

Candidate Name	Centre Number	Candidate Number
		4



## Entry Level

720/01

## DESIGN AND TECHNOLOGY

P.M. WEDNESDAY, 25 March 2009

1 hour

**Examiner  
only**

<b>Task 1 (Designing) (32)</b>	
<b>Task 2 (Making) (48)</b>	
<b>Total (80)</b>	

### ADDITIONAL MATERIALS

In addition to this examination paper, you will need:

- coloured pens/pencils.

### INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces at the top of this page.

**Answer TASK 1.**

**Answer only ONE (1) of the TASK 2 focus area questions.**

If you have difficulty in reading a question, put up your hand and the teacher-in-charge will read it to you.

### INFORMATION FOR CANDIDATES

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

**TASK 1: DESIGNING**

1. (a) Teenagers need the products shown below to take part in a wide range of leisure activities.

Look carefully at the drawings and match them up with the activities in the word list.

Write each activity in the correct box.

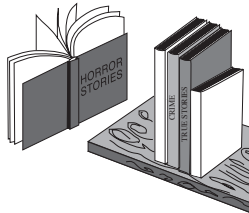
[10]

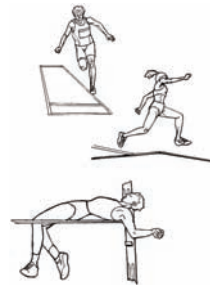





















**WORD LIST**

Reading

Making Food  
at Home

Skateboarding

Athletics

Playing  
Computer  
Games

Cycling

Playing  
Football

Listening to  
Music

Crafts

Swimming

(b) The materials used in the clothing and equipment for the activities shown below, need to have special qualities to make them suitable for the job.

Look at the products below and write down **two** (2) reasons why these materials are suitable.

(i)



This item could be made from Polyester.

This is a suitable material because:

(I) .....

.....

(II) .....

.....

[2]

(ii)



The frame of the mountain bike is made from metal.

This is a suitable material because:

(I) .....

.....

(II) .....

.....

[2]

(iii)



This item could be made from a type of plastic.

This is a suitable material because:

(I) .....

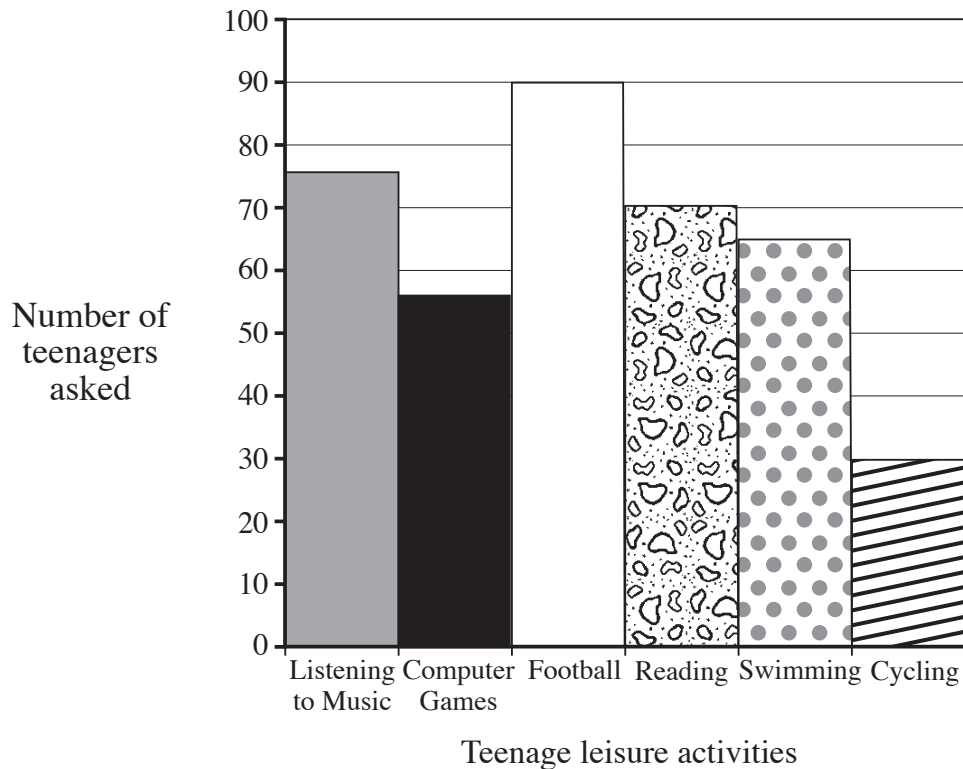
.....

(II) .....

.....

[2]

2. One hundred (100) teenagers were asked which leisure activities they took part in on a regular basis. The results are shown below.



- (a) Which activity was the **most popular**?

..... [1]

- (b) Which activity was enjoyed by 65 of the teenagers interviewed?

..... [1]

- (c) Which activity was the **least popular**?

..... [1]

- (d) **State** how many of the teenagers **listen to music**.

..... [1]

- (e) State the **total** number of teenagers who **read** and **swim**.

..... [1]

- (f) **Name one** (1) other method of recording information.

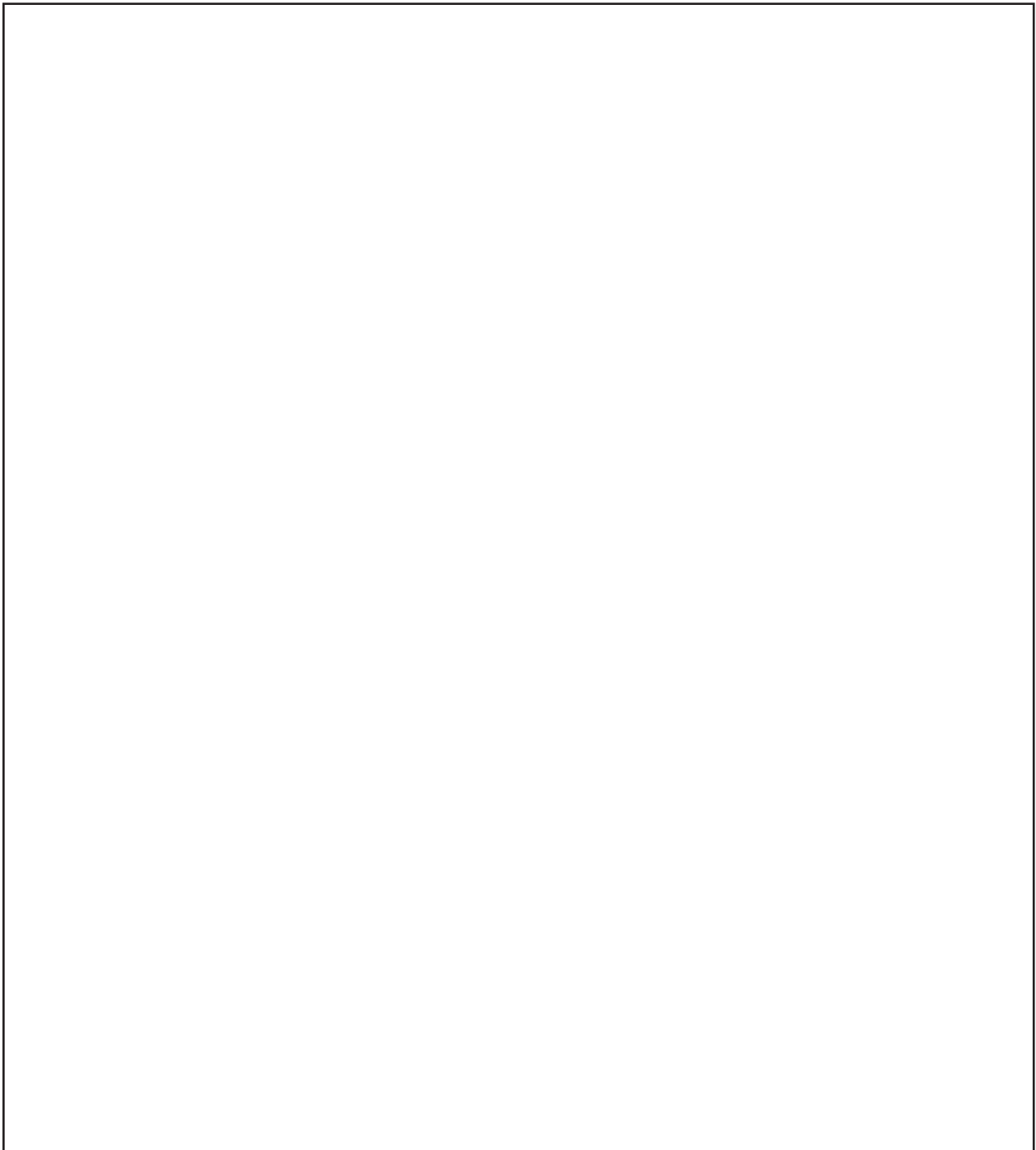
..... [1]

3. A local Leisure/Sports Centre is holding an OPEN DAY to encourage teenagers to use their facilities.

Design a poster to advertise the Open Day.

**Your poster must show:**

- ELY as the name of the Leisure/Sports Centre;
- the date, the time of the Open Day – 4<sup>th</sup> May 2009 at 10.00 am;
- colourful images of the different activities available.



[10]

Answer only ONE (1) of the TASK 2 focus area questions.

<b>TASK 2: MAKING</b>
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In this section of the paper, you should answer only one (1) of these questions:-

If you have been studying:-

\* **Food Technology** go to pages 7 to 10.

\* **Graphic Products** go to pages 11 to 14.

\* **Resistant Materials Technology** go to pages 15 to 18.

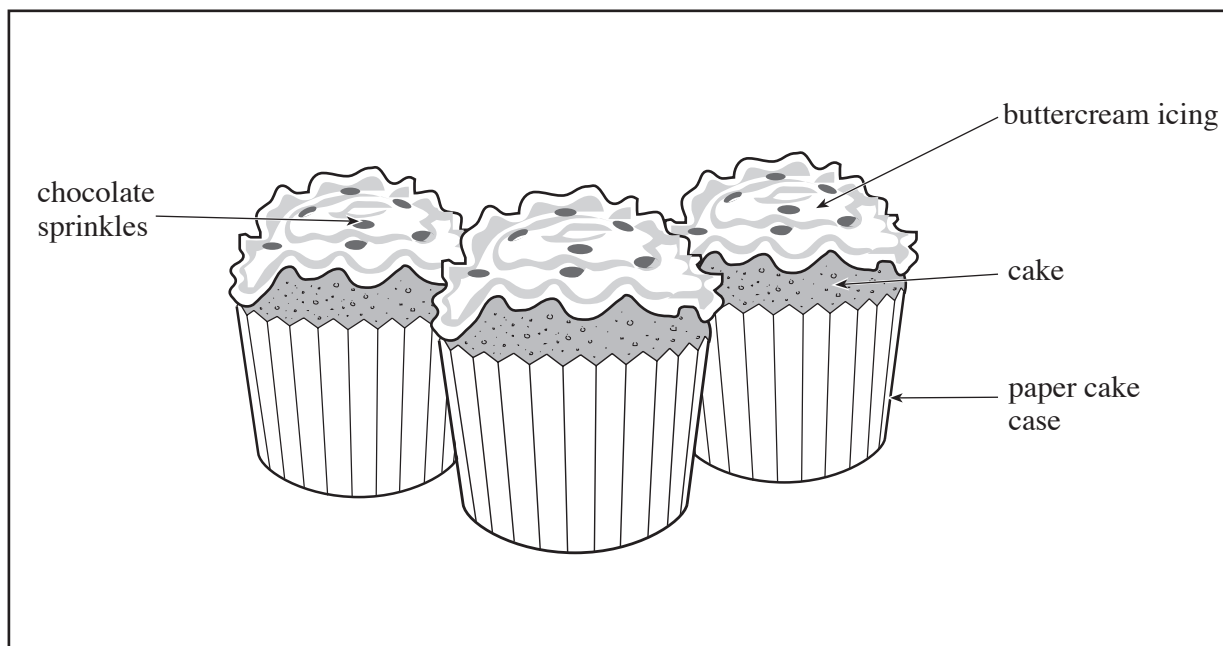
\* **Systems and Control Technology** go to pages 19 to 22.

\* **Textiles Technology** go to pages 23 to 26.

Put a tick (✓) in the box next to the ONE (1) area you are going to do.

<b>FOOD TECHNOLOGY</b>
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4. (a) **Name and sketch/draw two (2) pieces of equipment or tools that you would use to make the cakes shown below.**



Name of tool/equipment .....	Name of tool/equipment .....
Sketch/drawing	Sketch/drawing

[6]

(b) The stages for making the **cakes** have been jumbled up in each section.

**Put these sentences in the right order by writing a number in each box.**

The **first** [1] stage of each section has been done for you.

<b>Section 1: Preparation List</b>	
• Collect equipment, switch on the oven to 180°C/Gas Mark 5 and put nine (9) paper cases into a patty tin.	1
• Crack eggs into a basin and beat lightly.	
• Set up to weigh flour and sieve onto a plate.	
• Weigh sugar and margarine. Put into a large mixing bowl.	

[6]

<b>Section 2: Making List</b>	
• Add the sieved flour and fold in gently.	
• Gradually mix in the beaten eggs.	
• Divide the mix equally between the cake cases and bake for 12-15 minutes.	
• Cream the sugar and margarine until light and fluffy.	1

[6]

<b>Section 3: Finishing / Presentation List</b>	
• Decorate the top of the cakes with the buttercream and cover with chocolate sprinkles.	
• Allow the cakes to cool.	1
• Mix thoroughly to make a cream.	
• Place butter in a bowl and add sieved icing sugar.	

[6]

(c) From the **Section 1: Preparation List** (page 8), pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number .....	Making stage number .....

**Fill in** the number of **each** stage you have sketched/drawn. [8]

**Evaluation**

(d) (i) **List two** (2) good things about the **design** of these cakes.

(I) .....

..... [2]

(II) .....

..... [2]

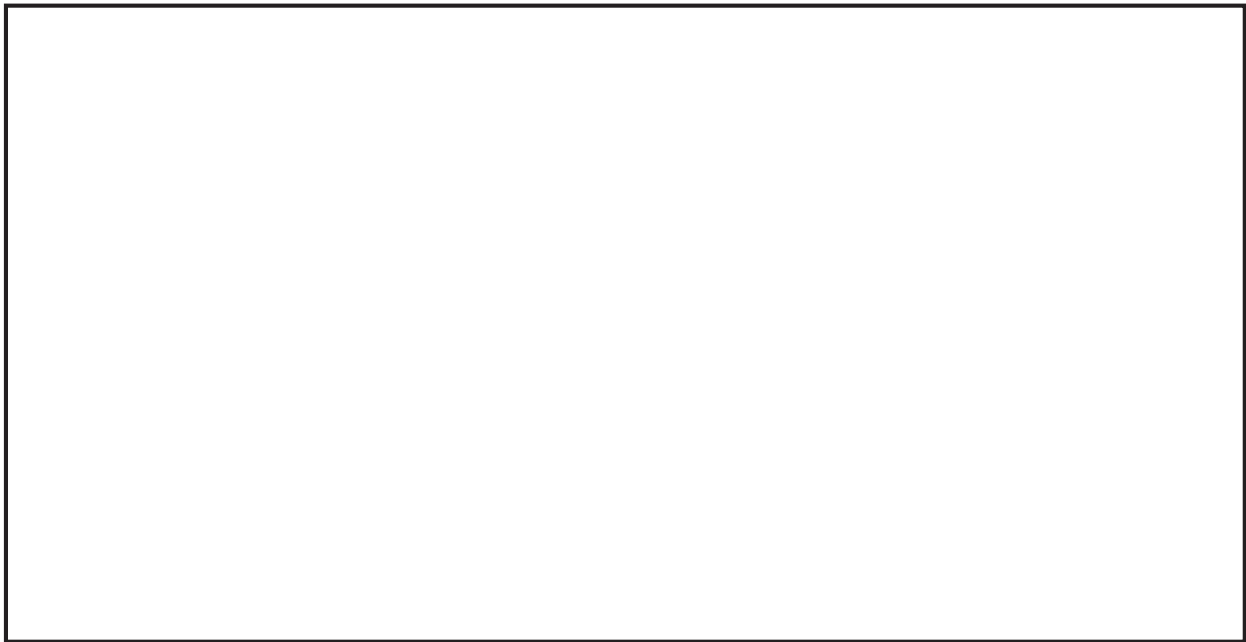
(ii) Think about the **ingredients** in the **recipe** and the **presentation** of the cakes.

**Give two (2) ways you could improve the recipe or presentation (make them better).**

(I) .....  
..... [2]

(II) .....  
..... [2]

(iii) **Sketch/draw one (1) of your ideas for improvement in the box below. Label your sketch/drawing.**



[4]

(iv) Who or what would these cakes be suitable for? Why?

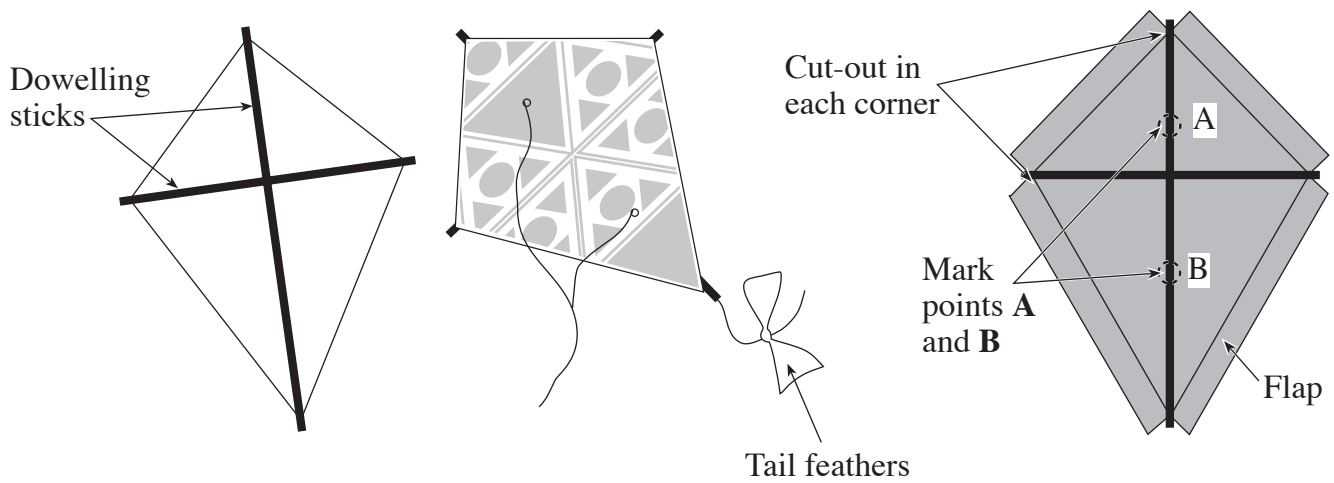
They would be suitable for .....  
..... [2]

Because .....  
..... [2]

**END OF FOOD TECHNOLOGY SECTION**

**GRAPHIC PRODUCTS**

4. (a) Name and sketch/draw **two** (2) pieces of equipment or tools that you would use to make this kite.



Name of tool/equipment .....	Name of tool/equipment .....
Sketch/drawing	Sketch/drawing

[6]

(b) The stages for making the **kite** have been jumbled up in each section.

**Put these sentences in the right order by writing a number in each box.**

The **first** [1] stage in each section has been done for you.

<b>Section 1: Preparation List</b>	
• Collect materials, tools and equipment.	1
• Mark out positions A and B and cut holes in the material.	
• On the material, mark out and cut the diamond shape for the kite.	
• Measure and cut lengths of dowelling to make the frame.	

[6]

<b>Section 2: Making List</b>	
• Cut out each corner.	
• Tie and glue the frame together.	
• Put frame over the material, turn over the flaps and glue them in place.	
• Decorate the kite material.	1

[6]

<b>Section 3: Finishing / Presentation List</b>	
• Test fly the kite.	
• Make the tail.	1
• Tie the tail to the kite.	
• Fix the string through holes A and B to the frame.	

[6]

(c) From the **Section 1: Preparation List** (page 12), pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number .....	Making stage number .....

**Fill in** the number of **each stage** you have sketched/drawn.

[8]

**Evaluation**

(d) (i) **List two** (2) good things about the **design** of this kite.

(I) .....

.....

[2]

(II) .....

.....

[2]

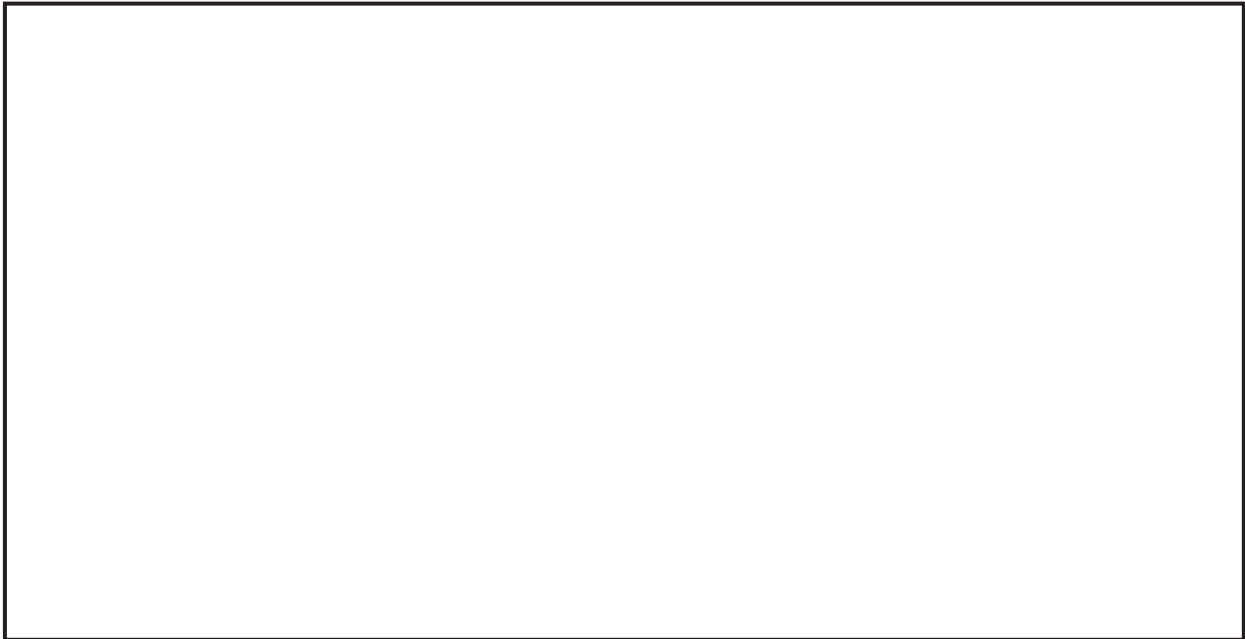
(ii) Think about the **design** of the kite.

**Give two (2) ways you could improve the design (make it better).**

(I) .....  
..... [2]

(II) .....  
..... [2]

(iii) **Sketch/draw one (1) of your ideas for improvement in the box below. Label your sketch/drawing.**



[4]

(iv) Who or what would this kite be suitable for? Why?

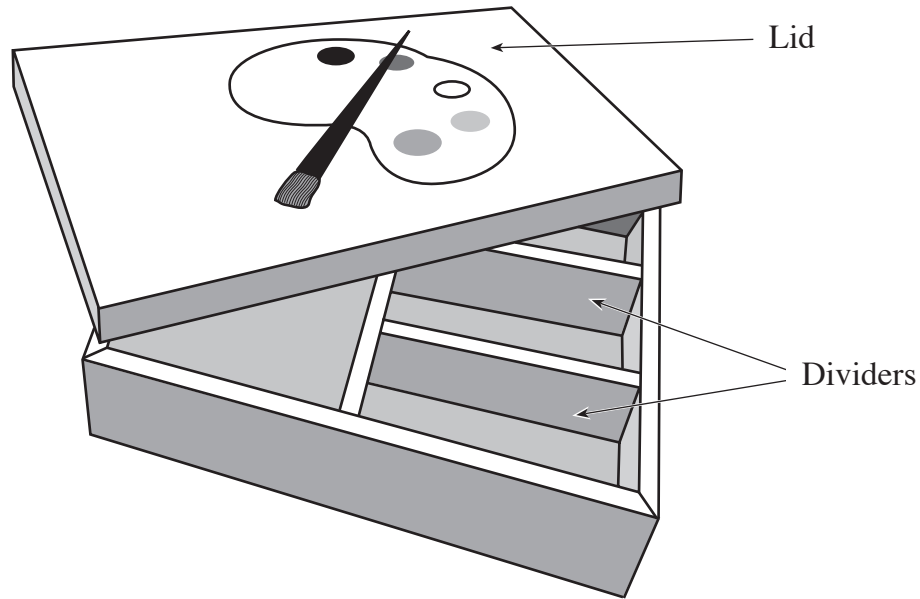
It would be suitable for .....  
..... [2]

Because .....  
..... [2]

**END OF GRAPHIC PRODUCTS SECTION**

**RESISTANT MATERIALS TECHNOLOGY**

4. (a) **Name and sketch/draw two (2) pieces of equipment or tools that you would use to make this wooden craft box.**



Name of tool/equipment .....	Name of tool/equipment .....
Sketch/drawing	Sketch/drawing

[6]

(b) The stages for making the **craft box** have been jumbled up in each section.

**Put these sentences in the right order by writing a number in each box.**

The **first** [1] stage of each section has been done for you.

<b>Section 1: Preparation List</b>	
• Collect all tools and equipment.	1
• Mark out the corner joints.	
• Measure and mark out the sides, top, bottom and dividers.	
• Cut out the wood for the sides, top, bottom and dividers.	

[6]

<b>Section 2: Making List</b>	
• Clamp the box and check it is square.	
• Glue and pin the box together.	
• Pin the plywood bottom on the box and trim.	
• Cut out the corners joints and rebates.	1

[6]

<b>Section 3: Finishing / Presentation List</b>	
• Decorate the top and apply a coat of varnish.	
• Punch the pins below the surface and fill holes with filler.	1
• Glass paper all surfaces.	
• Cut, shape and prepare lid to the correct size.	

[6]

- (c) From the **Section 1: Preparation List** (page 16), pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number .....	Making stage number .....

**Fill in** the number of **each** stage you have sketched/drawn. [8]

**Evaluation**

- (d) (i) List **two** (2) good things about the **design** of this craft box.

(I) .....

..... [2]

(II) .....

..... [2]

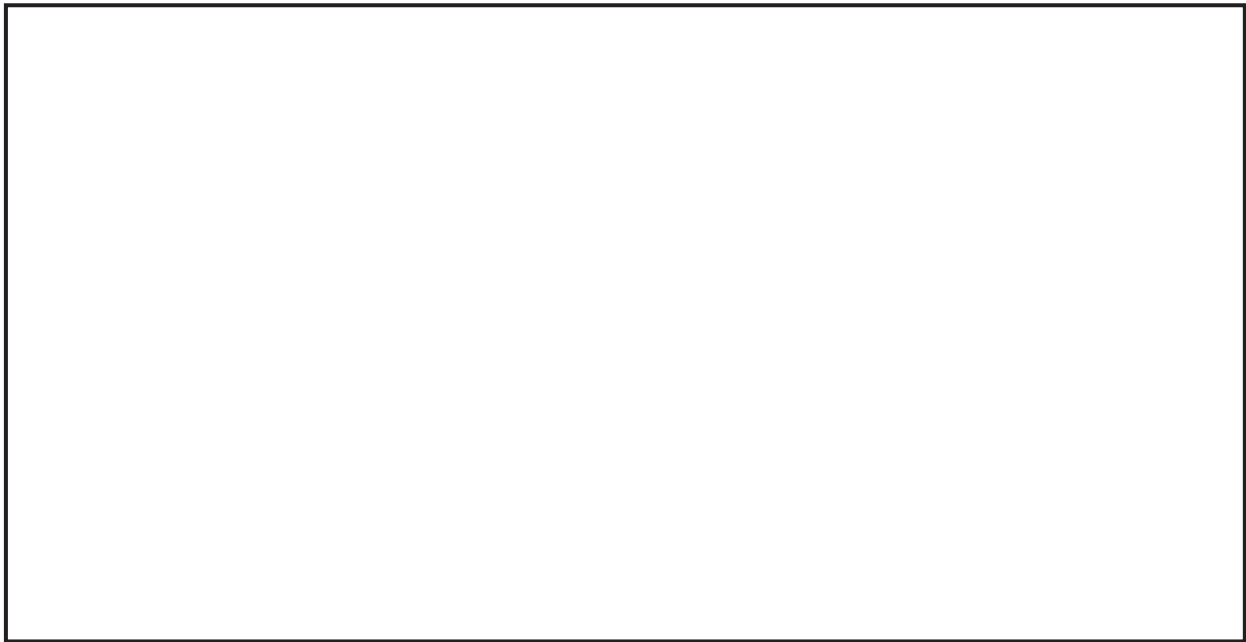
(ii) Think about the **design** of the craft box.

Give **two** (2) ways you could **improve** it (make it better).

(I) .....  
..... [2]

(II) .....  
..... [2]

(iii) **Sketch/draw one** (1) of your ideas for **improvement** in the box below.  
**Label your sketch/drawing.**



[4]

(iv) For what **other** purpose could the craft box be used? Why?

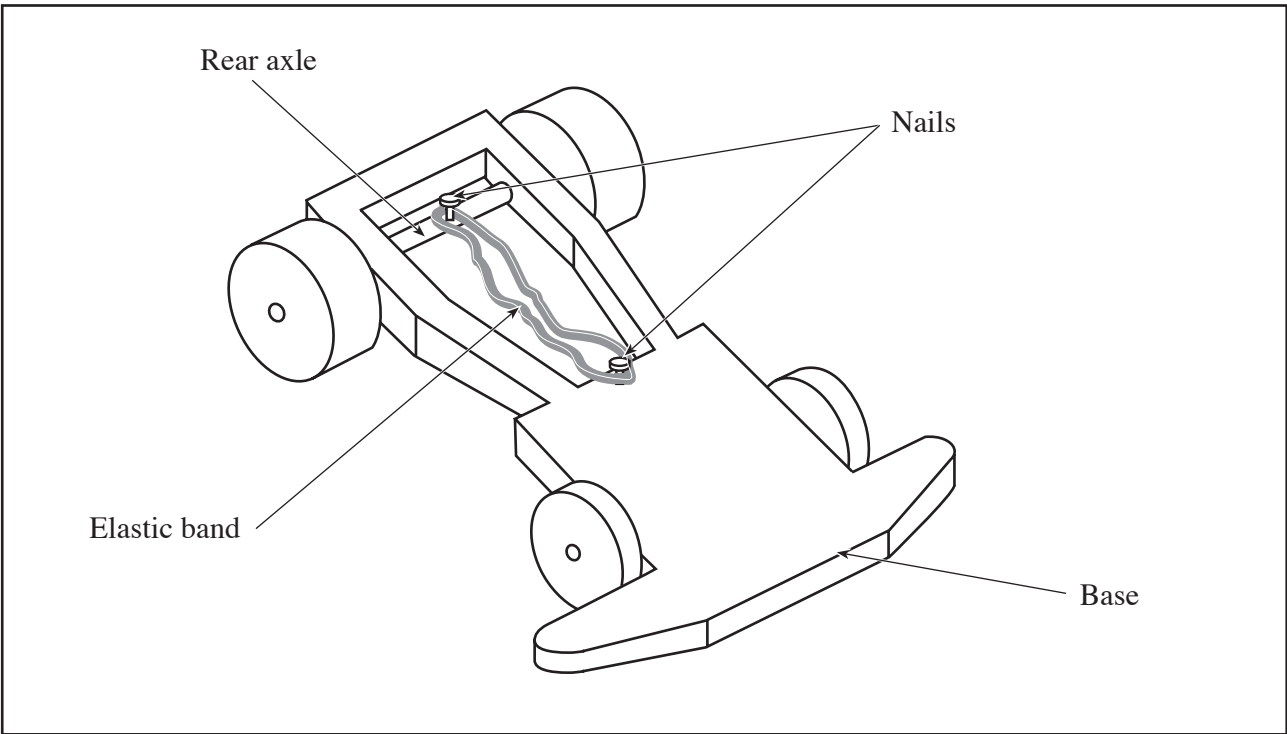
It could be used for .....  
..... [2]

Because .....  
..... [2]

**END OF RESISTANT MATERIALS TECHNOLOGY SECTION**

**SYSTEMS AND CONTROL TECHNOLOGY**

4. (a) **Name and sketch/draw two (2) pieces of equipment or tools that you would use to make this model car.**



Name of tool/equipment .....	Name of tool/equipment .....
Sketch/drawing	Sketch/drawing

[6]

(b) The stages for making the **model car** have been jumbled up in each section.

**Put these sentences in the right order by writing a number in each box.**

The **first** [1] stage of each section has been done for you.

<b>Section 1: Preparation List</b>	
• Collect all tools and equipment.	1
• Glass paper the wheels and base to make them smooth.	
• Measure and cut wood for the base and wheels.	
• Measure and cut two pieces of dowel for the axles.	

[6]

<b>Section 2: Making List</b>	
• Fix nails to the rear axle and the front of the base.	
• Push the axles through the base.	
• Glue the wheels on to the axles.	
• Mark the positions of the wheel axles and drill holes.	1

[6]

<b>Section 3: Finishing / Presentation List</b>	
• Let go and watch the car travel.	
• Attach the elastic band to the nails.	1
• Put the car on a flat surface.	
• Wind up the back wheels.	

[6]

(c) From the **Section 1: Preparation List**, (page 20) pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number .....	Making stage number .....

**Fill in** the number of **each** stage you have sketched/drawn.

[8]

**Evaluation**

(d) (i) List **two** (2) good things about the **design** of this model car.

(I) .....

.....

[2]

(II) .....

.....

[2]

(ii) Think about the **design** of the model car.

**Give two (2) ways you could improve it (make it better).**

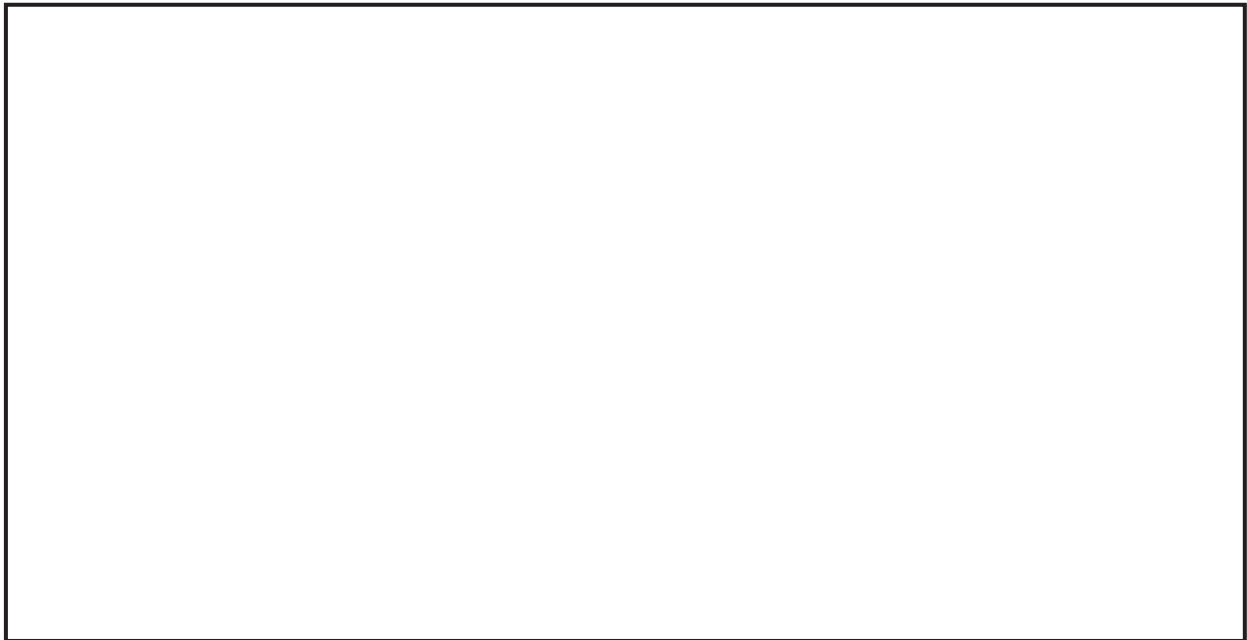
(I) .....

..... [2]

(II) .....

..... [2]

(iii) **Sketch/draw one (1) of your ideas for improvement in the box below. Label your sketch/drawing.**



[4]

(iv) Who would use this model car? Why?

It could be used by .....

..... [2]

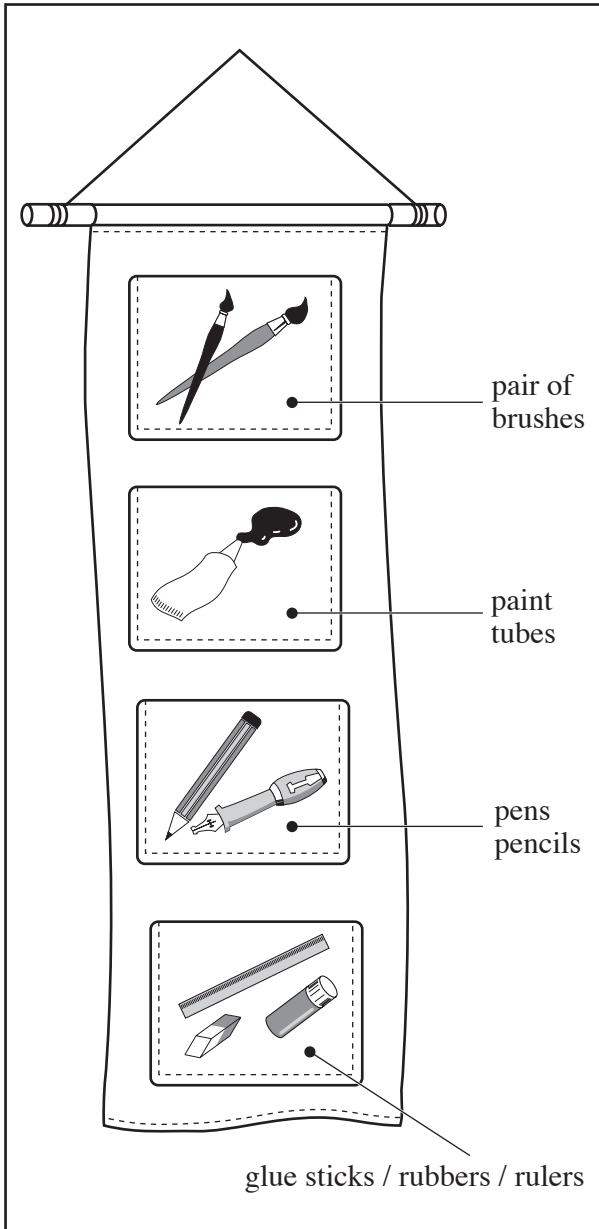
Because .....

..... [2]

**END OF SYSTEMS AND CONTROL TECHNOLOGY SECTION**

**TEXTILES TECHNOLOGY**

4. (a) Name and sketch/draw two (2) pieces of equipment or tools that you would use to make a pocket tidy for your Art/drawing equipment.



Name of tool/equipment .....

---

Sketch/drawing

Name of tool/equipment .....

---

Sketch/drawing

(b) The stages for making the **pocket tidy** have been jumbled up in each section.

**Put these sentences in the right order by writing a number in each box.**

The **first** [1] stage of each section has been done for you.

<b>Section 1: Preparation List</b>	
• Collect materials, tools and equipment.	1
• Remove paper patterns. Turn a wide hem at the top and bottom of backing fabric. Pin and tack into place.	
• Cut out paper patterns for organiser and pocket designs.	
• Pin paper patterns on to fabric. Cut out background, four pockets and pocket designs.	

[6]

<b>Section 2: Making List</b>	
• Pin and tack pockets in place.	
• Pin and tack designs on to each pocket. Machine design pieces in place. Remove tacking.	
• Machine around <b>three</b> (3) sides of each pocket leaving the top open.	
• Machine hem at top and bottom of backing fabric. Remove tacking.	1

[6]

<b>Section 3: Finishing / Presentation List</b>	
• Tie piece of cord to the dowelling and hang the tidy/organiser.	
• Tie off any loose threads.	1
• Press the tidy/organiser using a hot iron.	
• Put a piece of dowelling through the top of the backing fabric.	

[6]

- (c) From the **Section 1: Preparation List** (page 24), pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number .....	Making stage number .....

**Fill in** the number of **each** stage you have sketched/drawn. [8]

**Evaluation**

- (d) (i) **List two** (2) good things about the **design** of this pocket tidy.

(I) .....

..... [2]

(II) .....

..... [2]

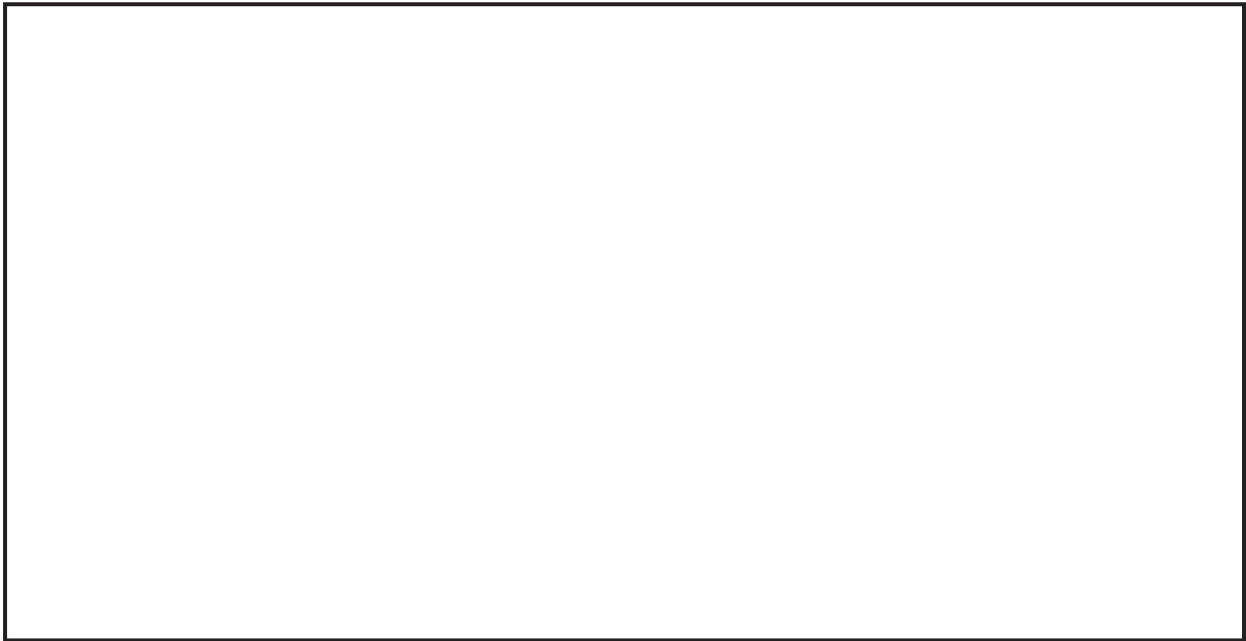
(ii) Think about the **design/shape** of the pocket tidy.

**Give two (2) ways you could improve it (make it better).**

(I) .....  
..... [2]

(II) .....  
..... [2]

(iii) **Sketch/draw one (1) of your ideas for improvement in the box below. Label your sketch/drawing.**



[4]

(iv) For what other purpose could the pocket tidy be used? Why?

It could be used for .....  
..... [2]

Because .....  
..... [2]

**END OF TEXTILES TECHNOLOGY SECTION**