

AQA Graphic Products Practice Papers 2017



*Pre-release context for Section A:
'Self-assembly decoration for a special event'*



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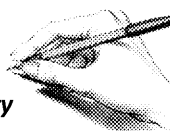
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Teacher's Introduction

In the run-up to the summer examinations, the importance of preparing for the examination becomes greater. With this in mind, the pack contains two practice examination papers covering the AQA GCSE Graphic Products (4550) specification – with Section A in each based on the summer 2017 pre-release design context:

- *'Self-assembly decoration for a special event'*

Each paper follows the structure of a typical AQA examination paper and as such can be used either for a mock examination, using the full paper, or as revision material, by setting question(s) individually.

Alongside each question paper there is a mark scheme, which includes indicative answers for each question. Combining these together can provide students with an invaluable insight into what is required of them when they sit the examination during the summer.

This resource is intended only to supplement your teaching.

As with all pre-release material, it is the teacher's responsibility to decide in what way to assist their students. It's the teacher's responsibility to decide how this resource in particular can be used to fit into that assistance.

The resources here are provided as an interpretation of the preliminary material.

The author does not have any special knowledge of what to expect on any particular exam.

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Name

AQA GCSE Design Technology Graphic Products – Unit 1 [15]

Practice Paper

Pre-release Context: Self-assembly decoration for a space

Time: 2 hours

Instructions

- Use black ink or black ballpoint pen. Use pencil and coloured pencils for drawing only.
- Fill in the box at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this answer book. Cross out any work you do not want to be marked.

Information

- The marks for each question are shown in brackets.
- The maximum mark for this paper is 120.
- The question in Section A relates to the pre-release context.
- You are reminded of the need for good English and clear presentation in your answers.
- Quality of written communication will be assessed in Question 7.

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Section A

Answer **all** questions in the spaces provided

Section A content intentionally hidden from inspection copy

You are advised to spend about 35 minutes on this question.

Design Theme: Self-assembly decoration for a special event

Design Brief

A party supplier has asked you to produce a range of cartoon-themed decorations for a birthday.

Design Specification

The table decorations must:

- be suitable for a children's party
- be easy to assemble
- be stable when free-standing on a table
- be able to be flat-packed for retail
- be manufactured from corrugated cardboard

1. (a) Sketch, with notes, two creative ideas for a self-assembly table decoration, using the design specification. Show your assembly details clearly.

Marks will be awarded for:

- Two different annotated ideas using the design specification
- Quality of sketching (10 marks)
- Creative solutions (10 marks)
- Notes explaining assembly (10 marks)

Do not include construction or assembly instructions in your design.

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1. d) Evaluate the effectiveness of your design against the specification

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Section B

Answer **all** questions in the spaces provided

Question 2 is about information drawings and is worth 12 marks.
You are advised to spend around 12 minutes on this question.

- 2 a) Use the information in the table to produce a **pictograph** in the space provided.

Number of games consoles sold between 2010 and 2015:



Year	Unit sales (millions)
2010	72
2011	65
2012	55
2013	48
2014	43
2015	39




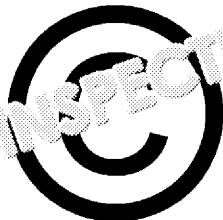

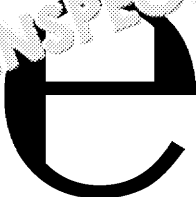
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- 2 b) Symbols are used to provide information to people without the need for words.

Complete the table below by either giving the meaning of the symbol or the symbol in the space provided.

Symbol	Meaning
 	<p>.....</p> <p>.....</p>
<p>(2 marks)</p>	<p>Recyclable material</p>
 	<p>.....</p> <p>.....</p>

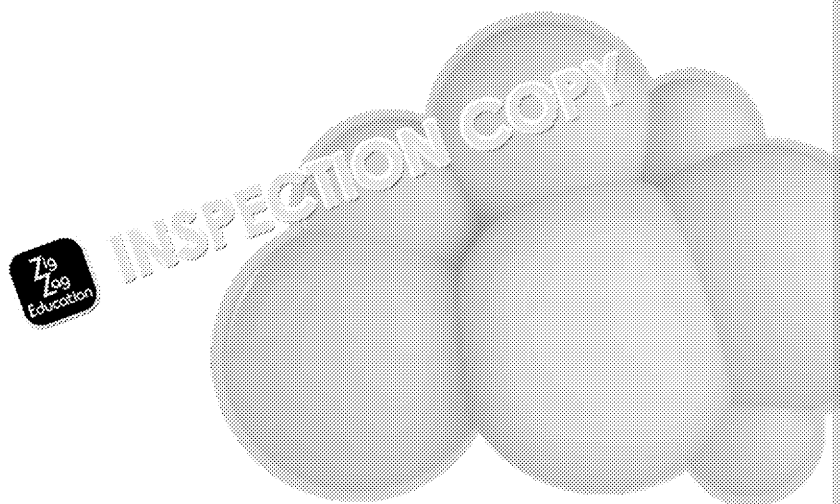
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Question 3 is about product development and is worth 20 marks.
You are advised to spend around 20 minutes on this question.

The image shows a prototype of a night light for children.



- 3 a) The prototype night light has been made from expanded polystyrene.

In the spaces below, produce a sequential drawing to show the formation of the expanded polystyrene prototype. Use notes to explain each stage.

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- 3 b) Explain the advantages of producing a prototype when developing

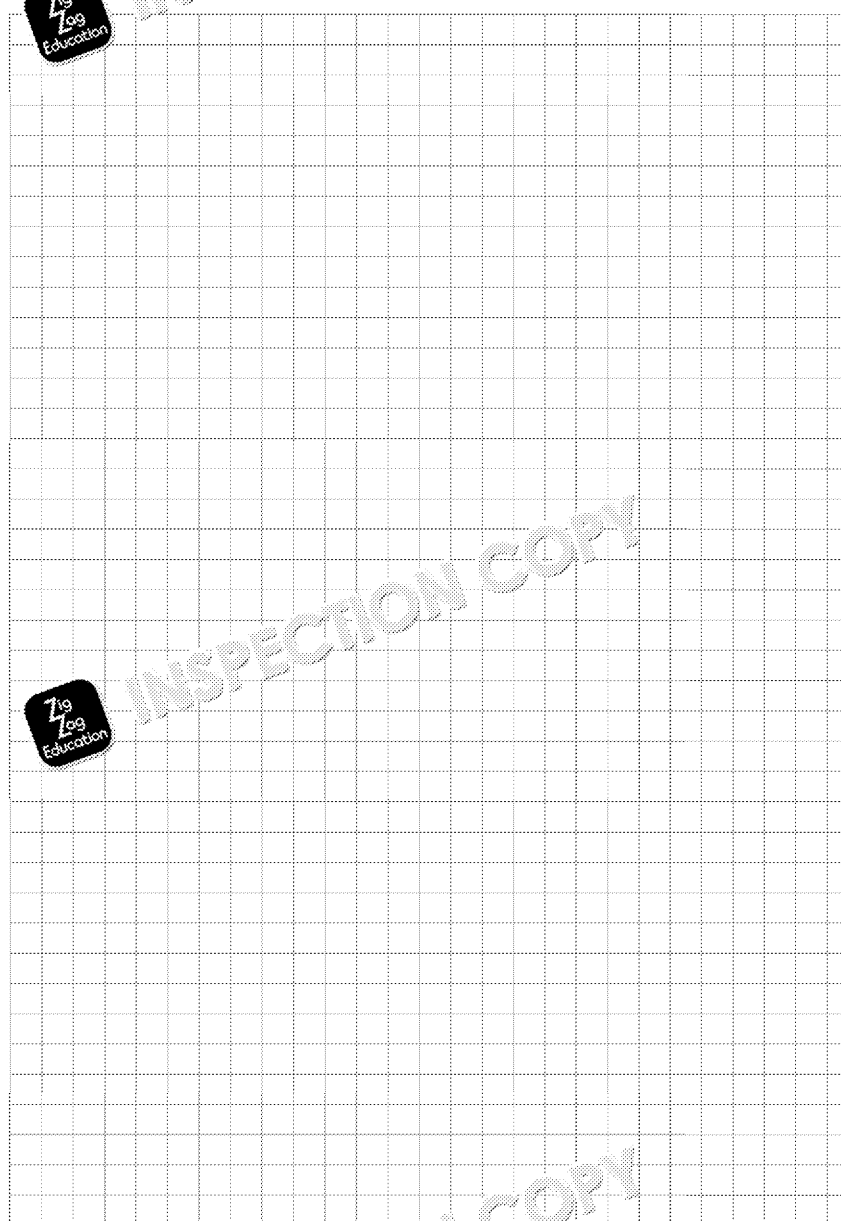
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- c) On the grid below sketch a third angle orthographic projection of



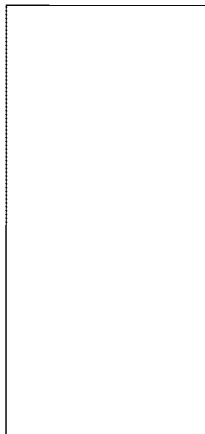
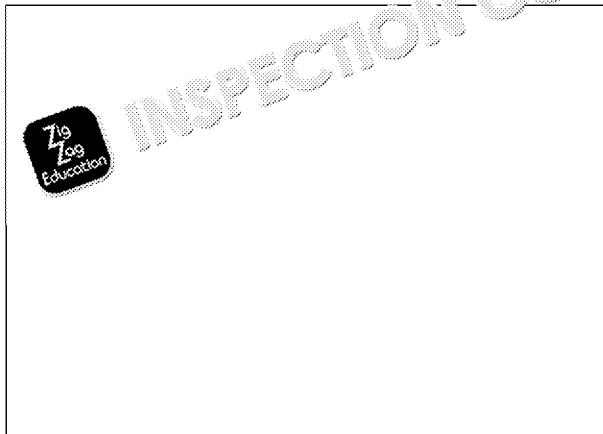
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Question 4 is about designing and materials and is worth 18 marks.
You are advised to spend around 18 minutes on this question.

- 4 a) A company called 'ZZ Express' specialises in next-day delivery of parcels. They have a fleet of vans, which are used to deliver parcels. The company has asked you to develop a lettering style to be used on the vans.

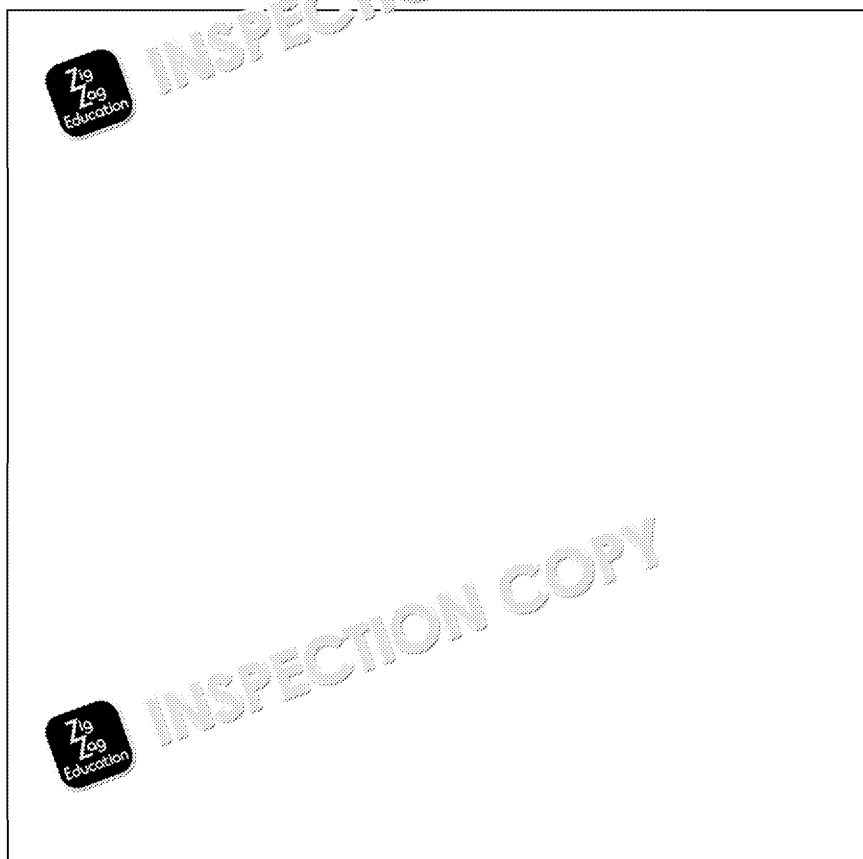
In the spaces below, produce two different ideas for a lettering style.



- b) ZZ Express has asked you to design the front of a leaflet that can be used to promote their services.

In the space below, design a leaflet that includes:

- one of your designs from 4 a) above
- images relevant for a transport company




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- 4 c) ZZ Express offers customers the option of buying packaging materials.

Complete the table below to give a description of the material, and what the material is used for.

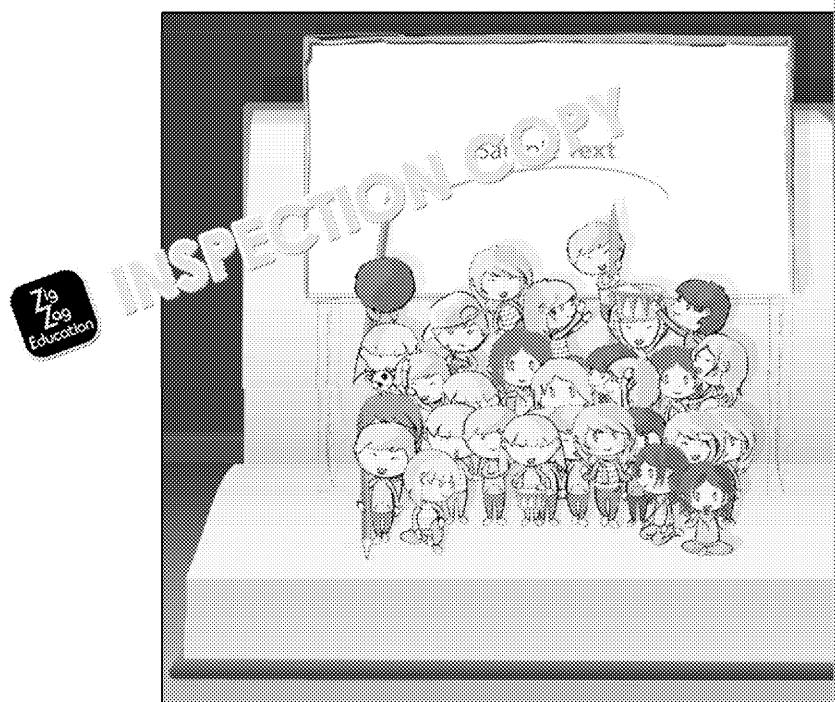
Material	Description	
Corrugated cardboard	Low cost sheet material which has flutes that provide protection to the contents.	Large parcels
 Paperfoam	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>(2 marks)</p>	
Potatopak	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>(2 marks)</p>	

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Question 5 is about the work of designers and is worth 19 marks.
 You are advised to spend around 19 minutes on this question.
 Study the pop-up book below.



- 5 a) Name the designer who is associated with the production of pop-up books.

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- b) The image has been printed using the offset lithography process. State two reasons for using offset lithography for the image and explain how each has been completed for you.

Example: The book will be printed in large batches so it is an economical choice.

Example: The book will be printed in large batches so it is an economical choice.

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2.

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- 5 c) Pop-up cards can be made in a school workshop.

Read through the following stages:

- A. Glue tabs
- B. Cut out pop-up
- C. Assemble parts
- D. Print out pop-up design
- E. Make creases on tabs
- F. Check the pop-up design
- G. Fold tabs

In the table below, put the letters for the stages in the correct order of equipment required at each stage. An example has been done for you.

Stage Number	Letter	Equipment
Stage 1	D	Computer and printer
Stage 2		
Stage 3		
Stage 4		
Stage 5		
Stage 6		
Stage 7	F	None required

- d) Pop-up cards can be designed using computer-aided design (CAD) computer-aided manufacturing (CAM) equipment.

Explain the advantages of using CAD to design pop-up cards.

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Question 6 is about production methods and is worth 8 marks.
You are advised to spend around 8 minutes on this question.

- 6 a) Commercially produced products are made using a range of processes.
Explain why some products are mass-produced.

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- b) Small batches of graphic products can be printed using screen printing.
Explain why screen printing is suitable for small batches of products.

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Question 7 is about materials and components and is worth 8 marks.
You are advised to spend around 8 minutes on this question.

Quality of written communication will be assessed in this question.

- 7 Discuss the reasons why manufacturers of graphic products use 'bought in' materials.
Use examples to support your answer.

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Name

AQA GCSE Design Technology Graphic Products – Unit 1 [145011]

Practice Paper 1

Pre-release Context: Self-assembly decoration for a space

Time: 2 hours

Instructions

- Use black ink or black ballpoint pen. Use pencil and coloured pencils for drawing only.
- Fill in the box at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this answer book. Cross out any work you do not want to be marked.

Information

- The marks for each question are shown in brackets.
- The maximum mark for this paper is 120.
- The question in Section A relates to the pre-release context.
- You are reminded of the need for good English and clear presentation in your answers.
- Quality of written communication will be assessed in Question 6.

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Section A

Answer **all** questions in the spaces provided

Section A content intentionally hidden from inspection copy

Design Theme:

Self-assembly decoration for a social

Design Brief:

A variety of supplies given to produce a range of self-assembly gift

Design Context:

The gift is for a

- * include the coloring suitable for a wedding
- * Be easy to assemble
- * Be able to be folded for
- * Have an easy surface decoration

1. a) i) In the boxes below, sketch two different letter styles for the

style 1

style 2

ii) In the space below, develop one (or both) of your lettering styles. Use colour to enhance your designs.

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Section A content intentionally hidden from inspection copy

Your sketches and notes should explain the features of the product.

Marks will be awarded for:

- Two different anchored ideas using the design specification
- Quality of sketching, including use of colour (5 marks)
- Creative solutions (3 marks)
- Notes explaining design decisions (2 marks)



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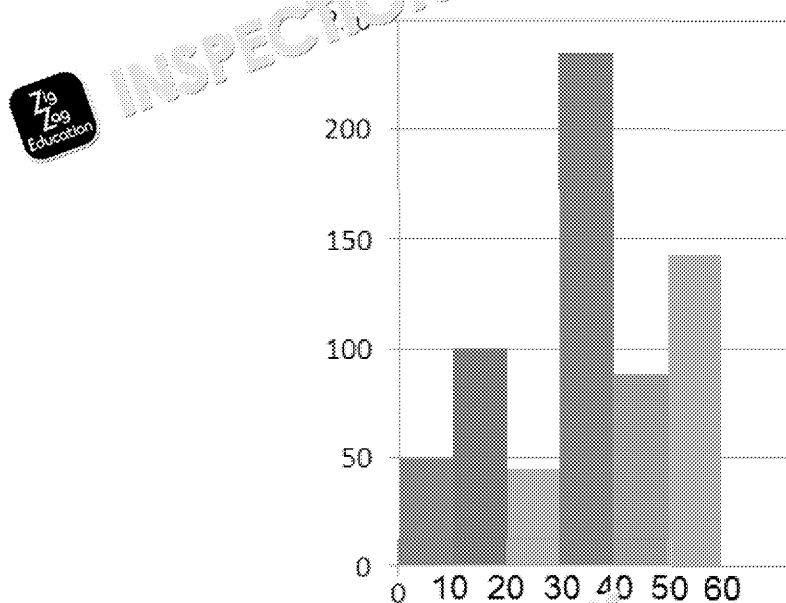


Section B

Answer **all** questions in the spaces provided

Question 2 is about information drawings and is worth 15 marks.
You are advised to spend around 15 minutes on this question.

- 2 a) i) The image shows an example of a chart used to represent data.



Name the type of chart shown.

- ii) Describe **one** advantage of using this type of chart to represent data.

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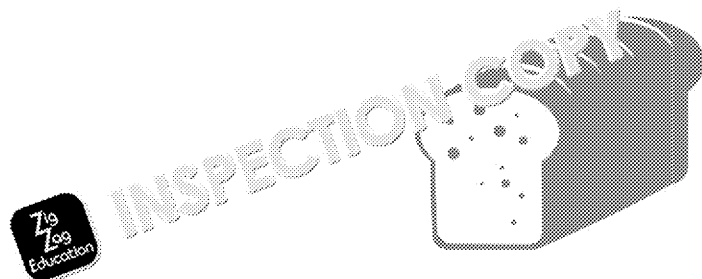
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- 2 b) A supermarket chain uses ideograms to identify the products sold in a supermarket.

Figure 1 shows the ideogram used for the bakery section.

Figure 1



- i) In the spaces below, sketch ideas for (i) fruit and vegetables, and (ii) meat and fish.

Fruit and vegetables

- 2 b) ii) Explain the advantages of using ideograms to display information.

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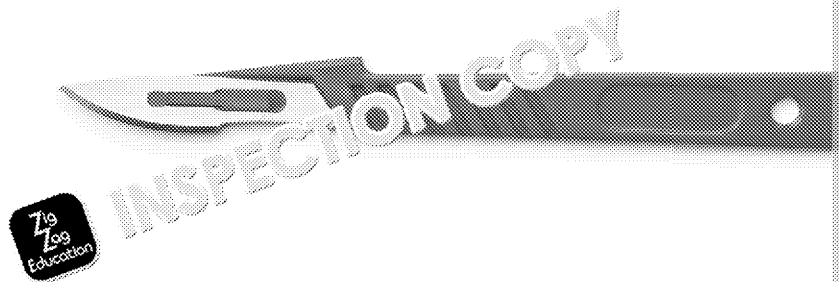
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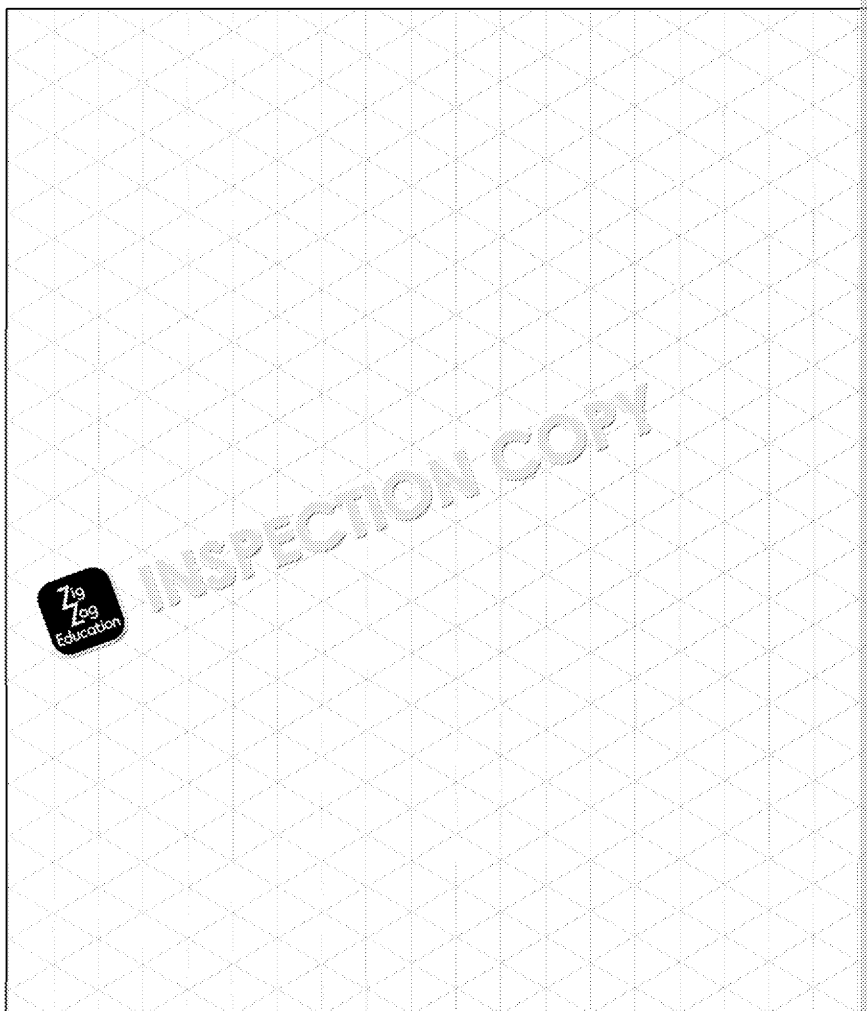


Question 3 is about tools and equipment and is worth 21 marks.
You are advised to spend around 21 minutes on this question.

The image shows a craft knife used in a school workshop.



- 3 a) In the space below, sketch an isometric exploded drawing of the craft knife.



- 3 b) Describe **two** safety precautions that should be followed when using a craft knife.

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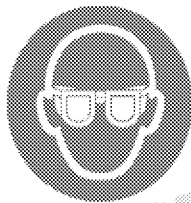
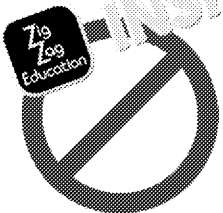
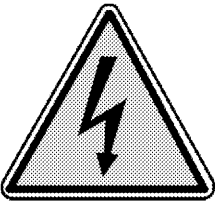
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- 3 c) Safety signage is used in schools to help everybody keep safe and
Complete the table below by stating the meaning of the types of sign

Example of sign	Meaning
	
	
	

- 3 d) Craft knives are used in school workshops for cutting and scoring.
An alternative way to produce net is to use a die cutter.

In the space below, using notes and sketches, show how a die cut

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Question 4 is about printing processes and materials and is worth 21 marks.
You are advised to spend around 21 minutes on this question.

- 4 a) The image below shows the cover of a guidebook given to tourists



- i) Name the quality control mark indicated by the letter B.

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- ii) Complete the table by naming the quality control mark, and explain its purpose.

Feature	Quality control mark name	
A	<p>.....</p> <p>.....</p> <p>(1 mark)</p>	<p>.....</p> <p>.....</p>
C	<p>.....</p> <p>.....</p> <p>(1 mark)</p>	<p>.....</p> <p>.....</p>

- b) Name **two** suitable printing methods for the booklet.

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- 4 c) The designer of the guidebook would like to improve the appearance of the guidebook by using finishing techniques.

Explain how embossing and foil blocking can be used to improve the appearance of the guidebook.

- (i) *Embossing*



- (ii) *Foil blocking*

- d) The booklet is displayed in hotels and visitor attractions using a point of sale display stand made of corrugated cardboard.

Explain why corrugated cardboard is a suitable material for point of sale displays.



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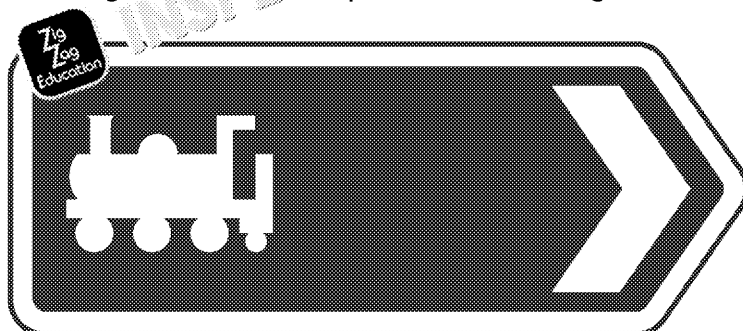
Question 5 is about the work of designers and designing and is worth 20 marks. You are advised to spend around 20 minutes on this question.

5 a) Name the **two** designers who influenced the design of UK road signs.

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b) The image shows an example of a UK road sign for a steam railway.



In the spaces below, sketch ideas for signs for the following tourist attractions.


Theme Park	S

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- 5 c) Road signs are designed using CAD systems and manufactured using CNC routers. Describe **one** use of the following pieces of equipment found in a CAD system.

Equipment	Use
<p>Mouse</p> 	
<p>Graphics tablet</p>	
<p>CNC router</p>	

- 5 d) Describe the benefits of using CAD for designing road signs.

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Question 6 is about scales of production and is worth 8 marks. You are advised to spend around 8 minutes on this question.

Quality of written communication will be assessed in this question.

- 6 Discuss how production methods change when scaling up from one-off production to mass production for graphic products.

Use an example to support your answer.

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Practice Paper 1 – Mark Scheme

1 (a)	<p>Annotated ideas (2 x 5 marks):</p> <p>4–5 marks Excellent idea, innovative design idea, manufacture (possible explanation), assembly (detail of method), stability and safety.</p> <p>2–3 marks Satisfactory idea, considering some of the above points.</p> <p>1 mark Weak idea, minor or no consideration of above points.</p> <p>0 marks Not attempted</p> <p>Quality of ideas for both ideas (overall impression):</p> <p>3 marks High level – good quality and effective</p> <p>2 marks Medium level – adequate quality, with limit range of application</p> <p>1 mark Low level – poor quality, difficult to interpret, inadequate</p> <p>0 marks Not attempted – scribble</p> <p>Creative solutions for both ideas (theme originality):</p> <p>3 marks High level – good quality and effective</p> <p>2 marks Medium level – some variety of ideas</p> <p>1 mark Low level – simple basic design, similar ideas</p> <p>0 marks Not attempted</p> <p>Quality of notes with reference to assembly details:</p> <p>Read annotation to gain this mark</p> <p>2 marks Clear understanding of assembly methods</p> <p>1 mark Some reference to assembly, labels only</p> <p>0 marks Incorrect or not attempted</p>
(b)	<p>Award marks as follows:</p> <p>6–7 marks High level – clear, logical development of one idea, appealing to the eye, good use of proportion, colour, or texture.</p> <p>4–5 marks Good development of most aspects, appealing</p> <p>2–3 marks Medium level – some development of aspects of the design</p> <p>1 mark Low level – limited development</p> <p>0 marks Not attempted</p>
(c)	<p>Award marks as follows:</p> <p>6–7 marks High level – good quality, in proportion, crating, line work, surface decoration and colour to a high standard.</p> <p>3–5 marks Medium level – adequate quality, recognisable design, inaccuracy, some surface decoration/colour</p> <p>1–2 marks Low level – poor, difficult to interpret, confused</p> <p>0 marks Not attempted</p> <p>Max 3 marks for 3D drawing not assembled</p> <p>Max 3 marks if no surface decoration/colour</p> <p>Max 2 marks for 2D drawing with surface decoration/colour</p> <p>Max 1 mark for 2D drawing without surface decoration/colour</p>
(d)	<p>Evaluation – as a table decoration, meeting the points in the design brief</p> <p>3 marks High level – analytical/critical, modification</p> <p>2 marks Good level – critical and suggests modifications</p> <p>1 mark Low level – limited objectivity</p> <p>0 marks Not attempted or not relevant, or descriptive</p>

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2	(a)	1 mark for correctly drawing and labelling axes 1 mark for use of suitable image for pictograph 1 mark for each correctly represented value shown in the bar chart (up to a												
	(b)	<table border="1"> <tr> <td>Symbol</td><td>Meaning</td><td></td></tr> <tr> <td></td><td>Copyright</td><td>1 mark</td></tr> <tr> <td></td><td>Recyclable material</td><td>2 marks</td></tr> <tr> <td></td><td>Estimated sign Net weight</td><td>1 mark</td></tr> </table>	Symbol	Meaning			Copyright	1 mark		Recyclable material	2 marks		Estimated sign Net weight	1 mark
Symbol	Meaning													
	Copyright	1 mark												
	Recyclable material	2 marks												
	Estimated sign Net weight	1 mark												
3	(a)	Award up to 2 marks for any four stages of the process (in the correct order) 1 mark awardable for a sketch, 1 mark for notes/annotations. 1 – mark out / draw design on expanded polystyrene 2 – cut out with craft knife / scroll saw / coping saw / hot wire cutter 3 – sand surface smooth 4 – add base coat / sealer 5 – apply surface finish												
	(b)	For each advantage, award 2 marks if the advantage shows good understanding of the need to produce prototypes when developing designs. Award 1 mark if the advantage shows some understanding of the need to produce prototypes when developing designs.												
	(c)	<p>Award marks as follows:</p> <p>2 marks Correctly showing three views 1 mark Two views shown or first angle projection</p> <p>Then award 2 marks for each view as follows:</p> <p>2 marks Clear, accurate and well-drawn. Correct proportions. 1 mark Recognisable with some accuracy 0 marks No attempt at the view</p>												
4	(a)	<p>Award marks as follows for each design:</p> <p>3 marks Suitable use of decorative lettering to represent a parcel 2 marks Good decorative lettering style, hollow lettering, some construction lines 1 mark Single line lettering only 0 mark Not attempted or scribbled</p>												
	(b)	<p>Marks will be awarded for:</p> <ul style="list-style-type: none"> lettering style and layout suitability for delivery company <p>Lettering style and layout</p> <p>3 marks High level: high visual impact, immediate understanding, attractive, well-balanced layout 2 marks Medium level: layout is effective, some lack of clarity 1 mark Low level: limited visual impact, poor layout</p> <p>Suitability for delivery company</p> <p>3 marks High level: good use of appropriate imagery 2 marks Medium level: mostly appropriate images 1 mark Low level: poor attempt or inappropriate images</p>												

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4	(c)	See the table below. Award marks as indicated for each cell correctly completed.																								
		<table> <tr> <th>Material</th><th>Description</th><th>Example</th></tr> <tr> <td>Paperfoam</td><td> <ul style="list-style-type: none"> Eco-friendly material (1) which can be moulded into shape easily (1) Made from plant starches and fibres (1) which decompose easily (1) </td><td> <ul style="list-style-type: none"> Injection moulding (1) Packaging </td></tr> <tr> <td>Plastic</td><td> <ul style="list-style-type: none"> Rigid material (1) made from plastic (1) Strong material (1) which can be moulded into a range of shapes (1) </td><td> <ul style="list-style-type: none"> Food trays Disposable Hardback books </td></tr> </table>	Material	Description	Example	Paperfoam	<ul style="list-style-type: none"> Eco-friendly material (1) which can be moulded into shape easily (1) Made from plant starches and fibres (1) which decompose easily (1) 	<ul style="list-style-type: none"> Injection moulding (1) Packaging 	Plastic	<ul style="list-style-type: none"> Rigid material (1) made from plastic (1) Strong material (1) which can be moulded into a range of shapes (1) 	<ul style="list-style-type: none"> Food trays Disposable Hardback books 															
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5	(a)	Only acceptable answer: Robert Sabuda																								
	(b)	For each reason, award 2 marks if the advantage shows good understanding of why offset lithography is suitable for book production. Award 1 mark if the reason is valid but lacking in understanding of the reasons for the process with reference to the book.																								
	(c)	Award marks for each completed section in the table. Accept appropriate abbreviations.																								
		<table> <tr> <th>Stage Number</th><th>Letter</th><th>Equipment</th></tr> <tr> <td>Stage 1</td><td>D</td><td>Computer and printer</td></tr> <tr> <td>Stage 2</td><td>B (1)</td><td>Scissors, craft knife, safety rule, cutting mat</td></tr> <tr> <td>Stage 3</td><td>E (1)</td><td>Folding bar, ruler (1)</td></tr> <tr> <td>Stage 4</td><td>G (1)</td><td>By hand, ruler (1)</td></tr> <tr> <td>Stage 5</td><td>A (1)</td><td>Glue stick, PVA, double-sided tape (1)</td></tr> <tr> <td>Stage 6</td><td>C (1)</td><td>Ruler, template (1)</td></tr> <tr> <td>Stage 7</td><td>F</td><td>None</td></tr> </table>	Stage Number	Letter	Equipment	Stage 1	D	Computer and printer	Stage 2	B (1)	Scissors, craft knife, safety rule, cutting mat	Stage 3	E (1)	Folding bar, ruler (1)	Stage 4	G (1)	By hand, ruler (1)	Stage 5	A (1)	Glue stick, PVA, double-sided tape (1)	Stage 6	C (1)	Ruler, template (1)	Stage 7	F	None
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	(d)	For each reason, award 2 marks if the advantage shows good understanding of why CAD is suitable for pop-up cards. Award 1 mark if the reason is valid but lacking in understanding of the reasons for using CAD. Advantages could include: Able to change/manipulate designs easily; parts of images can be combined; colour schemes at the touch of a button; images can be stretched																								
6	(a)	Award 2 marks for each valid feature with reasons or explanations. Award 1 mark for each feature which is not justified. Up to a maximum of 4 marks. <ul style="list-style-type: none"> products are of high demand (1) meaning they need to be produced in large quantities (1) products need to be low-cost for customers (1); therefore, process must be efficient (1) all items are identical (1) allowing large numbers of products to be produced from one design (1) 																								
	(b)	Award 2 marks for each valid feature with reasons or explanations. Award 1 mark for each feature which is not justified. Up to a maximum of 4 marks. <ul style="list-style-type: none"> it is a time-consuming process (1); therefore, only small batches can be produced (1) screen costs are low (1); therefore, does not add extra costs (1) can be done using simple equipment (1) allowing batches to be made (1) 																								

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7	<p>Award 1 mark for each of the following points (and any other suitable points) for a maximum of 4 marks:</p> <p>Examples of bought-in components</p> <ul style="list-style-type: none"> • Fastenings • Bindings • Electronic components • Smart materials <p>Advantages</p> <ul style="list-style-type: none"> • Allows electronic features to be included in products • Enhances the appearance/function of a product • Makes a product more desirable to buy • No need to produce the components themselves <p>Disadvantages</p> <ul style="list-style-type: none"> • Components are often readily available • Can be expensive to purchase • Supply problems can delay production • Exact components required may not be available <p>Award up to 4 marks for the QWC as follows:</p> <table> <tr> <td>1 mark</td><td>significant errors in spelling and grammar</td></tr> <tr> <td>2 marks</td><td>some errors in spelling and grammar</td></tr> <tr> <td>3 marks</td><td>few errors in spelling and grammar</td></tr> <tr> <td>4 marks</td><td>excellent QWC with no obvious errors</td></tr> </table>	1 mark	significant errors in spelling and grammar	2 marks	some errors in spelling and grammar	3 marks	few errors in spelling and grammar	4 marks	excellent QWC with no obvious errors
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Practice Paper 2 – Mark Scheme

1	(a)	(i)	<p>Award marks as follows for each design:</p> <p>2 marks High level: excellent lettering style, hollow lettering / dots of construction lines, suitable for a wedding</p> <p>1 mark Low level: single line lettering, limited variation</p> <p>0 marks Not attempted or scribbled</p>
		(ii)	<p>Award marks as follows:</p> <p>4 marks High level: excellent development – sequence of sketches progressing, fully communicated including use of colour (sketch 1)</p> <p>3 marks Medium level: evidence of development – some progress, final idea and moderate level of sketching. Only one sketch</p> <p>2 marks Low level: limited development – single idea or little progress communicated or a different idea from (i)</p> <p>1 mark Superficial attempt at development</p> <p>0 marks No attempt</p>
	(b)		<p>Ideas meeting the design specification (2 x 4 marks):</p> <p>4 marks Excellent idea, suitable for a wedding, able to be flat-packed, assembled, includes suitable images/text</p> <p>3 marks Good idea, considering most of the above points</p> <p>2 marks Satisfactory idea, considering some of the above points</p> <p>1 mark Weak idea, minor or no consideration of above points</p> <p>0 marks Not attempted</p> <p>Quality of sketching for both ideas (overall impression):</p> <p>4–5 marks High level – good quality, 3D and effective</p> <p>2–3 marks Medium level – adequate quality, with limited range</p> <p>1 mark Low level – poor quality, difficult to interpret</p> <p>0 marks Not attempted</p> <p>Creative solutions for both ideas (originality):</p> <p>3 marks High level – good quality and effective</p> <p>2 marks Medium level – some variety of ideas</p> <p>1 mark Low level – simple basic design, similar ideas</p> <p>0 marks Not attempted or scribbled</p> <p>Quality of annotation</p> <p>2 marks Clear understanding, with detailed notes</p> <p>1 mark Some reference to materials, labels only</p> <p>0 marks Incorrect or not attempted</p>
	(c)		<p>Award marks as follows:</p> <p>5–6 marks High level – good quality, in proportion, crating, line work, surface decoration and colour to a high standard.</p> <p>3–4 marks Medium level – adequate quality, recognisable design, some inaccuracy, some surface decoration/colour</p> <p>1–2 marks Low level – poor, difficult to interpret, confused</p> <p>0 marks Not attempted</p> <p>Max 3 marks for 3D drawing not assembled</p> <p>Max 3 marks if no surface decoration/colour</p> <p>Max 2 marks for 2D drawing with surface decoration/colour</p> <p>Max 1 mark for 2D drawing without surface decoration/colour</p>
	(d)		<p>Award marks as follows:</p> <p>4 marks High level evaluation: analytical, critical and including justification</p> <p>3 marks Medium level: descriptive, limited justification</p> <p>2 marks Low level: no justification, mainly self-congratulation</p> <p>1 mark No evidence or a description of the design</p> <p>0 marks No evidence or a description of the design</p>

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2	(a)	(i)	Award 1 mark for any of the following: <ul style="list-style-type: none"> • histogram • (accept bar chart)
		(ii)	Award 2 marks for each valid statement with reasons. Award 1 mark for statements that are not justified. Up to a maximum of 2 marks. <ul style="list-style-type: none"> • Data is shown in a visual way (1) allowing more popular options to be identified • Values are shown on the axes (1) so comparisons can be easily made
	(b)	(i)	Two identifiable ideograms for the two given departments. Marks to be awarded as follows: <p>4 marks High level: clear representation of the products; good use of colour and text</p> <p>3 marks Good level: most of the above evident</p> <p>2 marks Medium level: some of the above criteria evident</p> <p>1 mark Low level: ideograms are identifiable for the products</p> <p>0 marks No evidence</p>
		(ii)	For each advantage, award 2 marks if the advantage shows good understanding of reasons why ideograms are suitable for retail outlets. Award 1 mark if the advantage is partially understood and lacking in understanding of the advantages of ideograms.
3	(a)		Award marks as follows: <p>7–8 marks High level – full size isometric sketch, good proportion, neat lines, component parts in appropriate locations</p> <p>5–6 marks Good level – most of the above, some errors in the location of parts</p> <p>3–4 marks Medium level – good isometric sketch, some imperfect lines</p> <p>1–2 marks Low level – not isometric, lacks detail</p> <p>0 marks Not attempted</p>
	(b)		Award 2 marks for each description if there is a good understanding of the steps to be followed when using a craft knife. Award 1 mark if the description is partially understood. <p>Answers could consider:</p> <p>Use of safety ruler; cutting mat; keeping fingers away from blade; cutting away from body</p>
	(c)		Top <ul style="list-style-type: none"> • Mandatory / 'must wear' • Safety protection • Eye protection • Ear protection • Ear goggles Middle <ul style="list-style-type: none"> • Prohibition / 'do not' Bottom <ul style="list-style-type: none"> • High voltage • Warning
	(d)		A description of the process, including sketches. <p>Award 1 mark for each of the following features:</p> <ul style="list-style-type: none"> • Cutting knife has narrow blade that cuts card/paper • Creasing rule is used for folds • Perforating knife cuts through the paper/card to give perforations • Press/die form holds all the knives in a plywood base <p>Description to include reference to applying glue to the die form, for assembly</p> <p>Max 4 marks if there are no sketches</p> <p>Max 3 marks if only simple sketches</p>

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4	(a)	(i)	Award one mark for either: <ul style="list-style-type: none">• Crop mark• Trim mark										
		(ii)	<table><tr><th>Feature</th><th>Quality control mark name</th><th>Explanation</th></tr><tr><td>A</td><td>Registration mark (1 mark)</td><td>Used to check that printing is aligned – the image is blurred if out of alignment</td></tr><tr><td>C</td><td>Colour bar (1 mark)</td><td>Colour density can be checked (1) meets specifications (1) Allows use of a densitometer (1) to check variations (1)</td></tr></table>	Feature	Quality control mark name	Explanation	A	Registration mark (1 mark)	Used to check that printing is aligned – the image is blurred if out of alignment	C	Colour bar (1 mark)	Colour density can be checked (1) meets specifications (1) Allows use of a densitometer (1) to check variations (1)	
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	(b)		Award marks for any two of the following: <ul style="list-style-type: none">• offset lithography• lithography• flexography• gravure• digital printing										
	(c)	(i)	For each explanation, award 2 marks if the description shows good understanding of how embossing can improve the appearance of the guide book. Award 1 mark if the explanation is vague and lacking in understanding of embossing. Maximum 4 marks. Responses may consider embossing, debossing and blind embossing.										
		(ii)	For each explanation, award 2 marks if the description shows good understanding of how foil blocking can improve the appearance of the guidebook. Award 1 mark if the explanation is vague and lacking in understanding of foil blocking. Maximum 4 marks.										
	(d)		For each explanation, award 2 marks if the description shows good understanding of the properties of corrugated cardboard that make it suitable for a PoS display. Award 1 mark if the explanation is vague and lacking in understanding of the material. Maximum 4 marks.										
5	(a)		One mark for each of the following: <ul style="list-style-type: none">• Block colour• Margaret Calvert										
	(b)		Two identifiable direction signs for the two given attractions. Marks to be awarded: <table><tr><td>4 marks</td><td>High level: suitable image for the attraction, block colour, border and arrow</td></tr><tr><td>3 marks</td><td>Good level: most of the above criteria evident</td></tr><tr><td>2 marks</td><td>Medium level: some of the above criteria evident</td></tr><tr><td>1 mark</td><td>Low level: signs are identifiable for the attraction</td></tr><tr><td>0 marks</td><td>No evidence</td></tr></table>	4 marks	High level: suitable image for the attraction, block colour, border and arrow	3 marks	Good level: most of the above criteria evident	2 marks	Medium level: some of the above criteria evident	1 mark	Low level: signs are identifiable for the attraction	0 marks	No evidence
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CNC router	For creating 3D models (1) from CAD files (1)												
	(d)		For each explanation, award 2 marks if the response shows good understanding of how CAD is suitable for designing road signs. Award 1 mark if the response is vague and lacking in understanding of the reasons for using CAD. Answers could include: Able to use standard layouts/components/features; resize features for different sizes Features can be imported from libraries; standard fonts/symbols need to be used										

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6

Award 1 mark for each of the following points (and any other suitable points) for a maximum of 4 marks:

General considerations

- May need to implement a production line / manufacturing cells
- Material choices could be changed
- Increased automation
- More use of machinery
- Less use of traditional/hand production methods
- Ability to use remote/off-site manufacturing
- Design work most likely to be done through CAD
- Increased use of CNC equipment

A logo for 'Zig Zag Education' featuring the text 'Zig Zag' in a stylized font above the word 'Education', all enclosed within a rounded rectangular border.

Quality assurance becomes more important
Use of automated inspection/testing

Award up to 4 marks for the QWC as follows:

1 mark	significant errors in spelling and grammar
2 marks	some errors in spelling and grammar
3 marks	few errors in spelling and grammar
4 marks	excellent QWC with no obvious errors

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