unit that could be used to transport a small pet and provide them with food and water on the journey.

- (a) List **four** additional points about the function of such a unit that you consider to be important. [4]
- (b) Use sketches and notes to show **two** ways by which the pet could be put into or taken out of the unit. [4]
- (c) Develop and sketch **three** ideas for the unit. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and major dimensions. [12]
- (f) Suggest **two** suitable specific materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution. [6]

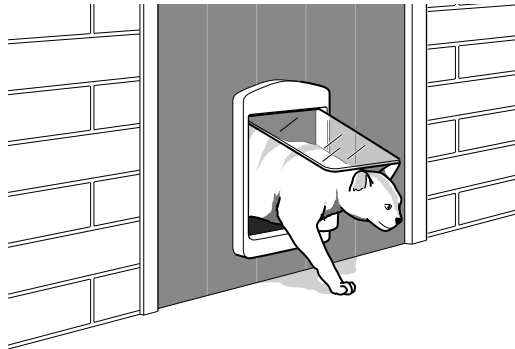
2 Games not only amuse children but can also be used to help them with their learning.



Design a game that encourages young children to learn about foods eaten by different animals.

- (a) List **four** additional points about the function of such a game that you consider to be important. [4]
- (b) Use sketches and notes to show **two** ways by which items can be matched up by young children. [4]
- (c) Develop and sketch **three** ideas for the game. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and major dimensions. [12]
- (f) Suggest **two** suitable specific materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution. [6]

- 3 Cats and other small pets often leave and enter the owner's house through a flap in a door.



Design a system that would indicate to the owner whether the cat is in or out of the house.

- (a) List **four** additional points about the function of such a system that you consider to be important. [4]
- (b) Use sketches and notes to show **two** display methods that would indicate to the owner whether the cat is in or out. [4]
- (c) Develop and sketch **three** ideas for the system. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and major dimensions. [12]
- (f) Suggest **two** suitable specific materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution. [6]

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