

Resistant Materials Technology

Graphic Products

Textiles Technology

Food Technology

Systems & Control Technology – Electronics

Systems & Control Technology – Mechanisms

Specifications and Edexcel set tasks

**Edexcel Entry level Certificate in Design &
Technology (8910)**

July 2001

Edexcel is one of the leading examining and awarding bodies in the UK and throughout the world. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers.

Through a network of UK and overseas offices, Edexcel's centres receive the support they need to help them deliver their education and training programmes to learners.

For further information please call our Customer Response Centre on 0870 240 9800, or visit our website at www.edexcel.org.uk

Authorised by Peter Goff

Publications Code S010877

All the material in this publication is copyright

© Edexcel Foundation 2001

Contents

Introduction	1
Key features	1
Aims	1
Assessment	2
National Qualifications Framework criteria	2
Scheme of assessment	2
Assessment criteria	2
Levels	2
Differentiation	3
Internal moderation	3
External moderation	3
Prior learning and progression	5
Forbidden combinations and links with other subjects	5
Awarding and reporting	5
Students with particular requirements	5
Private candidates	5
Enquiries about results and appeals	5
Assessment language	6
The wider curriculum	7
Moral, ethical, social, cultural and environmental issues, health and safety considerations and the European dimension	7
Support and training	8
Support materials	8
Edexcel Publications	8
Training	8
Website	9
Regional offices and Customer Response Centre	9

Specification content	10
Resistant Materials Technology	10
Graphic Products	10
Textiles Technology	10
Food Technology	10
Systems & Control Technology – Electronics	10
Systems & Control Technology – Mechanisms	11
Designing and making assessment	12
Designing and making assessment criteria	12
Student record sheets	15
Photographic evidence	15
Student record sheet – masters	17
Edexcel set tasks	20
Resistant Materials Technology	20
Graphic Products	21
Textiles Technology	22
Food Technology	23
Systems & Control Technology – Electronics	24
Systems & Control Technology – Mechanisms	25

Introduction

The Entry level Certificate in Design & Technology is based on the National Curriculum Programme of Study, leading to achievement at National Curriculum levels 1, 2 and 3.

Students have the opportunity, where appropriate, to work in **one** of the five focus areas. These are:

- Resistant Materials Technology
- Graphic Products
- Textiles Technology
- Food Technology
- Systems & Control Technology
 - two routes: Electronics or Mechanisms.

All five areas are consistent with and provide opportunities for progression towards Edexcel's GCSE Design & Technology Short and Full courses.

Key features

- Developed within the context of the National Curriculum Programme of Study for Design & Technology.
- Recognises achievement at National Curriculum levels 1, 2 and 3.
- One piece of coursework (design-and-make task) from one of five focus areas.
- Tasks set by Edexcel.
- Teacher assessed and Edexcel moderated.
- Coursework links directly with Edexcel's GCSE Design & Technology.
- Provides opportunity for progression to GCSEs or GNVQs.
- Recognises small steps of achievement.
- Provides opportunity for dual entry with Edexcel's GCSE in Design and Technology.

Aims

The aims of this specification are consistent with the requirements of the National Curriculum where students demonstrate fully their design and technology capability and combine skills with knowledge and understanding in order to design and make quality products.

The aims of this specification are to:

- give students opportunities to develop practical skills and the confidence to design and make products
- analyse and evaluate products and processes
- allow students to engage in focused practical tasks to develop and demonstrate techniques
- engage in strategies for developing ideas, planning and producing a product
- recognise the moral, cultural and environmental issues inherent in design and technology.

Assessment

National Qualifications Framework criteria

This specification is based on the common criteria and the Entry level criteria which are prescribed by the regulatory authorities including the Qualification and Curriculum Authority (QCA) and are mandatory for all awarding bodies. It is also derived from the prescribed subject criteria for GCSE Design & Technology.

Scheme of assessment

Candidates will be asked to complete **one** design-and-make task from those set by Edexcel.

The scheme of assessment is as follows:

Task	Internal assessment External moderation
One piece of coursework Design-and-make task set by Edexcel	20 hours
Weighting	100%

One Edexcel Entry level Certificate will be awarded at Entry 1 or Entry 2 or Entry 3 on successful completion of external moderation.

Assessment criteria

The Entry level in Design & Technology combines the processes of designing and making in a practical task where students will need to apply the following criteria:

- 1 gather basic information for a given task
- 2 develop ideas and solutions
- 3 use written and graphical techniques to communicate
- 4 produce and use simple work schedules. Consider simple inputs, processes and outputs when simulating production
- 5 select and use tools, including ICT, equipment and processes safely to make a product
- 6 test and evaluate their product.

Levels

The certificate is awarded at three levels:

- Entry 1
- Entry 2
- Entry 3.

Assessment is based on **one** coursework component. Students should undertake **one** task in **one** focus area, in which they achieve the following:

- design and make a product using one or more types of material
- focus on the development of particular skills.

Students are expected to spend 20 hours on this task and will be assessed on their ability to:

- apply knowledge and understanding through designing and communicating skills
- demonstrate their ability to use materials, tools and equipment to produce a product.

Edexcel set tasks are provided for assessment and moderation purposes. There are five tasks for each material area at the back of the specification and another 15 in the coursework guide. These will be added to over time.

Overall, in order to achieve an award, students need to fulfil the following requirements:

Award	Designing and making assessment criteria
Entry 1	To achieve a level one, a student must show competence and receive a tick in all areas of criteria two and five and at least one tick in each of the other four main criteria
Entry 2	To achieve a level two, a student must show competence and receive a tick in all areas of criteria two and five and at least one tick in each of the other four main criteria
Entry 3	To achieve a level three, a student must show competence and receive a tick in all areas of criteria two and five and at least one tick in each of the other four main criteria

Differentiation

Differentiation between students across the ability range will occur by means of task, process, outcome, response and level of award.

Internal moderation

The tasks will be marked by the teacher. Where more than one teacher is involved with a student or groups of students (and across more than one material), it is the centre's responsibility to ensure that **internal moderation** is carried out.

External moderation

On completion of internal marking, contact quality services. The external moderator allocated to you will ask for work to be sent by post for moderation.

The moderator will identify the sample. This sample must include:

- the work of a number of students
- grading decisions at each level
- internal moderation records.

Internal moderation is an ongoing process and initial sampling decisions should occur at the earliest practical opportunity. This will ensure that any problems within the programme can be rectified at an early stage.

Prior learning and progression

This specification builds on the knowledge, understanding and skills established by the National Curriculum at Key Stages 1, 2 and 3. It provides a foundation for further study towards GCSE in Design & Technology or may be accessed by those students who would be assessed as below grade G in the GCSE Design & Technology Short or Full course.

Forbidden combinations and links with other subjects

Every specification is assigned a national classification code indicating the subject area to which it belongs. Centres should be aware that students who enter for more than one Entry level Certificate qualification with the same classification code will have only one grade (the highest) counted for the purpose of the school and college performance tables.

The classification code for this specification is 8900.

Awarding and reporting

The grading, awarding and certification of this specification will comply with the requirements of the Entry level Code of Practice for courses starting in September 2001, which is published by QCA. Qualifications will be graded as pass or fail.

Awards of the Certificates will be made in line with the June entries. Certificates will summarise students' achievement demonstrated for each award.

Students with particular requirements

Regulations and guidance relating to students with special requirements are published annually by the Joint Council for General Qualifications and are circulated to examinations officers. Further copies of guidance documentation may be obtained from the following address or by telephoning 0870 240 9800.

Edexcel will assess whether or not special consideration or concession can be made for students with particular requirements. Requests should be addressed to:

Special Requirements
Edexcel Foundation
Stewart House
32 Russell Square
London WC1B 5DN

Private candidates

This specification is **not** available to private candidates.

Enquiries about results and appeals

Edexcel has made arrangements for enquiries about results and appeals. Details are contained in the *Regulations and Syllabus Synopses* for the current year and in the booklet *Information and Guidance for Centres*.

Assessment language

Assessment of this specification will be in English only. Assessment materials will be published in English only and all written and spoken work submitted for moderation must be produced in English.

The wider curriculum

Moral, ethical, social, cultural and environmental issues, health and safety considerations and the European dimension

The Entry level Certificate provides students with the opportunity to develop moral, ethical, social, cultural, environmental, health and safety education and European issues.

Moral, ethical, social, cultural, environmental, health and safety and European issues	Internal assessment or classwork that supports evidence of achievement	Supported through assessment in the following assessment criteria:
	Provides opportunity to:	
Ethical/moral issues	Take account of the needs of users related to moral issues, eg changing fashions.	1 Gather basic information for a given task.
Social issues	Take account of consumer taste when generating ideas.	2 Develop ideas and solutions.
Cultural issues	Assess current lifestyle, the contemporary image of products.	1 Gather basic information for a given task.
Environmental issues	Take account of the economic use of materials and their recycling.	1 Gather basic information for a given task. 2 Develop ideas and solutions. 5 Select and use tools, including ICT, equipment and processes safely to make a product.
Health and safety issues	Demonstrate safe working practices.	2 Develop ideas and solutions. 5 Select and use tools, including ICT, equipment and processes safely to make a product.
European issues	Develop an understanding of the needs of others living in different countries.	1 Gather basic information for a given task.

Support and training

Support materials

The following materials are available to centres:

- teacher's and coursework guides, which contain 15 further Edexcel set tasks
- exemplar material.

Other materials will be made available during the lifetime of the specification in response to centres' needs.

Additional copies of these support materials may be obtained from Edexcel Publications at the address below.

Edexcel Publications

Support materials and further copies of this specification can be obtained from:

Edexcel Publications
Adamsway
Mansfield
Notts NG18 4FN

Tel: 01623 467467

Fax: 01623 450481

E-mail: publications@linneydirect.com

Training

Every year Edexcel provides a programme of training courses covering aspects of the specification and assessment. For further information on what is planned, please consult the annual Training and Professional Development Guide, which is sent to all centres, or contact:

INSET
Edexcel Foundation
Stewart House
32 Russell Square
London WC1B 5DN

Tel: 020 7758 5620

Fax: 020 7758 5950

020 7758 5951 (second fax number)

E-mail: inset@edexcel.org.uk

Website

www.edexcel.org.uk

Please visit the Edexcel website, where further information about training and support for all qualifications, including this Entry level Certificate, can be found.

The website is updated regularly, and an increasing amount of support material and information will become available through it.

Regional offices and Customer Response Centre

Further advice and guidance is available through a national network of regional offices. For general enquiries and for details of your nearest office please call the Edexcel Customer Response Centre on:

Tel: 0870 240 9800

Email: enquiries@edexcel.org.uk

Regional subject advisors

For the South

Susan Medway

Tel/Fax: 01235 862307

E-mail: sue.medway@edexcel.org.uk

For the West

Carol Griffiths

Tel/Fax: 0151 648 8695

E-mail: carol.griffiths@edexcel.org.uk

For the East

Una Jones

Tel/Fax: 01206 366 398

E-mail: una.jones@edexcel.org.uk

For Wales

Dorothy Powell

Tel: 01873 890 382

E-mail: dorothy.powell@edexcel.org.uk

Specification content

Focus area content

The understanding of the materials and processes given below may be communicated through a student's coursework portfolio.

Resistant Materials Technology

Students should have a basic understanding of hard and soft woods, manufactured boards, ferrous and non-ferrous metals, thermoplastics, and common components such as nails, screws, glues, adhesives, nuts and bolts.

Students should have a basic understanding of essential hand tools and their use to manufacture products, and a limited range of machine tools such as sanders, drills and the strip heater.

Graphic Products

Students should have a basic understanding of paper, card, foam board, corrugated card, plastics packaging, acrylic and polystyrene, pencils, marker pens, drawing boards and equipment, glues, adhesives and simple binding methods using combs and ring binding, basic print making.

Students should have a basic understanding of essential hand tools and their use to manufacture products.

Textiles Technology

Students should have a basic understanding of natural and man-made fibres and yarns, knitted fabrics, woven and non-woven fabrics, and components such as buttons, Velcro and fasteners.

Students should have a basic understanding of essential hand tools and their use to manufacture products and a limited range of machines for sewing, knitting and finishing.

Food Technology

Students should have a basic understanding of nutrients, primary foods and secondary foods.

Students should have a basic understanding of essential hand tools and their use to manufacture products and a limited range of electrical equipment such as mixers, blenders and food processors.

Systems & Control Technology – Electronics

Students should have a basic understanding of battery power, input devices such as switches and moisture sensors, process devices such as resistors and transistors, output devices such as motors, buzzers, lamps and LEDs, and materials such as thermoplastics, manufactured boards, aluminium, copper and steel.

Students should have a basic understanding of essential hand tools and their use to manufacture products and a limited range of machine tools such as drills, soldering irons and strip heaters.

Systems & Control Technology – Mechanisms

Students should have a basic understanding of rigid materials such as metals, plastics and manufactured wooden boards, and mechanisms such as levers and linkages, pulleys and simple gear trains, screw threads, cams and cranks.

Students should have a basic understanding of essential hand tools and their use to manufacture products and a limited range of machine tools such as drills.

Designing and making assessment

Designing and making assessment criteria

The process of designing and making and the designing and making assessment criteria at each level contribute to the total assessment of this specification. The assessment criteria are progressive through the three levels.

Students must show competence in six assessment criteria, including all at criteria 2 and 5, at either level 1, level 2 or level 3 to achieve that level of award.

The work for the Entry level Certificate is largely expected to be practical, with a minimum of written work. It is important therefore to ensure that a clear record of progress is maintained, principally through the use of photographic evidence.

The tables below represent the coursework assessment criteria at each level.

Designing and making assessment criteria – Entry 1

The student is able to:	Specific content:
1 gather basic information for a given task.	Use a brief and specification of a product. Select and use information which may be supplied, such as product information.
2 develop ideas and solutions.	Talk about one idea for the product. Draw the product. Talk about some measurements and materials for the product. Talk about how the product will be made.
3 use written and graphical techniques to communicate.	Produce simple sketches with notes such as measurements and materials. Use ICT to word process information such as an evaluation.
4 produce and use simple work schedules. Consider simple inputs, processes and outputs when simulating production.	Plan one part of a task with guidance. Work to a given timetable of events.
5 select and use tools, including ICT, equipment and processes safely to make a product.	Under guidance, perform simple tasks with given tools and equipment while making the product. Work safely.
6 test and evaluate their product.	Compare what has been made with the specification.

Designing and making assessment criteria – Entry 2

The student is able to:	Specific content:
1 gather basic information for a given task.	<p>Use a brief and specification of a product.</p> <p>Add some points of specification to those supplied.</p> <p>Select and use some information gathered from one source such as pictures from magazines or catalogues.</p> <p>Comments on how this information helps the project.</p>
2 develop ideas and solutions.	<p>Draw one or more ideas.</p> <p>Select the solution.</p> <p>Talk about the possible materials and processes that could be used to make the product.</p> <p>Talk about how the product might be produced in quantity.</p>
3 use written and graphical techniques to communicate.	<p>Produce simple sketches and use another graphical technique to present their work.</p> <p>Include notes such as measurements, materials and joining details.</p> <p>Use appropriate ICT such as word processing.</p>
4 produce and use simple work schedules. Consider simple inputs, processes and outputs when simulating production.	<p>Plan, with help, a sequence of short events that will lead to a finished product.</p> <p>Produce parts of and use a timetable of events.</p>
5 select and use tools, including ICT, equipment and processes safely to make a product.	<p>Select and use tools, equipment and processes safely.</p> <p>Make a complete product.</p>
6 test and evaluate their product.	<p>Check how well the product meets the specification.</p> <p>Make some comment about the quality of the finished product.</p>

Designing and making assessment criteria – Entry 3

The student is able to:	Specific content:
1 gather basic information for a given task.	<p>Use a brief.</p> <p>Write a short specification.</p> <p>Gather information independently from a number of sources such as existing products.</p> <p>Consider possible materials and how they could be used.</p> <p>Comment on how the information helps your project.</p>
2 develop ideas and solutions.	<p>Draw two or three ideas which meet the specification.</p> <p>Choose one idea and make a detailed drawing or a model of it.</p> <p>State some details of materials and production processes.</p> <p>Talk about how the product might be produced in quantity.</p>
3 use written and graphical techniques to communicate.	<p>Use a range of graphical techniques. Include written notes such as measurements, the materials used and joining details.</p> <p>Use appropriate ICT such as word processing or drawing.</p>
4 produce and use simple work schedules. Consider simple inputs, processes and outputs when simulating production.	<p>Before starting a task plan, without help, a sequence of events that will lead to a finished product.</p>
5 select and use tools, including ICT, equipment and processes safely to make a product.	<p>Select and use appropriate tools, equipment and processes to perform a variety of tasks.</p> <p>Make a complete finished product.</p> <p>Work safely.</p>
6 test and evaluate their product.	<p>Use a simple test on the product.</p> <p>List how well the product meets the specification.</p>

Student record sheets

The following sheets should be photocopied, according to the level the student is entered for.

The completed form is sent with the coursework, if requested, for postal moderation purposes.

Students must achieve the six assessment criteria, two of which must be including 2 and 5, to be awarded the level entered for.

Only the column of the focus area for which the candidate is entered should be completed with the date and initials of the teacher examiner. The date should indicate when the assessment criterion was evidenced.

Photographic evidence

Photographic evidence is required for moderation purposes. Evidence should be clear and should include the name of the candidate and have some form of scale shown in the photograph.

Evidence of the finished product and any models or mock-ups that have been made during the process of production is required. It would be preferable for more than one view to be included to show details of construction and features of the product.

Entry Level Certificate in Design & Technology

Level 1 Record Sheet

Centre Name:		Centre Number:	
Candidate Name:		Candidate Number:	

Please indicate the subject area by circling as appropriate below:

**Resistant
Materials
Technology**

**Graphic
Products**

**Textile
Technology**

**Food
Technology**

**Systems &
Control
Technology**

Entry 1

To achieve a level one, a student must show competence and receive a tick in:

- all areas of criteria **two and five**.
- *at least **one tick** in each of the other four main criteria.

Please use the table below as a checklist to record achievement of criteria, the date on which it was achieved and the form of evidence:

(T = teacher observation, C = in the coursework folder)

Annotation is **particularly NECESSARY** where physical evidence does not exist

Assessment criteria		Form of evidence	Annotation
1	Use a brief and specification of a product		
	Select and use information which may be supplied, as product information		
2	Talk about one idea for the product		
	Draw the product		
	Talk about some measurements and materials for the product		
	Talk about how the product will be made		
3	Produce simple sketches with notes such as measurements and materials		
	Use ICT to word process information such as an evaluation		
4	Plan one part of a task with guidance		
	Work to a given timetable of events		
5	Under guidance, perform simple tasks with given tools and equipment while making the product		
	Work safely		
6	Compare what has been made with the specification		

Entry Level Certificate in Design & Technology

Level 2 Record Sheet

Centre Name:		Centre No:	
Candidate Name:		Candidate Number:	

Please indicate the subject area by circling as appropriate below:

**Resistant
Materials
Technology**

**Graphic
Products**

**Textile
Technology**

**Food
Technology**

**Systems &
Control
Technology**

Entry 2

To achieve a level two, a student must show competence and receive a tick in:

- all areas of criteria **two and five**.
- *at least **one tick** in each of the other four main criteria.

Please use the table below as a checklist to record achievement of criteria, the date on which it was achieved and the form of evidence:

(T = teacher observation, C = in the coursework folder)

Annotation is **particularly NECESSARY** where physical evidence does not exist

	Assessment criteria	Form of evidence	Annotation
1	Use a brief and specification of a product		
	Add some points of specification to those supplied		
	Select and use some information gathered from one source such as pictures from magazines or catalogues		
	Comments on how this information helps the project		
2	Draw one or more ideas		
	Select the solution		
	Talk about the possible material and processes that could be used to make the product		
	Talk about how the product might be produced in quantity		
3	Produce simple sketches and use another graphical technique to present the work		
	Include notes such as measurements, materials and joining details		
	Use appropriate ICT such as word processing		
4	Plan, with help, a sequence of short events that will lead to a finished product		
	Produce parts of and use a timetable of events		
5	Select and use tools, equipment and processes safely		
	Make a complete product		
	Work safely		
6	Check how well the product meets the specification		
	Make some comment about the quality of the finished product		

Entry Level Certificate in Design & Technology

Level 3 Record Sheet

Centre Name:		Centre Number:	
Candidate Name:		Candidate Number:	

Please indicate the subject area by circling as appropriate below:

**Resistant
Materials
Technology**

**Graphic
Products**

**Textile
Technology**

**Food
Technology**

**Systems &
Control
Technology**

Entry 3

To achieve a level three, a student must show competence and receive a tick in:

- all areas of criteria **two and five**.
- *at least **one tick** in each of the other four main criteria.

Please use the table below as a checklist to record achievement of criteria, the date on which it was achieved and the form of evidence:

(T = teacher observation, C = in the coursework folder)

Annotation is **particularly NECESSARY** where physical evidence does not exist

Assessment criteria	Form of evidence	Annotation
1	Use a brief	
	Write a short specification	
	Gather information independently from a number of sources such as existing products	
	Consider possible materials and how they could be used	
	Comment on how the information helps the project	
2	Draw two or three ideas which meet the specification	
	Choose one idea and make a detailed drawing or a model of it	
	State some details of materials and production processes	
	Talk about how the product might be produced in quantity	
3	Use a range of graphical techniques. Include written notes such as measurement, the materials used and joining details	
	Use appropriate ICT such as word processing or drawing	
4	Before starting a task plan, without help, a sequence of events that will lead to a finished product	
5	Select and use appropriate tools, equipment and processes to perform a variety of tasks	
	Make a complete finished product	
	Work safely	
6	Use a simple test on the product	
	Comment on how well the product meets the specification	

Edexcel set tasks

The tasks across focus areas are comparable, ie they are designed to be achieved within 20 hours. They outline a brief which points towards a certain scale of product outcome.

Resistant Materials Technology

Edexcel set tasks in Resistant Materials Technology are provided for assessment and moderation purposes.

- 1 A local supermarket sells a range of herbs grown in small pots; they are to be kept on a kitchen windowsill so the herbs can be picked fresh for cooking.

Your task

Research methods of holding pots in different ways.

Design and make a holder for four 65mm diameter plant pots that will fit on to a windowsill.

- 2 A large do-it-yourself store wishes to market a tool storage unit for simple everyday household repairs such as changing a plug or fixing a picture hook to a wall.

Your task

Research the range of tools that may be kept in the tool storage unit.

Design and make a portable tool storage unit.

- 3 A toy manufacturer is to market a range of pull-along toys for 2 to 5-year-old children. The toys are to have a simple mechanism that makes the toy go up and down as it is pulled along.

Your task

Research safety in toys for young children and simple mechanisms that could be used.

Design and make one toy that is safe for young children and has a simple mechanism to move it in the way described.

- 4 A local council has a number of parks and would like to encourage birds to nest in the trees. It would like to encourage small birds of different varieties to nest and feed in the surrounding area.

Your task

Research small birds that may nest in parks in towns and cities.

Design and make a suitable nesting box that can be fixed easily to trees.

- 5 A local music shop is to sell a range of compact disc (CD) holders. The holders should hold up to 10 CDs at a time and will stand on a flat surface.

Your task

Research the size of compact discs and holders for discs.

Design and make a disc storage unit in resistant materials.

Graphic Products

Edexcel set tasks in Graphic Products are provided for assessment and moderation purposes.

- 1 A primary school needs an educational jigsaw puzzle to occupy children during lunchtime.

Your task

Research jigsaw puzzles, their packaging and suitable educational themes.

Design and make an educational jigsaw puzzle and its packaging to occupy children of 5-6 years old.

- 2 A company that makes board games is to look into selling a series of simple board games suitable for entertainment on long journeys.

Your task

Research simple games that could be played on a long journey and will fit into a pocket or small bag.

Design and make one game in card and an instruction leaflet that can be used on long journeys without losing any of the pieces. Your game should include full playing instructions.

- 3 A series of computer games is to be sold on a CD ROM. The container and an instruction leaflet need to help to sell the CD ROM as well as giving instructions for use.

Your task

Research containers and instruction leaflets for CD ROMs that hold the CD securely.

Design and make the container and instruction leaflet for the CD ROM and an eye-catching front to help sell the CD ROM.

- 4 A local historic building wishes to offer a press-out card model for sale in the site information centre.

Your task

Research press-out card models and ways of joining card together to make free-standing models.

Design and make a simple card model in the shape of a building that includes an instruction leaflet on how to make the model.

- 5 A local fast food restaurant is to have a special offer on one of its menu items. It is to use a mobile to help advertise the event. The mobile will hang over the counter to attract the attention of customers as they walk up to the counter.

Your task

Research different types of mobile and menu cards that could be used to advertise the product (you choose the type of food to advertise).

Design and make a menu card and a self-assembly mobile to advertise the chosen product.

Textiles Technology

Edexcel set tasks in Textiles Technology are provided for assessment and moderation purposes.

- 1 A large country park has a cycle hire centre. The owner wants to include a simple first aid kit in their cycle hire in case of minor accidents.

Your task

Research the sizes of the contents of the first aid kit and ways of securely attaching the kit to a cycle.

Design and make a fabric case to contain some sticking plasters, a small bandage, some cotton wool balls and some sticking tape.

- 2 A belt manufacturer wishes to market a range of fabric belts that can be worn as an accessory.

Your task

Research belt construction and sizing.

Design and make one fabric belt that could be sold as part of the range.

- 3 A toy manufacturer wishes to market a range of small embroidery kits suitable for children aged 4 to 8.

Your task

Research embroidery kits and their instructions.

Design and make one complete design for one kit and include the instructions to go with the kit.

- 4 In order to raise money and provide some occupational therapy, a rest home for elderly people has asked you to design a range of soft toys that the elderly people could make.

Your task

Research materials and patterns for making soft toys and their instructions.

Design and make one complete toy and include the set of instructions to go with the kit.

- 5 A local crafts shop wishes to sell a range of containers, made using fabrics. The containers could be used to hold items such as make-up, school items or wall hanging tidies. Select one type of container for your design.

Your task

Research sizes of the items to be stored.

Design and make one container for the chosen items.

Food Technology

Edexcel set tasks in Food Technology are provided for assessment and moderation purposes.

- 1 The local amateur pantomime group has decided to tour some of the local primary schools to show a short play. They have asked you to design and make a food item that they can sell in the interval at these performances.

Your task

Research food products that require easy preparation and can be eaten without the need for cutlery.

Design and make the food item that will appeal to children of primary school age and can be eaten without the need for cutlery.

- 2 A breakfast cereal company wishes to market a bar that can be eaten in place of a breakfast cereal.

Your task

Research breakfast cereals and their nutritional values.

Design and make a breakfast cereal bar and show its nutritional value.

- 3 A range of vegetarian dishes is to be made for sale as a range of meals for one person. It is to be part of a cook/chill range.

Your task

Research vegetarian dishes and cook/chill procedures.

Design and make a simple vegetarian dish that can be made in advance then chilled for reheating at home.

- 4 The local playgroup has a mid-morning break and would like to offer the children a healthy snack to eat with their drink.

Your task

Research low-cost, healthy and nutritious food suitable for pre-school age children.

Design and make a suitable snack for children of playgroup age.

- 5 Many people from different lands choose to live in this country. They still often celebrate their special occasions with sweet foods.

Your task

Research a range of celebrations and festivals from different cultures.

Design and make a small range of sweet food items that could be suitable for such a special occasion.

Systems & Control Technology – Electronics

There are **two** routes in Systems and Control Technology – choose either Electronics or Mechanisms.

Edexcel set tasks in Systems & Control Technology – Electronics are provided for assessment and moderation purposes.

- 1 A local playgroup has a number of cycles that the children use outside during the summer. The playgroup leaders would like to have some lights fitted to each bike to make them more interesting for young children.

Your task

Research suitable light circuits that use switches to turn on individual lights.

Design and make one circuit that will switch two different coloured lights separately using one switch.

- 2 When a circuit is complete it is sometimes necessary to test part of it to make sure it works and is free from dry joints. This can be done using two probes and a signal component such as a light or a buzzer.

Your task

Research simple test circuits using light or sound as an indicator.

Design and make a simple circuit to test that voltage will flow through parts of a circuit.

- 3 There are a number of ways to count the people passing a set point.

Your task

Research pressure mats and switches and how they are made to work in an electronic circuit.

Design and make a small pressure mat that will complete an electronic circuit every time the mat is stepped on.

- 4 A hospital requires a simple electronic circuit that can be used in a variety of places where the level of water can be sensed, such as a washing-up bowl for partially sighted people.

Your task

Research simple moisture sensors that can be made to switch an electronic circuit to sound a buzzer.

Design and make a circuit that will sound a buzzer when water reaches a set level.

- 5 In order to protect a person from attack it is sometimes necessary to carry an alarm that can be set off to frighten the attacker.

Your task

Research small alarm systems that will fit into a bag or pocket and that give off a loud noise.

Design and make a small alarm that will sound a loud noise when switched on by a push button.

Systems & Control Technology – Mechanisms

There are **two** routes in Systems and Control Technology – choose either Electronics or Mechanisms.

Edexcel set tasks in Systems & Control Technology – Mechanisms are provided for assessment and moderation purposes.

- 1 In a play, as a door on to the stage is opened a spider, which is connected by a mechanism to the door, is lowered to the actor's eye level. As the door is closed the spider rises out of sight.

Your task

Research simple pulley mechanisms.

Design and make a simple mechanism that will lower then raise the spider as the door is opened then closed.

- 2 A local toy maker is to produce a range of simple mechanical toys. One of the toys in the range is a lorry with a tipping trailer.

Your task

Research simple cam mechanisms that will raise then lower the trailer when a handle is turned.

Design and make the toy lorry with the moving trailer.

- 3 Elderly people sometimes have difficulty holding newspapers up to read.

Your task

Research ways of holding a newspaper open and flat for reading while adjusting to different angles and folding flat for storage.

Design and make a holder for newspapers that has three positions and folds flat for storage.

- 4 Gardeners often find that once seeds are sown birds come along and feed on them.

Your task

Research ways of using wind power and bird-scaring devices that are currently available which do not harm the birds.

Design and make a wind-powered bird scarer that can be used in a small garden.

- 5 Elderly people often have difficulty bending down to pick up small objects from the floor.

Your task

Research levers and linkages that can be used to reach and pick objects from the floor.

Design and make a device that will allow elderly people to pick small objects from the floor without bending down.

Further copies of this publication are available from
Edexcel Publications, Adamsway, Mansfield, Notts, NG18 4FN

Telephone 01623 467467
Fax 01623 450481
E-mail: publications@linneydirect.com

Order Code S010877 July 2001

For more information on Edexcel qualifications please contact our
Customer Response Centre on 0870 240 9800
or E-mail: enquiries@edexcel.org.uk
or visit our website: www.edexcel.org.uk

Edexcel Foundation is a registered charity and a Company Limited
By Guarantee Registered in England No. 1686164

Edexcel
Success through qualifications