

SAMPLE GRAPHIC PRODUCTS

GCSE EXAMINATION PAPER

CENTRE NUMBER

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CANDIDATE NUMBER

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SAMPLE PAPER1

SURNAME

FORENAME(S)

CANDIDATE SIGNATURE

2 HOURS ALLOWED

Materials required for this examination:

- normal writing and drawing instruments
- a calculator
- a protractor.

Instructions to candidates:

- Use black ink or black ball-point pen. Use pencil only for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write on blank pages.
- Do all rough work in this book. Cross through any work that you do not want to be marked.

Information

- The marks for the questions are shown in brackets.
- The maximum mark for this paper is 125.
- Section A relates to the context given in the Preliminary Material that was previously issued. **35 marks** Section B - **90 marks**
- You are reminded of the need for good English and clear presentation in your answers. Quality of written communication will be assessed in Question 4 (a).

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SECTION A

This section is concerned with designing

Section A is about designing

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

Design Theme: FANTASY PAPER TOY CHARACTERS.

Look at the Design Brief and Design Criteria below.

Design Brief

A manufacturer of a new breakfast cereal, has asked you to design a Fantasy Paper Toy Character, that can be cut out of a paper/card template and folded to form a three dimensional character (a free promotional gift)



Design Criteria

You have been asked to design a fantasy paper toy character, which will be a free promotional gift, placed inside the packaging or printed on the back of the package, ready for cutting out.

The graphics must:

- be based on a 'Party / fun theme', with any text in a suitable letter style (typeface)
- display colourful images of **party / fun** characters, suitable for young children.
- appeal to children.

TO HELP YOU ANSWER THIS
QUESTION, FOLLOW THE LINKS

<http://www.technologystudent.com/grp09/styles1.html>
<http://www.technologystudent.com/grp09/typo1.html>
<http://www.technologystudent.com/grp09/styles2.html>

1. The Fantasy Characters should be designed to emphasise fun / a party theme. In the two spaces below, design two styles of writing for the term 'Party Time'. Party Time will be prominently displayed on the cereal packaging. **Do not add colour, as this question is concerned with producing a basic outline design. 2 x 2marks**

1a. Part Time

*1 - 2 marks awarded according to level of detail
Remember, the answer is a basic outline - so use teacher discretion regarding marks awarded.*

1b. Part Time

*1 - 2 marks awarded according to level of detail
Remember, the answer is a basic outline - so use teacher discretion regarding marks awarded.*

1c. Select your best outline design and draw it below, adding suitable colour and shade. **4 marks**

*Colour / shade must be applied to the design for any mark to be awarded.
1 mark for basic colour
2-3 marks for increased detail
4 marks for enhanced colour.*

Follow the links for detailed samples.

TO HELP YOU ANSWER THIS
QUESTION, FOLLOW THE LINKS

<http://www.technologystudent.com/despro2/toy4.html>
<http://www.technologystudent.com/despro2/toy5.html>
<http://www.technologystudent.com/despro2/toy6.html>

1d. In the four spaces below, draw four BASIC designs, for a suitable fantasy paper toy character, that could be developed into a folding 3D form. **4 x 2 marks**

*1 mark - basic sketch.
2 marks for more detail.
Colour need not be applied to gain 2 marks.
Use teacher discretion as to level of detail.*

Follow the links for sample answers

TO HELP YOU ANSWER THIS
QUESTION, FOLLOW THE LINKS

<http://www.technologystudent.com/despro2/toy4.html>
<http://www.technologystudent.com/despro2/toy5.html>
<http://www.technologystudent.com/despro2/toy6.html>

1e. Using the design criteria below, produce a series of annotated sketches, to show how **ONE** of your characters, can be developed into a character, that can be folded to form a 3D shape.

Design Criteria

The graphics must:

- ensure that the fantasy character represents the theme 'party' / 'fun'
- include a suitable colour scheme that supports the party / fun theme.
- your chosen character must appeal to children.
- show clearly detail of the net(s) / development(s) that are folded to form the final character.

Marks will be awarded for:

- effective application of the design criteria
- creativity, imagination, originality and quality of the development, including an indication of colour
- notes explaining your sketches.

[11 marks]

Use the next two pages to develop your design.

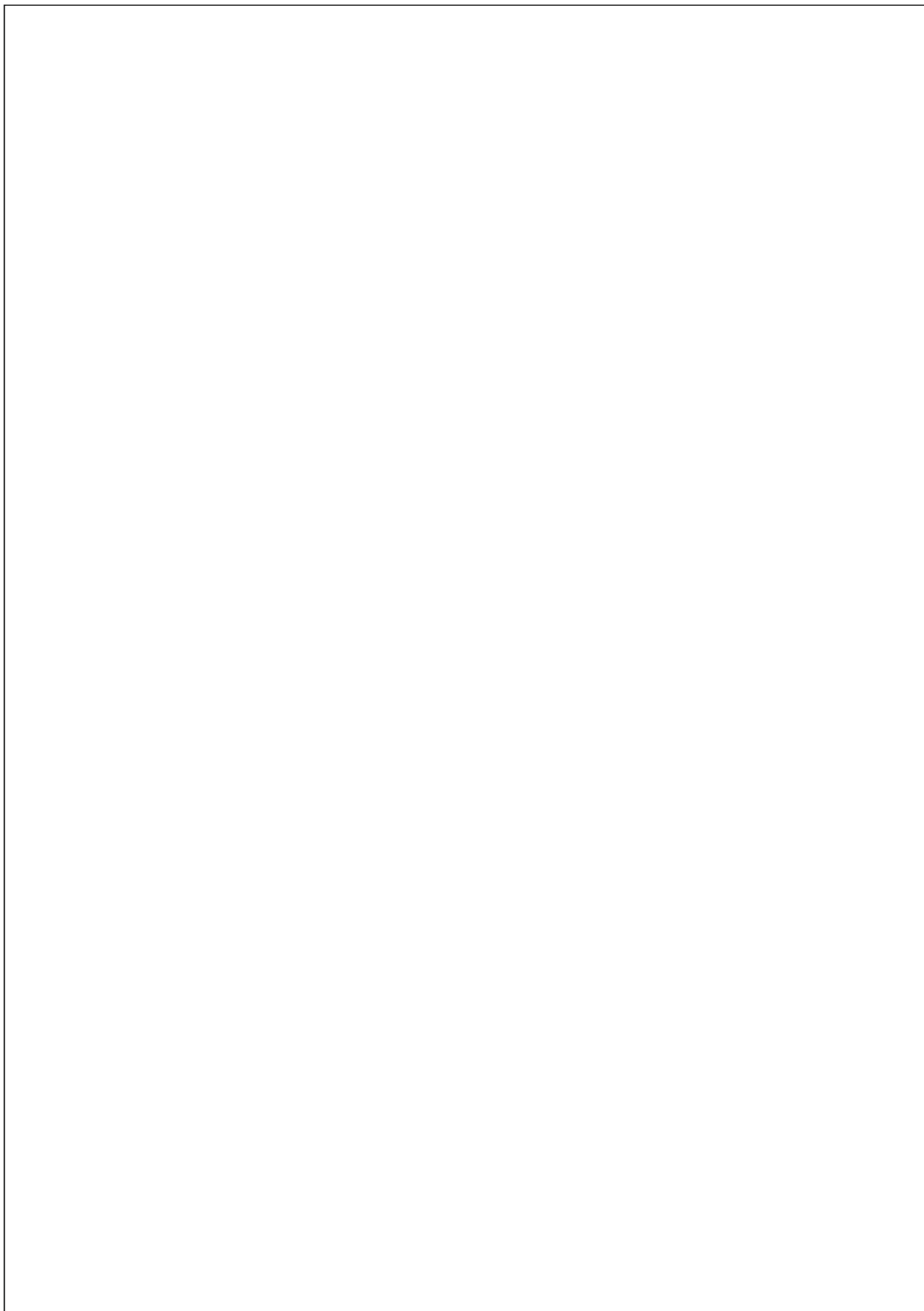
1-3 marks for basic development of character with no reference to the net / development shapes.

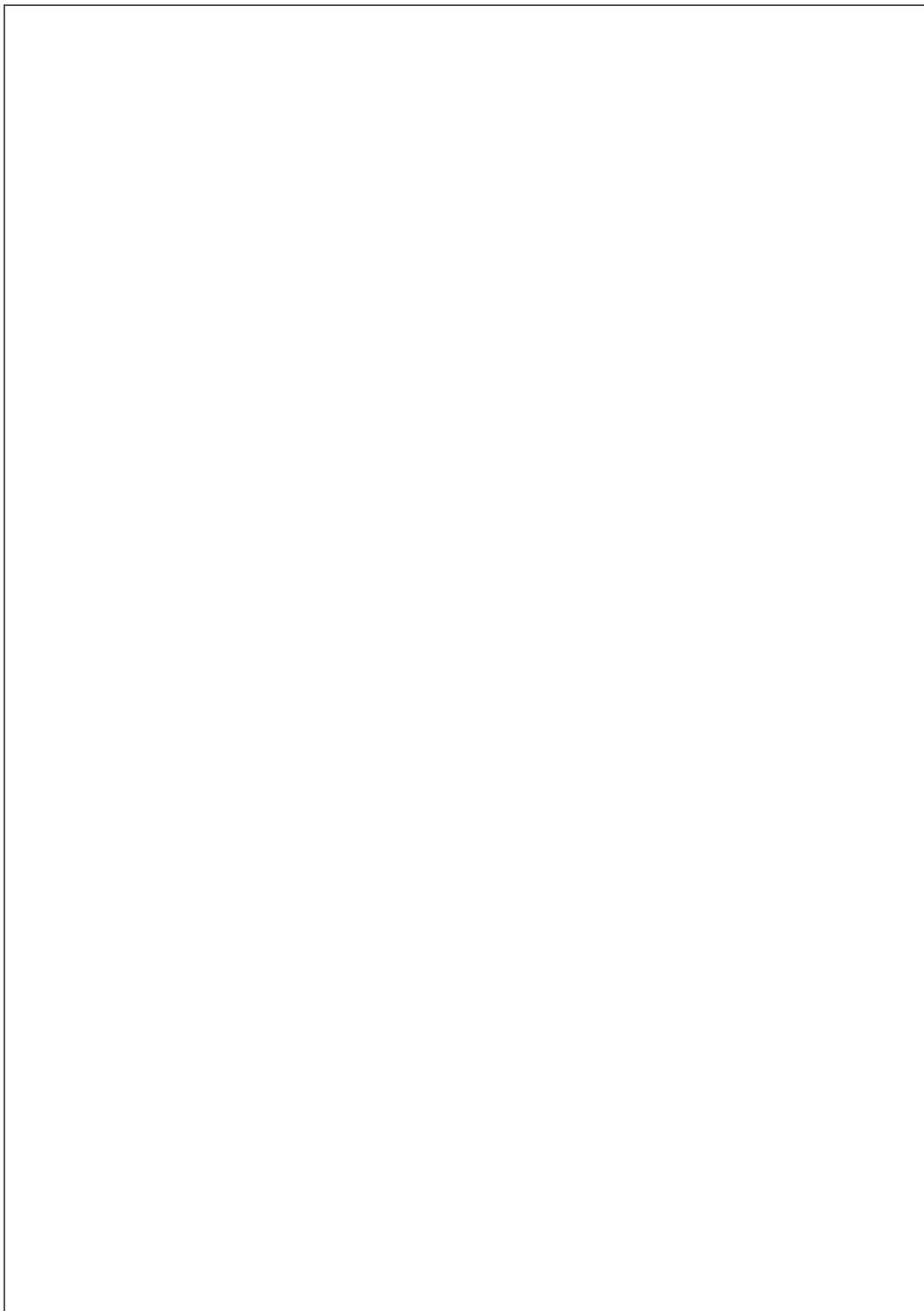
4-6 marks for basic development including nets and limited notes

7-9 marks for reasonable level of detail and explanation of the development of both the character and nets

10-11 marks for increased level of detail.

Follow the links for sample answers.





TO HELP YOU ANSWER THIS QUESTION, FOLLOW THE LINKS FOLLOW THE LINKS ON EACH PAGE TO THE PDF FILES

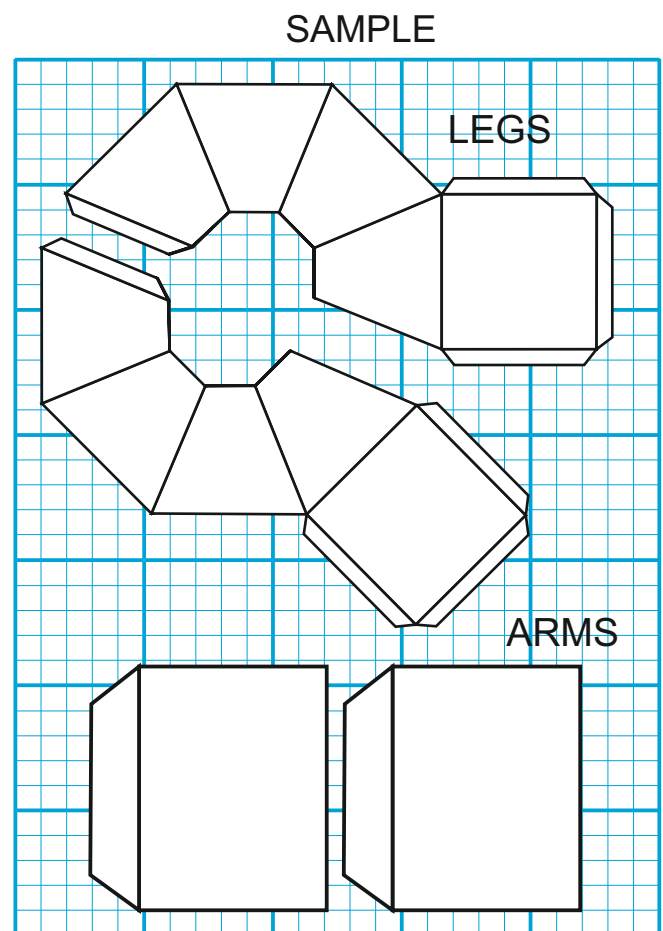
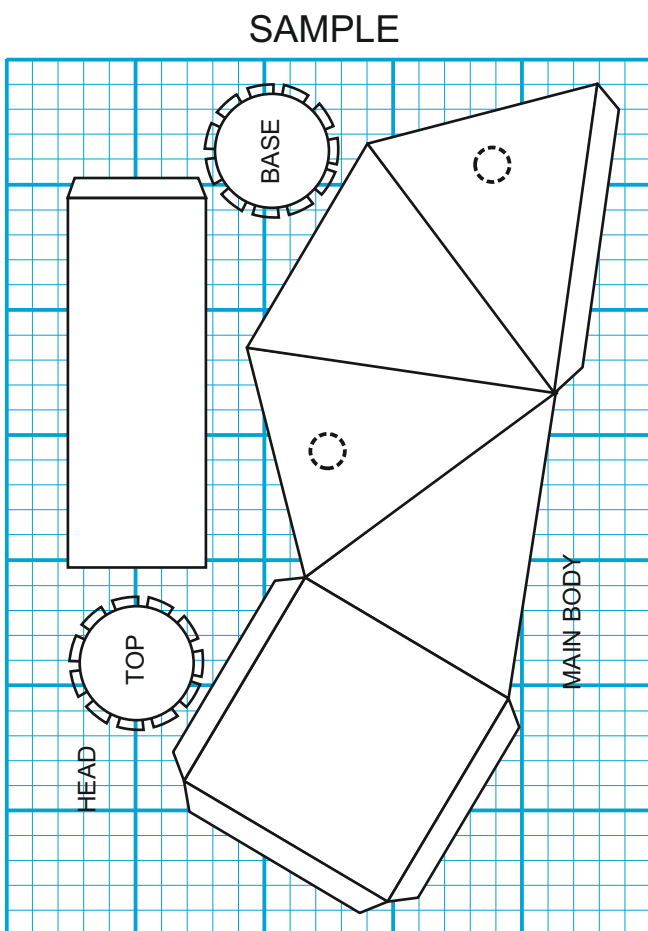
<http://www.technologystudent.com/despro2/toy4.html>
<http://www.technologystudent.com/despro2/toy5.html>
<http://www.technologystudent.com/despro2/toy6.html>

1f. The final development(s) / net(s) should be set out on paper / card ready for cutting out by a young child. Using the following pages, show how the development(s) / net(s) will be laid out to minimise waste. You have a maximum of two pieces of card to layout the net(s) / development(s) (you may need to use just one page, but two are available).

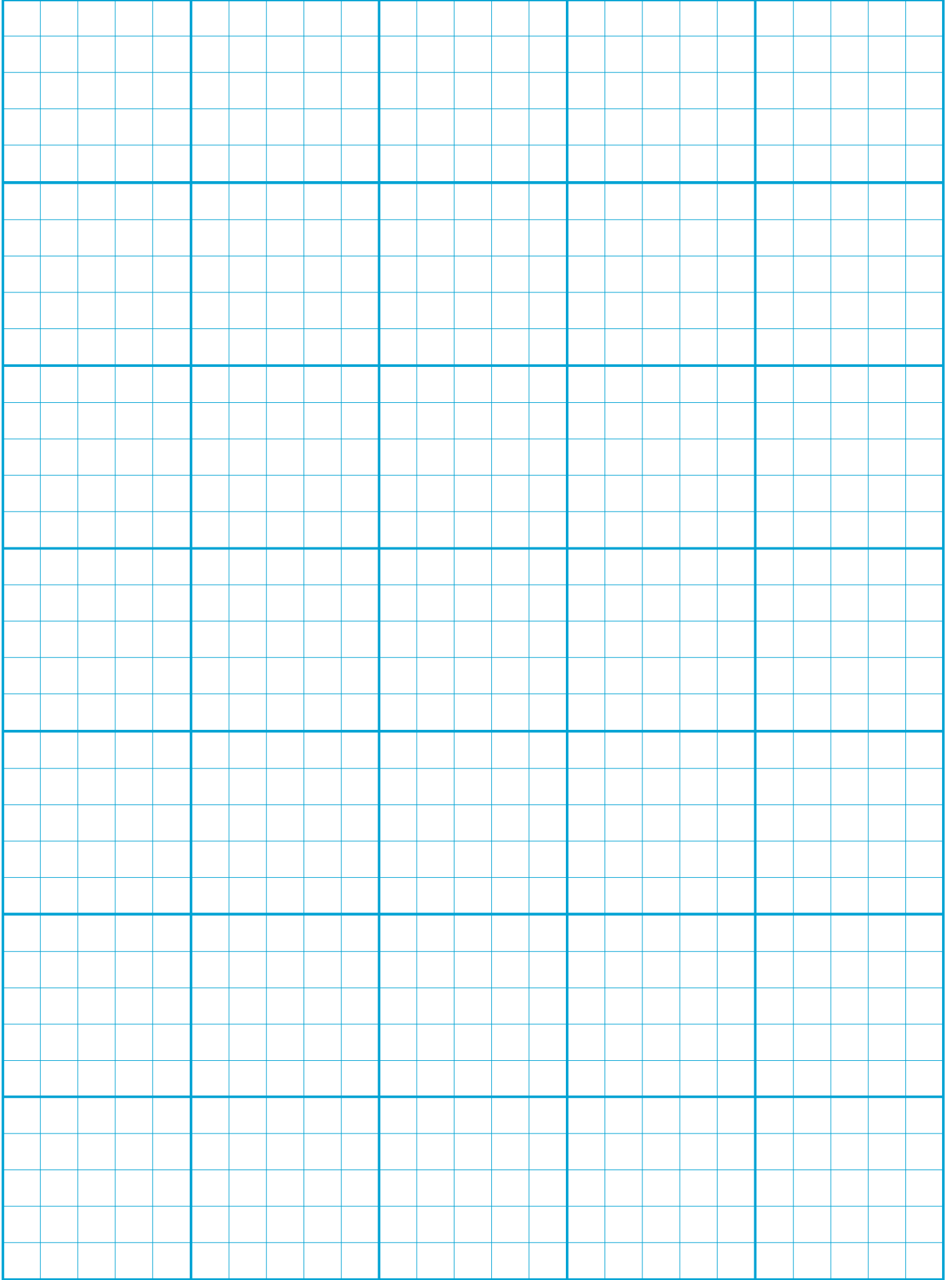
Use the next two pages to display the layout of your design.

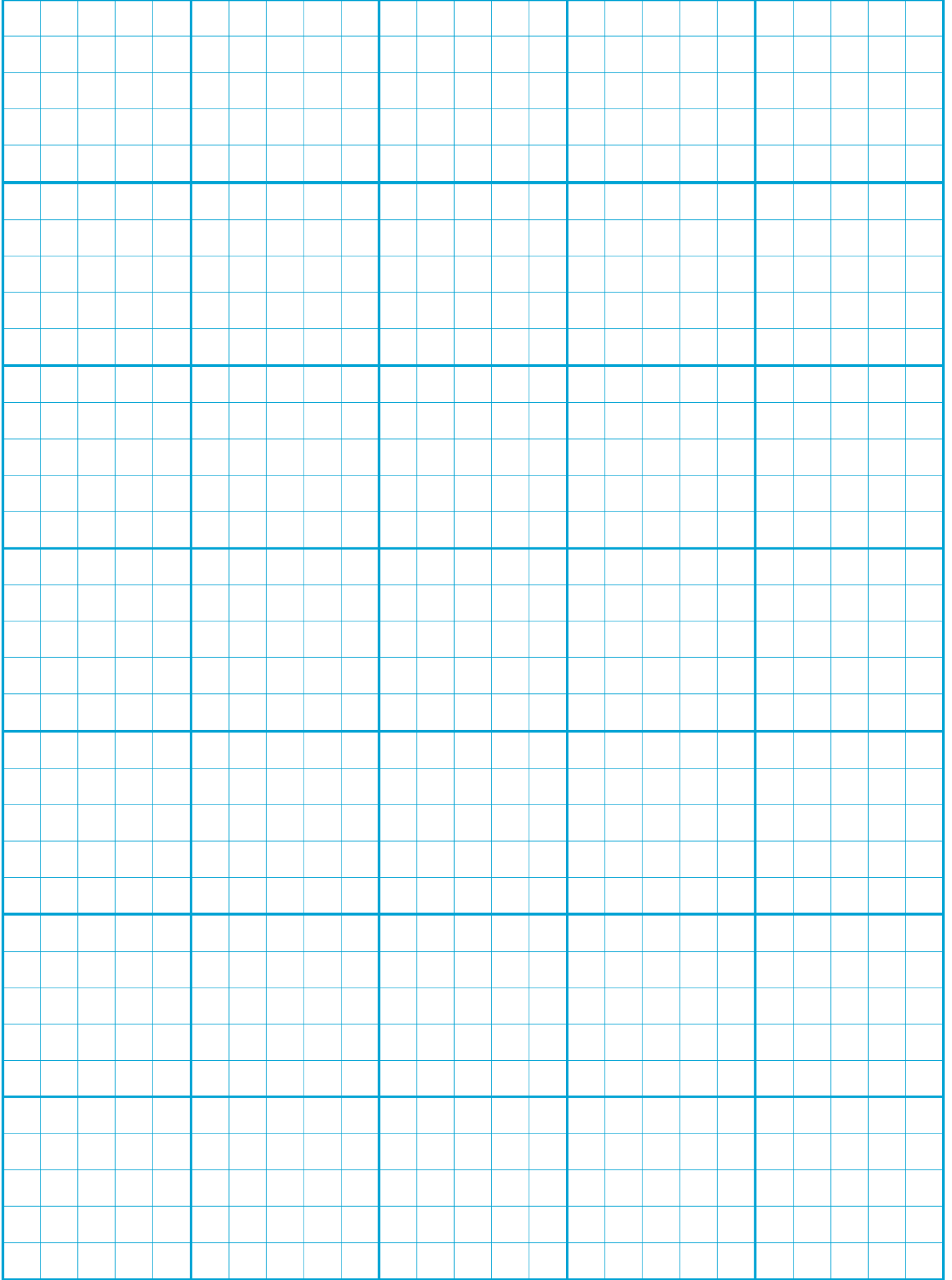
Below is a sample layout.

Total of 5marks



1 - 2 marks for a basic answer some no obvious attempt to minimise waste.
3-5 marks for accurate drawing of developments / nets, with obvious attention given to minimising waste.
Follow the links for sample answers





TO HELP YOU ANSWER THIS QUESTION, FOLLOW THE LINKS

<http://www.technologystudent.com/despro2/toy7.html>

1g. Evaluate your final fantasy character and the layout to the card developments / nets, you have drawn, against the design criteria shown below.

- ensure that the fantasy character represents the theme 'party' / 'fun'
- include a suitable colour scheme that supports the party / fun theme.
- your chosen character must appeal to children.
- show clearly, detail of the net(s) / development(s), that are folded to form the final character, minimising waste.

3 marks

1 mark for basic evaluation with limited reference to one or more criteria mentioned.

2 marks for two or more criteria mentioned in reasonable detail.

3 marks for including three or more of the criteria included in good detail.

Follow the link for detailed answer

TO HELP YOU ANSWER THIS QUESTION Follow the link below.
http://www.technologystudent.com/despro_fish/smartphone1.html

2. Study the three views of the mobile phone seen opposite. Using the isometric grid at the bottom of the page, sketch an accurate 3D version.

Add realistic colour and detail.

8 marks

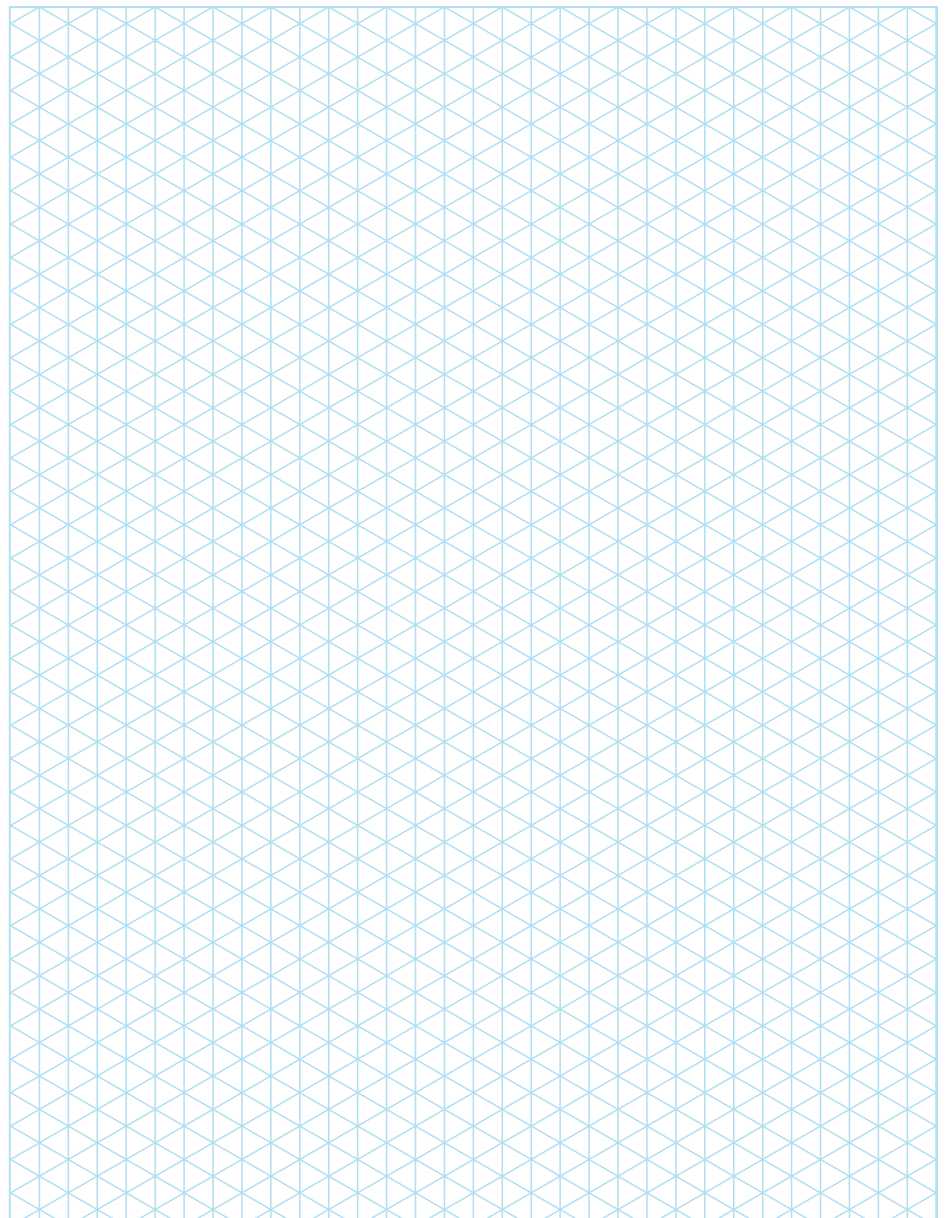


Up to 4 marks for a completed accurate 3D sketch

Up to 4 marks for realistic colour and detail.

Examiner to use professional discretion

Follow the link for a sample answer.



TO HELP YOU ANSWER THIS QUESTION Follow the links below.

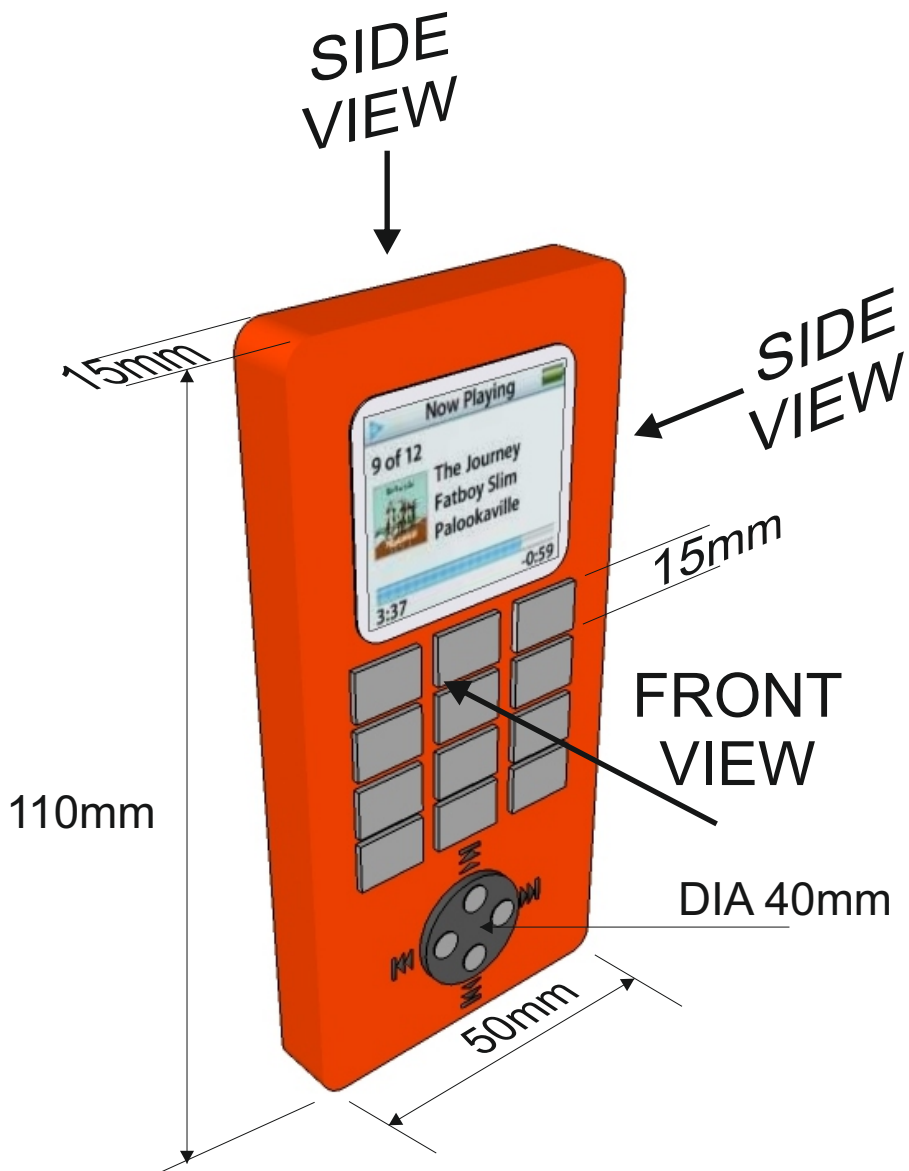
<http://www.technologystudent.com/gprep07/phortho4.html>
<http://www.technologystudent.com/gprep07/phortho11.html>

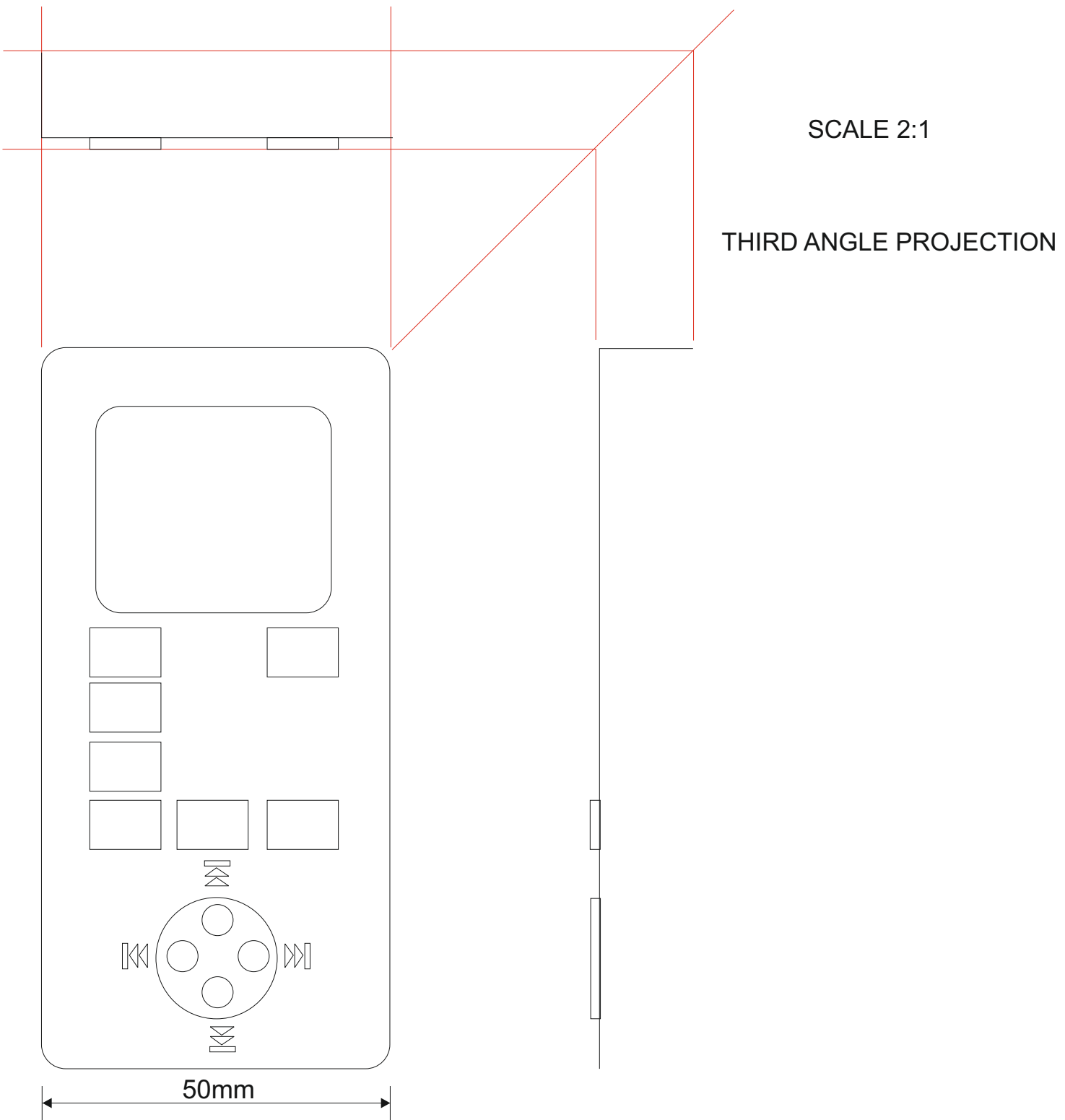
3. A RETRO media music device is shown below. This is drawn in perspective (3D).

A. Complete the orthographic drawing (on the next page) of the same media music device, in third angle orthographic projection. Show all your construction lines.

B. Add five dimensions

C. Add the symbol for third angle orthographic projection. **8 marks**





For full marks - Complete the orthographic drawing of the same media device, in third angle orthographic projection. Showing all your construction lines. up to 4 marks

2. Add five dimensions up to 2 marks

3. Add the symbol for third angle orthographic projection. up to 2 marks
Follow the link for sample answer

TO HELP YOU ANSWER THIS QUESTION Follow the link below.

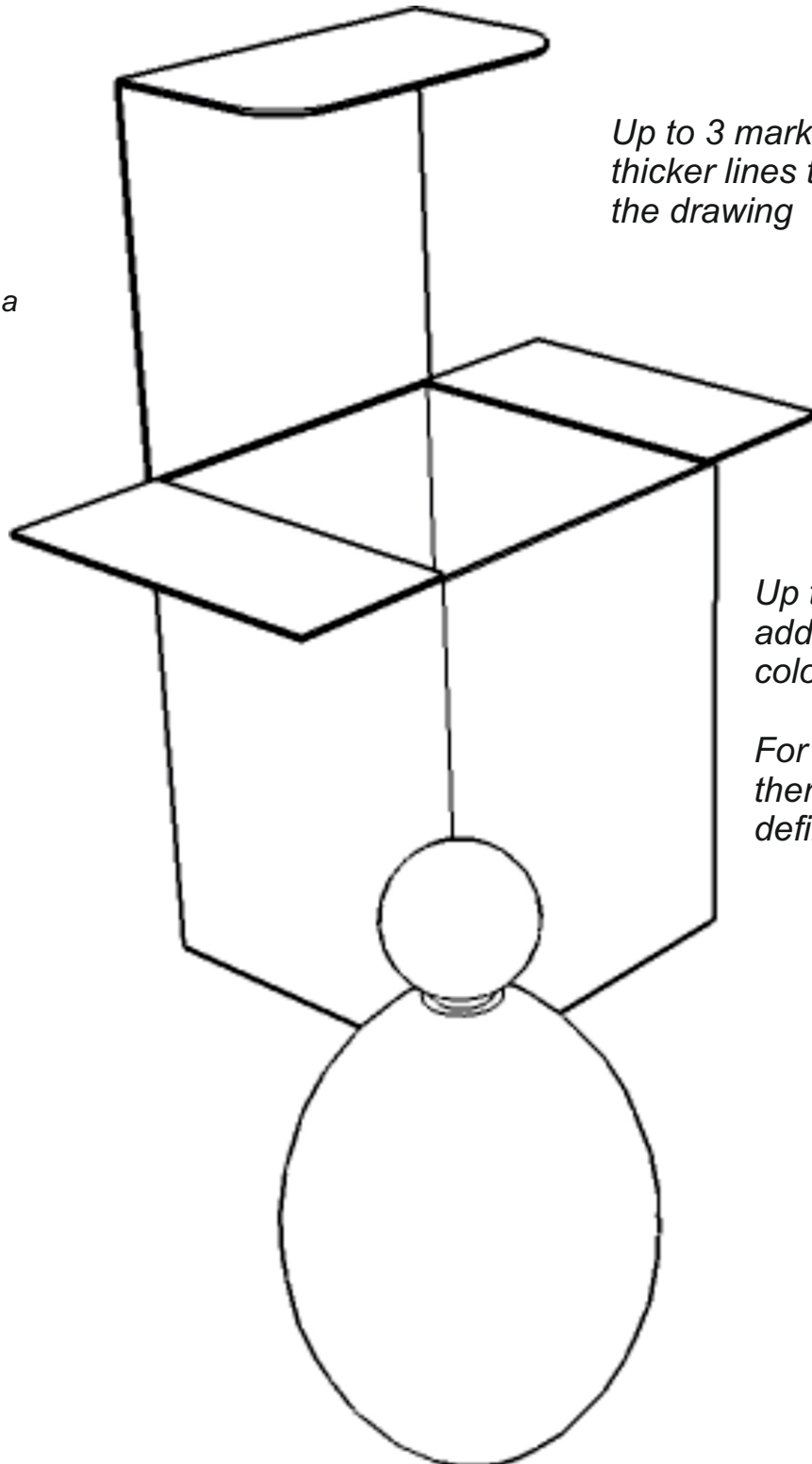
http://www.technologystudent.com/despro_f1sh/thick2.html

4. Below is the packaging and bottle for perfume.

Using coloured pencils:

Select a suitable colour and add thick lines, to emphasise the outline of the bottle and its packaging. *3 marks*

Add a series of thin coloured lines, to enhance the 3D effect. **6 marks**



Up to 3 marks for adding thicker lines to the outline of the drawing

Follow the link for a sample answer.

Up to 6 marks for adding effective coloured lines.

For 5 to 6 marks there must be a definite 3D effect.

TO HELP YOU ANSWER THIS QUESTION

Follow the link below.

<http://www.technologystudent.com/joints/photchrom1.html>

WORLD ASSOCIATION OF TECHNOLOGY TEACHERS

<https://www.facebook.com/groups/254963448192823/>

www.technologystudent.com © 2018 V.Ryan © 2018

5a. Designers need an understanding of smart materials. Photochromic inks have many practical applications. What are photochromic inks? **2 mark**

Up to 2 marks dependent on detail of answer.

Follow link for detailed answers

5b. Describe two practical applications of photochromic inks. **2 x 3 marks**

PRACTICAL APPLICATION 1:

Follow link for sample answer.

1 mark for basic answer

2 marks for addition of some detail

3 marks for full detailed answer.

PRACTICAL APPLICATION 1:

Follow link for sample answer.

1 mark for basic answer

2 marks for addition of some detail

3 marks for full detailed answer.

6. Packaging has a range of important functions. Describe 2 functions, in detail, in the area below. 2 x 4 marks

TO HELP YOU ANSWER
THIS QUESTION

Follow the links below.

www.technologystudent.com/despro2/packfn1.htm

FUNCTION 1:

Follow link to view range of functions.

Award 1 mark for title / subtitle and between 2 - 4 for answer that includes description / explanation, dependent on level of detail.

FUNCTION 2:

Follow link to view range of functions.

Award 1 mark for title / subtitle and between 2 - 4 for answer that includes description / explanation, dependent on level of detail.

TO HELP YOU ANSWER THIS QUESTION Follow the links below.

<http://www.technologystudent.com/despro2/estper1.htm>

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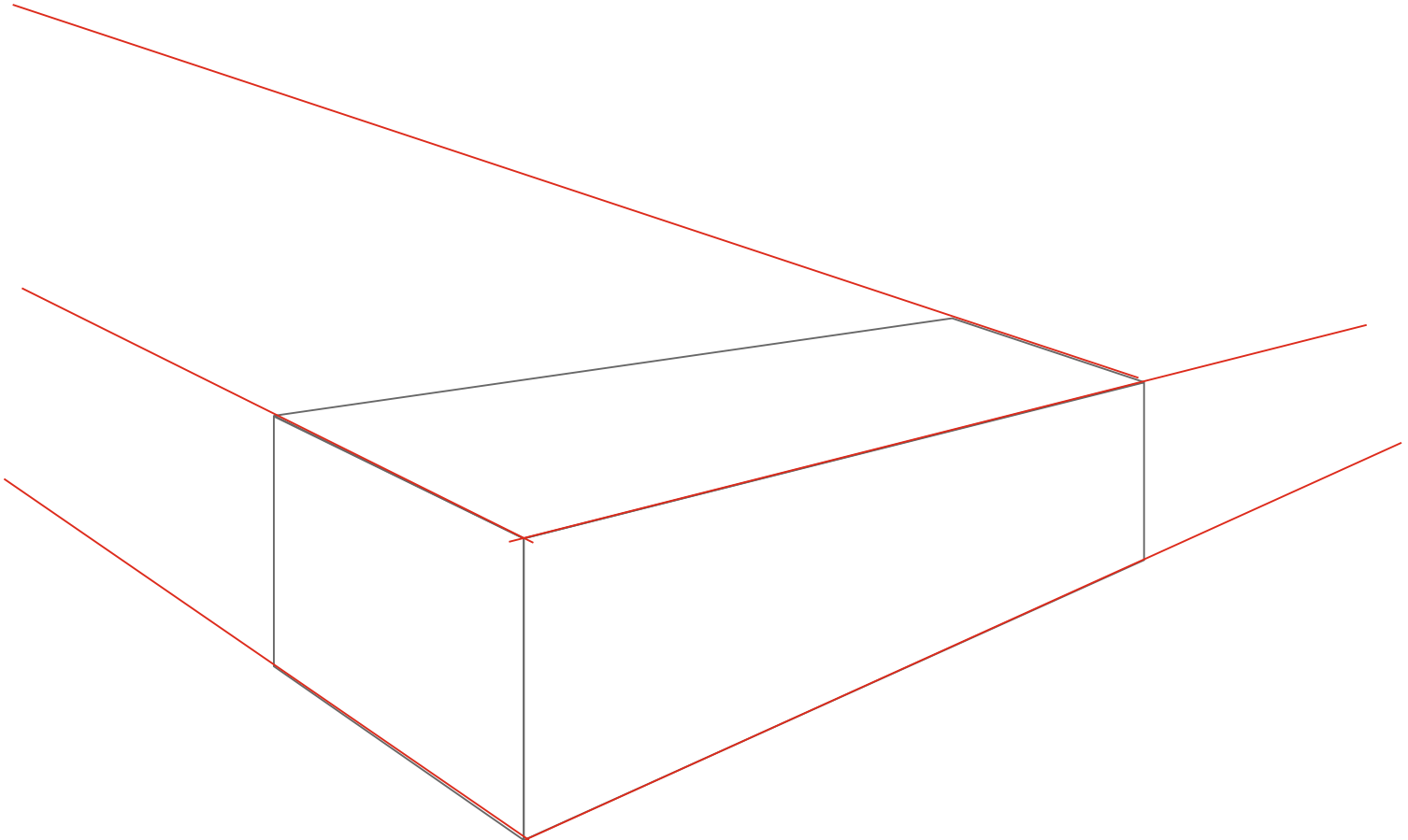


7. This is a simple pencil sharpener.

An two point perspective drawing of the sharpener has been started below.

Complete the outline of the sharpener.
3 marks

Add appropriate pencil shading, to enhance the final finish. **3 marks**



Follow the link for a sample answer.

Up to 3 marks for the drawing (1 mark for basic drawing, 2-3 marks according to detail)

In addition - Up to 3 marks for shading (1 mark for basic shading, 2-3 marks according to detail / level of shading)

TO HELP YOU ANSWER THIS QUESTION Follow the link below.

<http://www.technologystudent.com/prddes1/qual1.html>
<http://www.technologystudent.com/prddes1/qual2.html>
<http://www.technologystudent.com/prddes1/quality1.html>

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Designers need an understanding of Quality Control and Quality Assurance

8a. What is meant by the term Quality Assurance? **4 marks**

Follow links for detailed information.

! mark per correct fact / point

8b. What is meant by the term Quality Control? **4 marks**

Follow links for detailed information.

! mark per correct fact / point

TO HELP YOU ANSWER THIS QUESTION Follow the link below.

http://www.technologystudent.com/despro_flsh/evalintegr1.html

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9a. Designers invest time and effort, testing and evaluating a prototype. Why do designers test and evaluate? **2 marks**

Follow link for sample answers / detail.

1 mark for basic answer

2 marks for full answer

9a. Describe two features / aspects of a design, that designers evaluate. **2 x 3 marks**

Feature/aspect 1:

Follow the link for detailed information.

1 mark for one fact / point

2 marks for two facts / points

3 marks for three facts / points

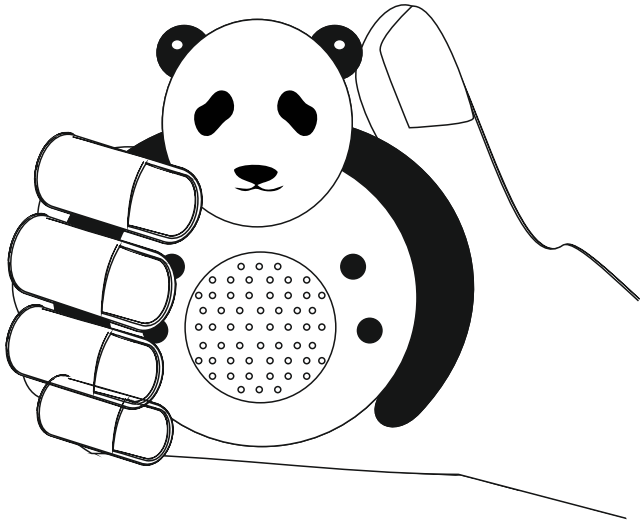
Feature/aspect 2:

Follow the link for detailed information.

1 mark for one fact / point

2 marks for two facts / points

3 marks for three facts / points



10. The design of a small handheld device is shown opposite.

Describe how it could be 'block modelled', as the next stage of the design process.

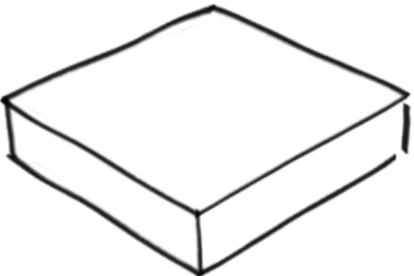
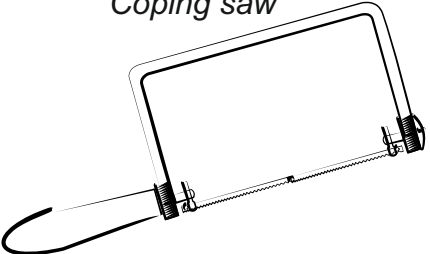
10a. SELECTED MATERIAL:

Material must be listed for any mark

1 mark

10b. MATERIAL PROPERTIES: **(3 marks)**

Using the table / grid below, describe the stages involved in the 'block modelling' of the hand held electronic device seen above. The first stage has been completed for you. **10 marks**

STAGE - SKETCH	SKETCH OF TOOL	DESCRIPTION
	<p>Coping saw</p> 	<p>A block of _____ model board is cut to a suitable size, using hand tools (coping saw) or a fretsaw.</p>
<p><i>Award up to 2 marks per row of sketches and notes.</i></p> <p><i>Only one mark for an appropriate sketch and another mark for adequate notes.</i></p>		

STAGE - SKETCH

SKETCH OF TOOL

DESCRIPTION

Award up to 2 marks per row of sketches and notes.
Only one mark for an appropriate sketch and another mark for adequate notes.

Award up to 2 marks per row of sketches and notes.
Only one mark for an appropriate sketch and another mark for adequate notes.

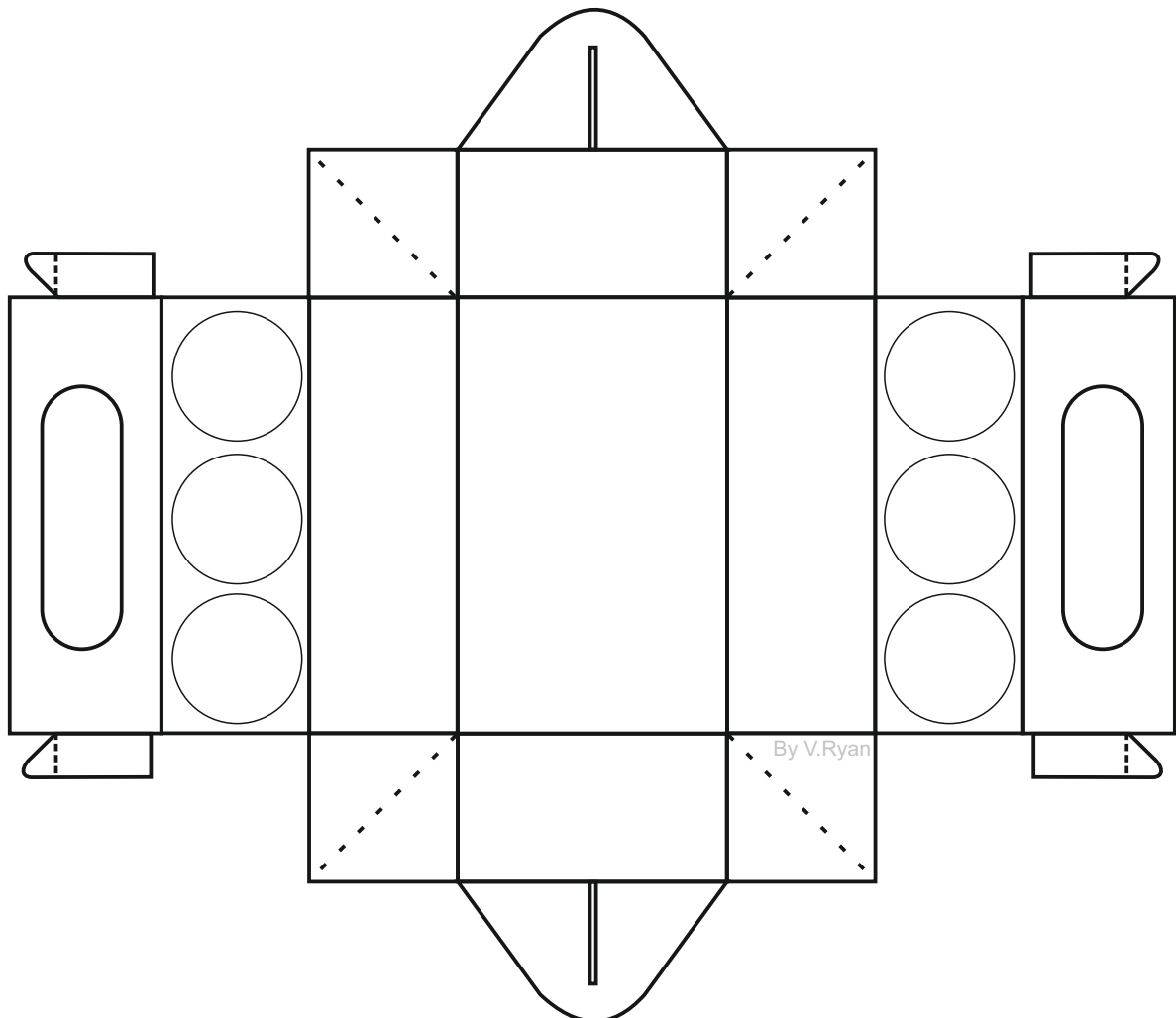
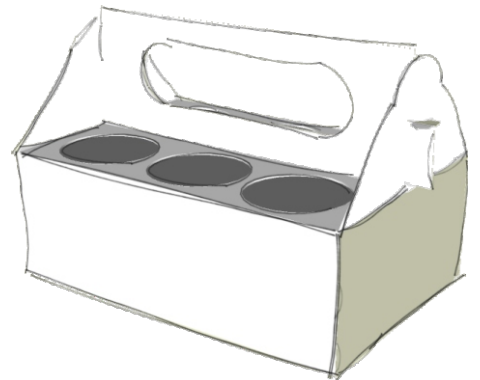
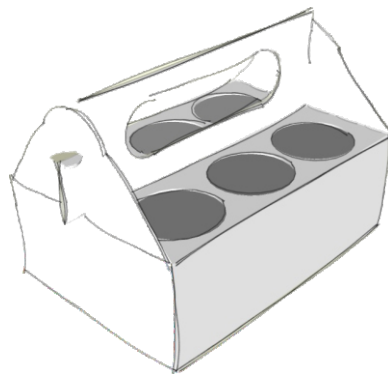
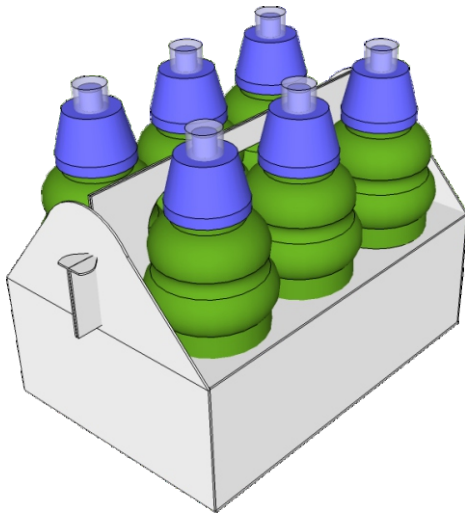
Award up to 2 marks per row of sketches and notes.
Only one mark for an appropriate sketch and another mark for adequate notes.

Award up to 2 marks per row of sketches and notes.
Only one mark for an appropriate sketch and another mark for adequate notes.

DRINKS CONTAINER - PROMOTIONAL PACKAGING DESIGN FEATURES

11. The packaging seen below, has been designed to hold / store six 'plastic' bottles containing a natural fruit soft drink. It is aimed at the teenage market.

THE QUESTIONS ON THE NEXT PAGE RELATE TO THIS PRODUCT



11. The packaging should have the following design features:

TO HELP YOU ANSWER
THIS QUESTION

Follow the link below.
<http://www.technologystudent.com/prddes1/prodpack3.html>

11a. Explain why the packaging should be sustainable. **2 marks**

Follow link for detailed answers.

1 mark for one fact

2 marks for two facts

11b. Explain why it would be an advantage for the packaging to be educational.
2 marks

Follow link for detailed answers.

1 mark for one fact

2 marks for two facts

11c. Explain why the use of colour and images on promotional packaging, is an important design feature. **2 marks**

Follow link for detailed answers.

1 mark for one fact

2 marks for two facts

11d. The packaging should allow ease of stacking on a supermarket shelf and during transport. Why is this? **2 marks**

Follow link for detailed answers.

1 mark for one fact

2 marks for two facts

11e. The packaging should promote a healthy diet. Why? **2 marks**

Follow link for detailed answers.

1 mark for one fact

2 marks for two facts

TO HELP YOU ANSWER
THIS QUESTION

Follow the link below.
http://www.technologystudent.com/despro_flash/foilblk1.html

EXAMPLES OF FOIL BLOCKING / FOIL STAMPING

PASSPORTS



GOLD FOIL DECORATION



FOIL ENHANCED LEATHER COVERS



BAGS AND PACKAGING



12a. What is Foil Blocking? You should include notes and a diagram(s) in your answer. **3 marks**

Follow the link for detailed answer.

*1 mark for basic description.
2 marks for reasonable description,
with at least 2 facts/points included.
3 marks for increased detail.*

12b. Why do you think Foil Blocking is regarded as an expensive way of decorating a product, such as a birthday card, compared to most other forms of printing? **2 marks**

1 mark per acceptable fact / point.

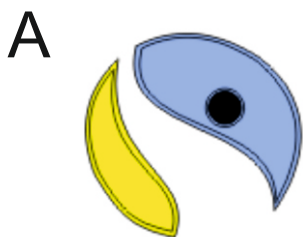
Quality finish, gold and silver foil can be applied - suggesting expensive finish etc....

This question is focussed on materials and also symbols.

TO HELP YOU ANSWER
THIS QUESTION

<http://www.technologystudent.com/despro2/drink7.htm>

13. Three important symbols are seen below. Complete the table by adding the symbol letter to the correct description. **3 marks**



LETTER	DESCRIPTION
C	Displayed on a product it means that the manufacturer/retailer has agreed to the 'British Toy and Hobby Associations' Code of practice. It is a consumer symbol that represents the manufacturers promise to conform to all relevant safety information.
A	This means that the contents of the package has been produced in the Third World and that the producer (ie. the farmer) has received a fair and realistic price. subsidises.
B	The product inside the package, has been tested to European safety standards. The symbol is normally applied to non-food products such as electronic products or toys. However, it may still be applied to the packaging, as a reference to the package itself being safe.

TO HELP YOU ANSWER THIS QUESTION

http://www.technologystudent.com/despro_fish/laminate1.html

http://www.technologystudent.com/despro_fish/laminate2.html

14a. The products shown below are manufactured from laminated card.



Write two reasons why this type of material is suitable for the products above. **2 marks**

REASON 1:

For both reasons:

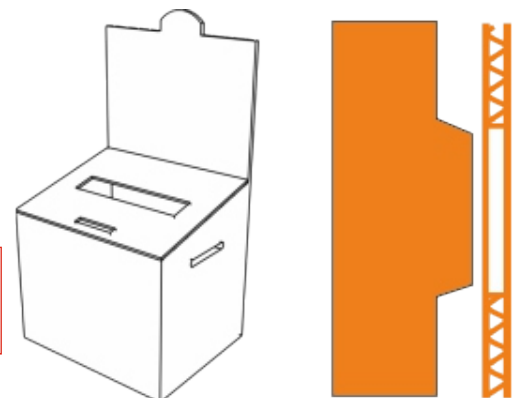
Follow link for full detail on answers.

Answers may include - cost, hygiene, protection of product.

REASON 2:

1 mark per reason.

14b. The large clothes collection box is manufactured from corrugated polypropylene. Write two reasons why this material is suitable. **2 marks**



TO HELP YOU ANSWER THIS QUESTION
http://www.technologystudent.com/despro_fish/charity13.html

REASON 1:

For both reasons:

Follow link for full detail on answers.

Answers may include - cost, hygiene, protection of product.

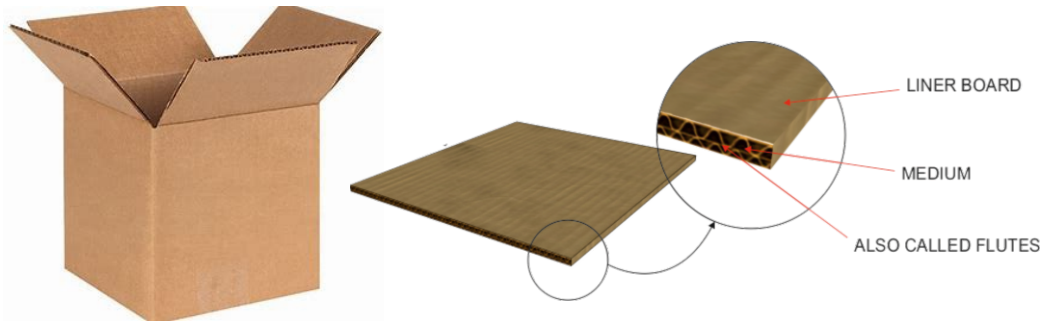
REASON 2:

1 mark per reason.

TO HELP YOU ANSWER
THIS QUESTION

<http://www.technologystudent.com/despro2/crdpap2.htm>

14c. The packaging box is manufactured from corrugated card. Write two reasons why this material is suitable. **2 marks**



REASON 1:

For both reasons:

Follow link for full detail on answers.

Answers may include - cost, hygiene, protection of product.

REASON 2:

1 mark per reason.