

# ENTRY LEVEL

## Design and Technology

OCR Entry Level Certificate in Design and Technology: Electronics R371

OCR Entry Level Certificate in Design and Technology: Graphics R372

OCR Entry Level Certificate in Design and Technology: Industrial Technology R373

OCR Entry Level Certificate in Design and Technology: Resistant Materials R374

OCR Entry Level Certificate in Design and Technology: Textiles R375

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# 1 Introduction to Entry Level Certificate in Design and Technology

## 1.1 Overview of OCR Entry Level Certificate in Design and Technology

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<b>Design and Technology: Electronics (R371), Graphics (R372), Industrial Technology (R373), Resistant Materials (R374) or Textiles (R375)</b>	
One internally assessed task	<p>60 marks 100% of the qualification 20-25 hours supervised assessment</p> <p>Candidates can be entered for more than one material area in a series. Candidates produce a portfolio in one or more of the following material areas:</p> <ul style="list-style-type: none"><li>• Electronics</li><li>• Graphics</li><li>• Industrial Technology</li><li>• Resistant Materials</li><li>• Textiles</li></ul> <p>Candidates select <b>one</b> task from a range of themes set by OCR for the material area(s) chosen. The task can be adapted in order to suit centre specific circumstances. Alternatively, a task that is not listed in this booklet may be chosen, as long as it falls under one of the themes.</p> <p>The task will focus on the design, development and making of one product that is capable of being tested and evaluated.</p> <p>The task is internally assessed and externally moderated.</p>

## 1.2 What is new in OCR Entry Level Certificate in Design and Technology?

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If you taught the legacy OCR Entry Level Certificate in Design and Technology that finished in June 2011, please check the table below for details of the main differences between that and the new version.

What stays the same?	What is changing?
The qualification is still internally assessed and externally moderated.	The new specifications incorporate the focus of our GCSE Design and Technology Innovator Suite, enabling it to be taught alongside these updated GCSEs.
A choice of OCR-set tasks is provided.	
The focus is still on practical work – design, develop and make.	The updated specifications incorporate two new material areas at Entry Level – Industrial Technology and Electronics.
It still provides a suitable progression pathway to GCSE Design and Technology courses of study.	This no longer incorporates Food Technology – we offer a separate Entry Level qualification in Food Studies.
You can still submit evidence by post for moderation.	The new specifications contain fresh and up-to-date content, enabling teachers to engage learners and bring the subject to life. There's a wider range of themes and suggested tasks within them.
Candidates can be entered for more than one material area in a series.	The new specifications employ generic marking criteria which are applicable to all material areas.
	There is scope to teach some of the different material areas alongside each other owing to some shared content.
	You can also submit evidence electronically, via the OCR Repository.
	The sample for moderation will now be selected by the Moderator, and the centre will be advised.

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## 1.3 Guided learning hours

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There are no specified guided learning hours for this course; typically it could take between 60 and 120 guided learning hours depending on the ability of the candidates and the delivery approach adopted.

# 2 Content of Entry Level Certificate in Design and Technology

This chapter consists of two broad sections.

Section 2.1 covers content that is to be taught to all candidates irrespective of which material area they are going to pursue.

Section 2.2 covers the technical content and themes for each material area. It is included to help teachers structure their schemes of work and to define areas that will be assessed through internal assessment.

It should be noted that only the content relevant to the chosen internal assessment task will be assessed by OCR.

## 2.1 Content for all material areas

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Candidates should be taught knowledge, skills and understanding through:

- investigation of existing products
- focussed practical tasks that allow for the opportunity to develop a range of techniques, skills, processes and knowledge
- design and make tasks that allow for the opportunity to develop the application of knowledge of systems and ICT

### Candidates should be able to:

Contribute to generating design proposals

- recognise a design opportunity or need
  - examine the intended purpose of the product and be aware of how existing products fulfil the needs of the intended user/s
  - generate and record a range of suitable design proposals
  - use graphical techniques including ICT, CAD and CAM in the generation, development, modelling and communication of design proposals
  - apply knowledge of digital media and new technologies as appropriate
  - identify a suitable design idea considering how it meets its purpose
  - demonstrate an ability to draw up a suitable specification for a product.
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Contribute to planning and making	<ul style="list-style-type: none"> <li>• contribute to a plan of work in order to make the product</li> <li>• select appropriate materials, tools, equipment and processes</li> <li>• where appropriate recognise the importance of understanding the physical and aesthetic properties of the selected material</li> <li>• prepare materials economically allowing for waste and fine finish</li> <li>• be able to recognise problems and contribute to suitable solutions</li> <li>• use a range of tools, equipment and processes effectively and safely to shape, form, join and finish materials and assemble components</li> <li>• make a working product to a good standard using appropriate skills and techniques.</li> </ul>
Contribute to an evaluation of a product	<ul style="list-style-type: none"> <li>• use the product for its intended purpose and evaluate it against the design need to see how it meets the requirements of the user/s</li> <li>• review how they have used materials, tools, equipment and processes</li> <li>• recognise that the product design could be developed or modified.</li> </ul>

Candidates will be expected to look at how Design and Technology has evolved through the examination of products from the past and present. They should develop a knowledge and understanding of sustainability, environmental concerns, cultural, moral and social issues.

Candidates need to consider how future designs will impact on the world in which we live. They should gain awareness and understanding of trends and innovations in design and manufacture and the impact that the design of such products is having on the environment, society and the economy.

Working within their chosen material area, candidates should develop an awareness and basic understanding of the content listed below.

Issues to be considered in the design of products	<p>Social issues:</p> <ul style="list-style-type: none"> <li>• Recognising the need to consider the views of others, including people with disabilities, when designing and discussing products</li> <li>• Signs and symbols giving important information about materials and products.</li> </ul>
	<p>Cultural Issues:</p> <ul style="list-style-type: none"> <li>• Look at, respond to and value the responses of others to design solutions</li> <li>• The impact of different cultures on modern products.</li> </ul>
	<p>Environmental issues:</p> <ul style="list-style-type: none"> <li>• Understand and be able to select materials that are both suitable and sustainable</li> <li>• Understand that products or parts of products can be recycled and used in the making of other products</li> <li>• The reduction in the use of chemicals and materials dangerous to the environment, ie bleaches, CFCs, toxic materials</li> <li>• Carbon footprint – reducing the energy used in the manufacture of products</li> <li>• The need to dispose of redundant products and their packaging in a safe and environmentally friendly way.</li> </ul>

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Design issues:

Be aware of how good design and product choice improves the quality of life.

Health and Safety

- Be aware of the responsibilities of designers and manufacturers to the work force, the consumer and the general public
- Understand the importance of personal safety when engaged in designing and making activities
- Recognise the importance of basic risk assessment procedures
- Be aware of COSHH

Understand the importance of following instructions provided for certain materials, equipment and processes.

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## 2.2 Technical content and themes

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Candidates should select one or more material areas to work in.

They will need an awareness of the technical aspects of designing and making in the material they are working in, i.e. Electronics (R371), Graphic Products (R372), Industrial Technology (R373), Resistant Materials (R374) or Textiles (R375).

Candidates will also be expected to apply the necessary skills, processes, knowledge and understanding **only** as applicable to the design and make task that they undertake for assessment.

## 2.2.1 Electronics (R371)

### Electronics Specification Content

Materials	<p>Metals and plastics in common use in the workshop and manufacturing such as: aluminium, copper, acrylic, HDP, ABS</p> <p>Availability and selection of appropriate specific materials for particular applications.</p>
Performance characteristics of materials	<p>Properties and applications of thermoplastics including ABS, polystyrene, acrylic</p> <p>Properties and applications of thermosetting plastics including GRP, PCB substrate, epoxy resin.</p>
Smart and Modern materials	<p>Be aware of the properties and typical applications of Smart and Modern materials including QTC and memory metals</p> <p>Be aware of other Smart and Modern materials as they become available.</p>
Properties of materials	<p>Be aware of physical properties of materials when selecting for a specific purpose</p> <p>Conductive properties of materials, thermal and electrical</p> <p>Recognise the importance of aesthetic qualities of materials</p> <p>Be aware of sustainability issues when choosing and disposing of products and materials.</p>
Manufactured components used to make electronic products	<p>Switches, motors, speakers, displays</p> <p>The selection, mounting and fixing of components, cable selection and use</p> <p>Discrete components – resistor, capacitor, diode, LED, transistor, relay</p> <p>Modular components – amplifier</p> <p>Identify and suggest applications for a wide range of pre-manufactured components.</p>
Tools and equipment	<p>Knowledge and understanding of basic tools and equipment; how to select appropriate tools and equipment and use them safely and effectively</p> <p>Awareness of alternative tools and equipment that can be used for the same task</p> <p>Safety checks to carry out on equipment before use.</p>

## 2.2.2 Graphics (R372)

### Graphics Specification Content

Materials	<p>An understanding of materials commonly used in a graphics studio, such as:</p> <p>Paper – sizes and types and their suitability for different situations</p> <p>Card and Board</p> <p>Foam Board – its nature and properties</p> <p>Sheet Plastics – (up to 1mm thick) their suitability for different situations; suitability of thermoplastic sheet for line bending and vacuum forming</p> <p>Corri-flute</p> <p>Styrofoam.</p>
The physical and aesthetic properties of graphic materials	<p>Recognise the importance of understanding the physical and aesthetic properties of graphics materials when selecting a material for a specific use</p> <p>The purpose of self and applied finishes protecting, preserving and/or enhancing the appearance of products such as: laminating; spirit varnish and embossing.</p>
Joining materials	<p>Joining methods including PVA adhesive, spray adhesive, solvent cement, hot melt glue (glue gun), epoxy resin, glue sticks, single and double sided adhesive tape</p> <p>Pre-manufactured components including Velcro, double sided sticky pads, paper fasteners, eyelets, press fit 'click' fasteners, plastic rivets (Clic rivets), and their suitability for different situations.</p>
Smart and Modern Materials	<p>Be aware of Smart and Modern materials such as:</p> <p>Including – Polymorph, Thermo-chromic inks, pigments and film, Photo-chromic inks and pigments, Phosphorescent pigments, Fluorescent pigments and their suitability for different situations</p> <p>Other Smart and Modern materials as they become available.</p>
Environmental and sustainability issues	<p>Recognise and understand commonly used symbols and pictograms associated with environmental and recycling issues such as SPI symbols; Mobius loop; Mobius loop with a percentage; recycled cardboard symbol; green dot symbol; tidy man symbol</p> <p>Make best use of materials, components, equipment and resources, including time and energy.</p>

Tools and equipment	Knowledge and understanding of the basic graphics materials equipment; how to select the appropriate tool and use it safely and effectively.
Processes	Recognise, name and draw basic graphic shapes and developments such as triangles; quadrilaterals; pentagons; hexagons; octagons; ellipses.
Read, interpret and produce simple drawings	<p>Orthographic Projection – Different views of an item, the layout of views, dimensioning; the use of square grids</p> <p>Sectional Views – whole sections on the principal vertical and horizontal lines; cross hatching</p> <p>Assembly Drawings – to show how separate component parts join together to make a product; parts list</p> <p>Isometric Drawing – to include circles and part circles, isometric grids</p> <p>Perspective Drawing – one and two point perspective excluding circles and curves.</p>
Enhancement techniques - suggesting form and material	<p>Tone – apply an understanding of light and shade to enhance mass in pictorial drawing; to include the use of shading, highlights, reflections, lines and dots</p> <p>Thick and Thin Lines – to enhance pictorial drawings, create impact and make objects look more solid</p> <p>Texture – use basic textural representation to illustrate a variety of materials such as wood, plastics, glass, metal, brick, concrete/stone</p> <p>Select colours based on aesthetic considerations, an understanding of the colour wheel, making use of colour associations e.g. green for safety.</p>
Graphical interpretation of data	Be able to translate or transpose written data into a visual form.

## 2.2.3 Industrial Technology (R373)

### Industrial Technology Specification Content

Materials	<p>Metals and plastics in common use in workshops and the manufacturing industry</p> <p>Availability and selection of appropriate specific materials for particular applications in one-off and quantity production</p> <p>Market forms of materials; standard shapes and sizes of metal sections; sheet, powder and granular plastics.</p>
Performance characteristics of materials	<p>Properties and applications of ferrous metals and alloys – including mild steel, carbon steels, alloy steels and cast iron</p> <p>Properties and applications of non-ferrous metals and alloys- including aluminium, copper, tin, zinc, titanium, brass, bronze, aluminium alloys, hard and soft solders</p> <p>Properties and applications of thermoplastics – including ABS, polyethylene, polystyrene, PVC, nylon, acrylic, PET</p> <p>Properties and applications of thermosetting plastics – including GRP, urea formaldehyde, epoxy resins.</p>
The conversion or altering of materials into other usable forms	<p>Heat treatment of ferrous metals – annealing; case hardening of mild steel; hardening and tempering</p> <p>Work hardening and annealing of non-ferrous metals</p> <p>Combining metals to produce alloys with specific properties.</p>
Smart and Modern materials	<p>Including composites, polymorph, shape memory alloys and polymers, thermochromic and photochromic materials; properties and typical applications</p> <p>Recognise the impact made by Smart and Modern materials on the design and manufacture of products</p> <p>Be aware of other Smart and Modern materials as they become available.</p>
Pre-manufactured components used to make a product	<p>Candidates should be able to identify and suggest an application for a wide range of pre-manufactured components such as; temporary and permanent fastening devices, springs, gears, pulleys; standard sizes and common applications; practical and economic reasons for use.</p>

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## Tools and equipment

Basic equipment; how to select the appropriate hand and machine tools and equipment and use them safely and effectively

Tools and equipment used for measuring and marking out of metals and plastics

Tools used in workshops for wasting, forming, fabrication and finishing processes

The use of jigs, fixtures, templates and patterns to aid quantity production

Machine tools used in the workshop; construction and operating principles; recognition of machine parts and their application

Care and maintenance of tools and equipment

Checks on machines and equipment before use, including correct settings on machines such as lathes, milling machines and pillar drills.

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## Processes

Be aware of a range of processes used to make products from metals and plastics in the workshop and manufacturing industry, including:

Preparing, marking out, measuring and testing; using a rule, try square, callipers, dividers, scribe, punches and templates

Wasting; using methods such as sawing, filing, turning, milling, drilling, punching, shearing, threading, laser cutting

Forming processes for metals – forging, bending, casting (sand, die and investment), extrusion, presswork

Forming processes for plastics – line bending, vacuum forming, injection moulding, extrusion, blow moulding, compression moulding, laminating

Fabrication – assembly of component parts using temporary and permanent joining methods ; screw threads, standard components, clip-together mouldings, knock-down fittings, riveting, hard and soft soldering, welding

Finishing processes – self- finishing and applied surface finishes for protection and decoration including polishing, painting, plating, plastic coating

Process planning – stages involved in carrying out processes accurately and effectively.

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Computer applications

Use CAD packages for producing drawings and 2D / 3D images

Use on-screen modelling and manipulation of images

Use text, database and graphics software as appropriate

Store and share data electronically

Apply CAD / CAM as appropriate in the design and making of products

Knowledge of the use of computer control machines (CNC) including lathes, milling machines, routers, laser cutters.

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Quality

Understand the importance of quality in the design and making process

Recognise the fact that the quality of a product may be affected by the materials, components and processes used in making

Understand the importance of accuracy when making products

Be aware of simple quality control checks to ensure accuracy and quality of finish.

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## 2.2.4 Resistant Materials (R374)

### Resistant Materials Specification Content

Materials	Commonly used hardwoods, softwoods, manufactured boards, metals, plastics.
The finishing processes applied to Resistant Materials to improve performance and appearance	<p>Metal finishes – primers, paints (acrylic and cellulose), plating (chrome), dip coating</p> <p>Wood finishes – polyurethane and yacht varnish, primer, undercoat and gloss paints, stains, polishes, oils and wax</p> <p>Plastics – self-finishing and polishing</p> <p>Surface preparation for the application of a finish</p> <p>Understand the reasons for the use of specific finishes in particular applications</p> <p>The application of finishes by means of brush or spray.</p>
Smart and Modern materials	<p>Be aware of Smart and Modern materials as they become available</p> <p>Modern wood-based and metal-based materials, including 'flexiply' flexi veneer, 'Hexaboard', anodised aluminium sheet and alu composite sheet.</p>
Pre-manufactured components used to make a product	Candidates should be able to identify and select as appropriate to the task a wide range of pre-manufactured components such as; screws, nails, nuts and bolts, Knock Down fittings including single and two piece blocks, scan fitting, cam lock, leg plate and dowel, hinges, catches, knobs, locks.
Tools and equipment	<p>Knowledge and understanding of the basic equipment; how to select the appropriate tool and equipment and use it safely and effectively</p> <p>Awareness of alternative tools and equipment that can be used for the same task</p> <p>Safety checks to carry out on electrical equipment before use</p> <p>Checks on equipment before use including correct settings on machines such as lathes, milling machines and pillar drills.</p>

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Processes

Preparing, marking out, measuring and testing using a rule, try square, dividers, scribe, punches and templates

Wasting using hand methods such as sawing, drilling, chiselling, planing or using machines such as a router, jigsaw, centre lathe or milling machine

Deforming by means of laminating, bending, press moulding, vacuum forming, blow moulding and line bending

Fabricating using temporary methods such as screws, nuts and bolts and Knock Down fitting

Fabricating using permanent methods such as adhesive, with nail, dowel, halving, comb, butt, rebate, mortise and tenon, housing and mitre joints, braze, solder, pop rivet and weld

Understand the purpose and use as appropriate; jigs, fixtures, templates and patterns to control accuracy in the making of a product.

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Computer applications

Use of CAD packages as appropriate for producing drawings and 2D / 3D images

On-screen modelling and manipulation of images

Appropriate use of text, database and graphics software

Application of CAD / CAM in the designing and making process

Be aware of Computer Numerical Control of machines (CNC) such as lathes, milling machines, routers, laser cutters.

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Quality

Understand the importance of quality in the design and making process

Understand that the quality of a product may be affected by the materials, components and processes used in making

Understand the importance of accuracy when making products

Be aware of simple quality control checks to ensure accuracy and quality of finish.

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## 2.2.5 Textiles (R375)

### Textiles Specification Content

Materials	A basic knowledge and understanding of the use of materials commonly used in making Textile products including;
The origin and performance characteristics of fibres	Natural fibres such as cotton, flax, bamboo, wool and silk Regenerated cellulose fibres such as viscose Manufactured fibres such as polyester, acrylic and elastane.
The conversion of fibres into yarn and fabric and the performance characteristics of those fabrics	A basic knowledge and understanding of how fibres can be made into fabrics e.g. spinning, weaving, knitting, non-woven fabrics.
Mixing and blending of fibres and yarns, laminating and coating fabrics to improve the performance characteristics of the fabric produced.	
Smart and Modern materials	Be aware of: Modern materials such as Kevlar and breathable fabrics such as Gortex Materials which respond to changes in light, temperature and pressure Be aware of other Smart and Modern materials as they become available.
Pre-manufactured components used to make a textile product	Commonly used components such as threads and fastenings Decorative items, including appliqué motifs, ribbon, lace, braid, ric-rac, buttons and sequins.
Tools and equipment	Knowledge and understanding of the basic textiles equipment; how to select the appropriate tools and equipment and use it safely and effectively Awareness of alternative tools and equipment that can be used for the same task Safety checks to carry out on electrical equipment before use Checks on equipment before use including correct settings for sewing machines and irons.

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## Processes

A basic understanding of a range of processes used in the making of Textile items such as:

Use of patterns or templates to cut fabric to make products

Methods of transferring pattern

Temporary methods of joining

Permanent methods of joining fabrics by hand and machine

Different types of hand stitches that can be used for decorative purposes

Methods of neatening edges

Methods of attaching fastenings and other pre-manufactured components

Quality control checks used during the making of a product

Methods of colouring fibres and fabric and applying pattern, e.g. tie-dye, batik, block print, diffusing, transfer printing, using commercial pens and paints

Techniques using fabric and thread, including quilting, appliqué, computer controlled stitching, free style machine embroidery, and patchwork.

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## Computer applications

Use of CAD as appropriate for producing drawings and 2D / 3D images

On screen modelling and manipulation of images

Appropriate use of text, database and graphics software

Storing and sharing data electronically

Application of CAD / CAM / CIM in the designing and making process

Computer control of machines (CNC) including sewing and embroidery machines.

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## Quality

Understand the importance of quality in the design and making process

Understand that the quality of a product may be affected by the materials, components and processes used in making

Understand the importance of accuracy when making products.

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# 3 Assessment of Entry Level Certificate in Design and Technology

## 3.1 Overview of the assessment in Entry Level Certificate in Design and Technology

Entry Level Certificate in Design and Technology: Electronics R371

Entry Level Certificate in Design and Technology: Graphics R372

Entry Level Certificate in Design and Technology: Industrial Technology R373

Entry Level Certificate in Design and Technology: Resistant Materials R374

Entry Level Certificate in Design and Technology: Textiles R375

### Internally Assessed Task

100% of the total marks  
60 marks  
20-25 hours supervised  
assessment

Based upon a theme set by OCR.

Candidates generate a design proposal and plan. Then they design and make a product, and evaluate their work.

The task is internally assessed and externally moderated.

In addition to the 20 – 25hrs internal assessment, there should also be further teaching time to increase candidates' depth of knowledge and understanding and development of skills in preparation for the supervised internal assessment.

Course content will be delivered through a series of mini-tasks that will aim to increase candidates' depth of knowledge and understanding, and develop the necessary skills to complete a major project that will be submitted for final assessment.

## 3.2 Assessment Availability

There is one assessment series each year in June.

## 3.3 Assessment objectives

Candidates are expected to demonstrate the following in the context of the content described

<b>AO1</b>	<b>Recall, select and communicate</b> Recall and understand the knowledge defined in the specification content
<b>AO2</b>	<b>Apply knowledge, understanding and skills</b> Apply knowledge, understanding and skills in a variety of contexts and in designing and making products
<b>AO3</b>	<b>Evaluate</b> Evaluate products, including their design and production.

### 3.4 Assessment objective weightings

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The relationship between the qualification and the assessment objectives of the scheme of assessment is shown in the following grid

	% of Entry Level			Total
	AO1	AO2	AO3	
Design and Technology (R371/R372/R373/R374/R375)	23	67	10	100

### 3.5 Awarding of grades

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The grades awarded for the Entry Level Certificate will be at three levels: Entry 1, Entry 2 and Entry 3.

All marking criteria have been written to address the following target boundaries:

Specification grade	Entry 3	Entry 2	Entry 1
Target	80%	60%	40%

# 4 Regulations for internally assessed work

## 4.1 Internal assessment tasks

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The themes for internal assessment are set by OCR, and can be found in Appendix C of these specifications. Candidates **must** select **one** of the themes from their chosen material area(s). Starting points and example tasks are also provided. Centres are permitted to contextualise the starting points and the tasks appropriately to reflect centre resources and candidate interest, or to set their own task based around one of the themes.

## 4.2 Supervision and authentication of internally assessed work

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OCR expects teachers to supervise and guide candidates who are undertaking work that is internally assessed. The degree of teacher guidance will vary according to the kind of work being undertaken. It should be remembered, however, that candidates are required to reach their own judgments and conclusions.

When supervising internally assessed tasks, teachers are expected to:

- offer candidates advice about how best to approach such tasks;
- exercise supervision of the work in order to monitor progress and to prevent plagiarism;
- ensure that the work is completed in accordance with the specification requirements and can be assessed in accordance with the specified mark descriptions and procedures.

Work should, wherever possible, be carried out under supervision. However, it is accepted that some tasks may require candidates to undertake work outside the centre. Where this is the case, the centre must ensure that sufficient supervised work takes place to allow the teachers concerned to authenticate each candidate's work with confidence.

## 4.3 Production and presentation of internally assessed work

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Candidates must observe certain procedures in the production of internally assessed tasks.

- Tables, graphs and spreadsheets may be produced using appropriate ICT. These should be inserted into the portfolio at the appropriate place.
- Any copied material must be suitably acknowledged.
- Quotations must be clearly marked and a reference provided wherever possible.
- Work submitted for moderation or marking must be marked with the:
  - centre number
  - centre name
  - candidate number
  - candidate name
  - qualification code and title
  - task title.

Work submitted on paper for moderation must be secured by treasury tags. Work submitted in digital format (CD or online) must be in a suitable file structure as detailed in Appendix D at the end of this specification handbook.

## 4.4 Annotation of candidates' work

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Each piece of assessed work should show how the marks have been awarded in relation to the mark descriptions.

The writing of comments on candidates' work provides a means of dialogue and feedback between teacher and candidate and a means of communication between teachers during internal standardisation of internally marked work.

However, the use of a completed cover sheet for each candidate's work provides a means of communication between teacher and Moderator and might replace the need for annotation.

## 4.5 Marking and moderation

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All centres entering candidates are subject to quality control via moderation of a sample of candidates' work towards the end of the course. These specifications offer the opportunity for moderation evidence to be submitted by post as well as electronically via the OCR Repository (see Entry codes in Section 7.1 Registration and entries).

All internally assessed tasks are marked by the teacher and internally standardised by the centre. Marks are then submitted to OCR, after which moderation takes place in accordance with OCR procedures. The purpose of moderation is to ensure that the standard of the award of marks for work is the same for each centre and that each teacher has applied the standards appropriately across the range of candidates within the centre.

The **Moderator** will select the sample and advise the centre where the work is to be sent (postal moderation). Centres entering candidates via the OCR Repository must ensure that the sample is uploaded on receipt of the Moderator's selection.

The sample of work that is presented to the Moderator for moderation must show how the marks have been awarded in relation to the marking criteria.

Each candidate's work should have a cover sheet attached to it with a summary of the marks awarded for the task. If the work is to be submitted in digital format, this cover sheet should also be submitted electronically within each candidate's folder.

## 4.6 Minimum requirements for internally assessed work

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If a candidate submits no work for an internally assessed task, then the candidate should be indicated as being absent from that task on the mark sheets submitted to OCR. If a candidate completes any work at all for an internally assessed task, then the work should be assessed according to the criteria or mark scheme and the appropriate mark awarded, which may be zero.

## 4.7 Submitting the moderation samples via the OCR Repository

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The OCR Repository allows centres to submit moderation samples in electronic format via Interchange. Please check the Entry codes in Section 7.1 of this specification handbook. Instructions for how to upload files using the OCR Repository can be found on OCR Interchange.

# 5 Support for Entry Level Certificate in Design and Technology

## 5.1 Free resources available from the OCR website

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- Entry Level Certificate in Design and Technology Specification
- Teacher's Handbook.

## 5.2 Training

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- For more information go to [www.ocr.org.uk/training](http://www.ocr.org.uk/training)

## 5.3 OCR Support Services

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### OCR Interchange

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OCR Interchange has been developed to help you to carry out day to day administration functions online, quickly and easily. The site allows you to register and enter candidates online. In addition, you can gain immediate free access to candidate information at your convenience. Sign up at <https://interchange.ocr.org.uk>.

## 6 Access arrangements for Entry Level Certificate in Design and Technology

Arrangements for candidates with special needs for Entry Level Certificate specifications are based on the principle that the centre is best able to assess the needs of the candidate and the appropriateness of the arrangement required. Arrangements for candidates with special needs should not advantage nor disadvantage a particular candidate, nor should they reduce the reliability and validity of the assessment.

The arrangements for candidates with special needs are more flexible than those currently available at GCSE and as such it should not be assumed that any arrangements made at Entry Level will automatically be available at GCSE or GCE Level. Please consult the JCQ booklet *Access Arrangements, Reasonable Adjustments and Special Consideration*. Entry Level Forms are available on the JCQ website (Forms 11-13).

The following arrangements can be made for candidates without permission being sought:

- mechanical and technological aids may be used by candidates who are physically dependent on them; (screen readers must not be used in reading tests);
- language support staff may provide linguistic help; (please see regulations relating to readers and scribes, sign language and oral language modifiers);
- bilingual and word exchange lists may be used.

For information relating to permission to use the following special arrangements, please consult the JCQ booklet *Access Arrangements, Reasonable Adjustments and Special Consideration*.

Under certain circumstances:

- the teacher may act under the candidate's instructions to perform simple physical actions which the candidate is unable to undertake. The skills being tested are practical. A practical assistant may hold or set up equipment or pass items to the candidate but must not perform skills for which marks are being credited; (please see regulations on the use of practical assistants);
- mechanical and technological aids may be used by candidates who generally use them in their normal work; (for screen readers, please see regulations relating to readers);
- communicators or signers may be used;
- readers and amanuenses may be used;

It is expected that, generally, the candidate's own teacher will act as a communicator, a signer, a reader or an amanuensis.

Further clarification of any special arrangements may be obtained by consulting the JCQ booklet *Access Arrangements, Reasonable Adjustments and Special Consideration* or by contacting the OCR Special Requirements Team.

# 7 Administration of Entry Level Certificate in Design and Technology

## 7.1 Registration and entries

Centres must be registered with OCR in order to make any entries, including estimated entries. It is recommended that centres apply to OCR to become a registered centre well in advance of making their first entries.

Both estimated and final entries must be made in the certification year. Estimated entries, giving estimated numbers only, are needed for the appointment of the centre Moderators and final entries provide the necessary individual candidate details.

Candidates should be entered for one or more of the qualification codes below:

- Design and Technology: Electronics R371
- Design and Technology: Graphics R372
- Design and Technology: Industrial Technology R373
- Design and Technology: Resistant Materials R374
- Design and Technology: Textiles R375

**It is essential** that entry codes are quoted in all correspondence with OCR.

For this qualification candidates must be entered for either component 01 (electronic submission via the OCR Repository) or 02 (postal moderation). Centres must enter all of their candidates for ONE of these components. It is not possible for centres to offer both components within the same series.

Entry option code	Component code	Submission method
R371A/R372A/ R373A/ R374A/ R375A	01	<i>OCR Repository</i>
R371B/R372B/ R373B/ R374B/ R375B	02	<i>Postal moderation</i>

## 7.2 Entry deadlines

Candidate entries must be made by the dates published on the OCR website.

## 7.3 Grading and award of certificates

Final certification is available from OCR on a three-point scale of grades: Entry 1, Entry 2 and Entry 3, where Entry 3 is the highest grade available.

## 7.4 Qualification re-sits

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Candidates may enter for the qualification an unlimited number of times.

## 7.5 Enquiries about results

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Under certain circumstances, a centre may wish to query the result issued to one or more candidates. Enquiries about results units must be made immediately following the series in which the qualification was taken (by the enquiries about results deadline).

Please refer to the *JCQ Post-Results Services* booklet and the *OCR Admin Guide* for further guidance about action on the release of results. Copies of the latest versions of these documents can be obtained from the OCR website.

## 7.6 Restrictions on candidate entries

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Candidates may not make more than one entry for a particular specification code, e.g. Resistant Materials (R374), in a given examination series. However, candidates may be entered for more than one Entry Level Design and Technology specification code in a given examination series.

They may, however, also enter for any GCSE, NVQ or equivalent qualification.

# 8 Other information about Entry Level Certificate in Design and Technology

## 8.1 Overlap with other qualifications

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There is no significant overlap between the content of these specifications and those for other Entry Level qualifications.

There is some overlap of content with the OCR GCSE Design and Technology Innovator Suite, although the assessment requirements are different.

## 8.2 Progression from this qualification

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These Entry Level qualifications are general qualifications designed to enable candidates to progress either directly to employment or to Foundation Level courses.

The progress of some candidates during the course might be sufficient to allow their transfer to a Design and Technology GCSE course.

## 8.3 Avoidance of bias

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OCR has taken great care in preparation of this specification handbook and assessment materials to avoid bias of any kind.

## 8.4 Regulatory requirements

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The specifications comply in all respects with *The Statutory Regulation of External Qualifications 2004*.

## 8.5 Language

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The specifications and associated assessment materials are in English only.

## 8.6 Spiritual, moral, ethical, social, legislative, economic and cultural issues

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The specifications offer opportunities which can contribute to an understanding of these issues in the following topics:

- Imaginative and creative activity in their own practical assessed task and developing an appreciation of the imagination and creativity of others in design technology
- Moral, cultural, economic, environmental and sustainability issues inherent in design and technology. Please see section 2.1 of this specification handbook for further details
- The moral implications of some applications of technological activities
- The relationship between cultures and societies, the influence they have on designing and making, and the impact that products have on lifestyle
- The role of the technology in the context of national and European citizenship.

There are no direct references to spiritual issues within these specifications. However, opportunities may exist to explore this area through the designing and making of products that relate to a religious or spiritual context.

## 8.7 Sustainable development, health and safety considerations and European developments, consistent with international agreements

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The specifications support these issues, consistent with current EU agreements, in the following topics:

- Design and technology activities are global and not solely restricted to Europe. Design and making responses are multicultural and arise from identifiable needs and opportunities. These specifications do not make specific reference to European developments; however, they may be drawn into the course of study in many ways, e.g. European Safety Standards
- Emerging and existing technologies in other European countries and the world
- Ways in which economic, environmental, ethical and social dimensions interact to influence designing and making
- Health and safety when working with tools, equipment, components and materials
- Sustainability in making decisions and combining skills with knowledge and understanding in order to design and make quality products.

OCR has taken account of the 1988 Resolution of the Council of the European Community in preparing these specifications. European examples should be used where appropriate in the delivery of the subject content.

## 8.8 Key Skills

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The specifications provide opportunities for the development of the Key Skills of *Communication (C)*, *Application of Number (AoN)*, *Information Technology (IT)*, *Working with Others (WwO)*, *Improving Own Learning and Performance (IOLP)* and *Problem Solving (PS)* at Level 1. However,

the extent to which this evidence fulfils the Key Skills criteria at these levels will be totally dependent on the style of teaching and learning adopted.

The following table indicates where opportunities may exist for at least some coverage of the various Key Skills criteria at Level 1.

	C	AoN	IT	WwO	IOLP	PS
	1	1	1	1	1	1
R371/R372/R373/ R374/R375	✓	✓	✓	✓	✓	✓

## 8.9 Citizenship

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Since September 2002, the National Curriculum for England at Key Stage 4 has included a mandatory programme of study for Citizenship. Parts of the programme of study for Citizenship (2007) may be delivered through an appropriate treatment of other subjects.

There are opportunities for developing knowledge, skills and understanding of citizenship issues during this course.

# Appendix A: Internal assessment teacher guidance

Candidates will need to cover all of the following areas:

- The task will involve the candidates in the identification of a suitable design opportunity
- Show some response to a design brief
- Produce a basic specification for the product
- Communicate the development of design ideas using notes, annotated drawings, CAD as appropriate
- Make decisions about the choice of the final design
- Use appropriate modelling, trialling and testing to aid product development
- Show evidence of a contribution to planning and the selection of appropriate materials, components, equipment and processes
- Demonstrate an ability to work appropriately and safely with tools, equipment, materials and components
- Use suitable processes to shape, form, assemble and finish materials and components in order to make the final product
- Contribute to recognising and resolving problems in the designing and making process
- Simple testing and evaluation of the success of the final product considering the following;
  - Design decisions
  - Choice of materials and components
  - Processes used in the making of the product
  - Does it meet the specification / needs of the user?
  - Does it work as intended?
  - Suggest any modifications as appropriate to the design and making of the product.

Candidates should record the key stages in the development, making and evaluation of the product using a variety of media that could include sketches, drawings, notes, digital images/photographs, ICT, CAD/CAM.

Candidates must use appropriate ICT to help with their work, including CAD/CAM, control programs, and ICT based sources for research and design relevant to the task.

If the portfolio is presented on paper, A4 or A3 size is acceptable. Digital images/photographs must be included of any models or mock-ups used by the candidate when designing, modelling or testing. A minimum of two digital images/photographs should be included showing front and back views of the final product in use.

It is not expected that the final product will accompany the portfolio for the external moderation process. However the final product must be available should further evidence be required or if visiting moderation takes place as part of monitoring.

# Appendix B: Marking criteria for internal assessment

ASSESSMENT CRITERIA	LEVEL OF RESPONSE	MARK RANGE	TOTAL
<b>DESIGN AND CREATIVITY (AO1)</b> Candidates will need to : <ul style="list-style-type: none"> <li>recognise a design opportunity or need</li> <li>produce suitable ideas to satisfy a design brief</li> <li>develop design ideas</li> <li>identify a final design solution</li> <li>contribute to a product specification</li> </ul>	<ul style="list-style-type: none"> <li>Some recognition of a design need or opportunity</li> <li>Has proposed a suitable idea/s in response to a given design brief</li> <li>Has made a basic contribution to a product specification.</li> </ul>	1  1  1 – 2	0-4
	<ul style="list-style-type: none"> <li>Some detail given of a design need or opportunity.</li> <li>The proposed idea/s include some detail.</li> <li>Some development of design ideas, to include modelling where appropriate</li> <li>Contributes to a product specification which identifies some key points.</li> </ul>	2  2  3  3	5-10
	<ul style="list-style-type: none"> <li>Clear details of a design need or opportunity .</li> <li>Clear evidence of detail given about the proposed design idea /s.</li> <li>Clear evidence of development of ideas to include modelling where appropriate</li> <li>Has provided clear evidence of contribution to a more detailed design specification.</li> </ul>	3  3  4  4	11-14
	Mark (out of 14)		

ASSESSMENT CRITERIA	LEVEL OF RESPONSE	MARK RANGE	TOTAL	
<p><b>MAKING</b></p> <p><b>(AO2)</b></p> <p>Candidates will need to :</p> <ul style="list-style-type: none"> <li>contribute to a plan of making</li> <li>select and use suitable materials, tools, equipment, components &amp; processes</li> <li>work appropriately and safely with tools, equipment, materials &amp; components.</li> <li>recognise possible problems in the designing &amp; making process and suggest solutions</li> <li>make a product to meet a design need.</li> </ul>	<ul style="list-style-type: none"> <li>Some record of activity undertaken</li> <li>With frequent guidance selects materials, tools and equipment</li> <li>With close supervision can carry out some processes</li> <li>Limited application of safe working practices</li> <li>The product is attempted but is of very low standard and is not completed.</li> </ul>	<p>2</p> <p>2</p> <p>2</p> <p>1</p> <p>3</p>	0-10	
	<ul style="list-style-type: none"> <li>Evidence of some contribution to planning as a result of prompting</li> <li>With some guidance selects materials, tools and equipment</li> <li>With some guidance has used basic skills and techniques</li> <li>Some recognition of possible problems</li> <li>Reasonable application of safe working practices</li> <li>The product is of a low standard but will be mainly complete.</li> </ul>	<p>2 – 3</p> <p>3 – 4</p> <p>3 – 4</p> <p>2</p> <p>2</p> <p>4 - 7</p>	11-22	
	<ul style="list-style-type: none"> <li>Clear evidence of a contribution to planning</li> <li>With limited guidance selects materials, tools and equipment</li> <li>With limited guidance has used a range of skills and techniques appropriate to the task</li> <li>Some recognition of possible problems and can suggest possible solutions</li> <li>Works safely most of the time</li> <li>The product will be of a reasonable standard and will be mainly complete.</li> </ul>	<p>4 – 5</p> <p>5 – 6</p> <p>5 – 8</p> <p>3 – 4</p> <p>3</p> <p>8 - 14</p>	23-40	
	Mark (out of 40)			

ASSESSMENT CRITERIA	LEVEL OF RESPONSE	MARK RANGE	TOTAL
<p><b>EVALUATE (AO3)</b></p> <p>Candidates will need to:</p> <ul style="list-style-type: none"> <li>use the product for its intended purpose to test its suitability</li> <li>evaluate the product against its fitness for purpose and original design opportunity or need.</li> <li>suggest some development of the product.</li> </ul>	<ul style="list-style-type: none"> <li>Simple comment/s made with some reference to materials, tools, equipment and/or processes</li> </ul>	1	0-2
	<ul style="list-style-type: none"> <li>Minimal evidence of testing the product.</li> </ul>	1	
	<ul style="list-style-type: none"> <li>Some comments made with reference to some aspects of choice of materials, tools, equipment and /or processes</li> <li>Evidence of some testing of the product with some comment on its fitness for purpose.</li> </ul>	2	3-4
	<ul style="list-style-type: none"> <li>Evidence of some testing of the product with some comment on its fitness for purpose.</li> </ul>	2	
	<ul style="list-style-type: none"> <li>Some relevant comments made with reference to materials, tools, equipment and / or processes</li> <li>Clear evidence of testing the product with some comment on its fitness for purpose/ meeting the design need, and includes a suggestion for some development of the product.</li> </ul>	3	5-6
		3	
Mark (out of 6)			
<b>Total mark out of 60</b>			

# Appendix C: Internal assessment themes and suggested tasks

Candidates select **one** task from the themes listed for their chosen material area(s). The tasks below serve as examples and can be adapted in order to suit centre specific circumstances. Alternatively, a task that is not listed in this specification may be chosen, as long as it conforms to one of the themes.

## Electronics (R371)

Themes	Starting Point	Examples of Tasks
Security	Alarms can be used to protect a wide range of items.	Alarm for sports bag activated by any movement of the bag.  Cupboard alarm activated by the door being opened.  Cycle alarm set off if the bike is moved.
Music	Investigate a range of personal stereo amplifiers.	A group of friends would like to be able to listen together to the music on an MP3 player, but headphones won't allow this. The product must be small and inexpensive.
Lighting	When camping a battery powered lamp may be required to illuminate the tent. The majority of these lamps are expensive on battery power.  LED technology has allowed lighting to be produced which consumes less battery power.	Make a lamp suitable for lighting a tent at night. The lamp should use LED technology.
Lighting	Some young children are afraid of the dark.	Make a small light for a child's bedroom that would come on for a limited period of time and which may or may not operate automatically as the natural light levels fall.
Sport	Look into the popularity of fishing as a pastime and identify products which indicate when a fish has taken bait.	Many types of bite indicators are available but it is essential that students restrict the trigger mechanism to one which recognises movement of the line in the simplest way.

Themes	Starting Point	Examples of Tasks
Sports timer	Training for sport could be helped by the use of electronics.	Produce a device that would act as a simple timer device during training or sports activities.
Sound	Electronic circuits can be made to produce a variety of sounds / noises.	Sound can make toys more interesting. Produce a toy that makes use of sound.
Electronic aids	There are many situations where electronic aids are used to assist people in the home.	Visually impaired people often have difficulty filling drink containers to the correct level. Make a product that could be used to assist with this task.
Numbers	Investigate how random numbers can be generated electronically.	Produce a device that will give a random yes / no answer when the user is faced with a decision.  Design and make a game which involves the production of random numbers.
Safety	There are many examples of situations and activities where knowing a set temperature can be important.	The temperature of bath water for babies, young children and the elderly is very important. Produce a device that will indicate when the temperature of the water is at a safe level.

## Graphics (R372)

Themes	Starting Point	Examples of tasks
Promotional Items	Items such as calendars, pop-up cards, stickers, and posters are frequently used as giveaways to promote a significant event, concert / theatre / film promotion.	Investigate promotional items for a given event or film and make an item suitable as a free giveaway.
Corporate Identity	A business or company can often be recognised by their brand logo, colour scheme etc which can be used on business cards, letterheads, promotional items, corporate gifts, and bags / packaging.	Explore, design and present ideas for a brand identity of a new business of your choice such as a restaurant/ sports, games or toy shop.
Signs and Display	Signs that give information, directions and other details are useful and sometimes essential to the general public.	Produce a small range of unusual signs for an exhibition or local tourist destination.
Travel and Tourism	When people visit a tourist destination or attraction they are frequently given or can buy a pack which can include items such as tickets, brochures, emergency situation instructions, visitor centre information, and maps to guide them around.	Produce a visitor centre information pack and map, to be used by children visiting a tourist destination.
Retail Environment	Manufacturers, retailers and consumers are becoming increasingly aware of ethically produced goods such as Fairtrade products.	A new ethically produced range of goods is to be introduced. Design and make suitable items to promote the launch, such as posters to advertise the event and packaging.
Visual Communication	Wordless signs can be understood in any language/culture. This could be visual instructions for emergency situations such as the evacuation of a building or pictorial instructions for completing a specific task such as washing and drying hands.	Design and make signs or instructions which can be used in an airport or by an airline.
Food and Drink	Items used as packaging and labelling can be designed to be flat packed for ease of storage or transport. These include fast food/convenience packaging, wraparound labels, cartons, drink/food carriers and disposable cup sleeves.	Design and make attractive and novelty packaging for a local restaurant or take-away.

Themes	Starting Point	Examples of tasks
Education	Visual aids can be very useful for primary school children to teach them about the world around them and to aid the development of language skills.	Design and make a poster or set of cards on the theme of environment or recycling.
Promotional Mobile	A '3D Mobile' is a novelty item which can be used to promote and / or raise awareness of a specific organisation or issue.	Design and make a novelty mobile to promote and / or raise awareness of an organisation or issue of your choice.
Packaging	Packaging is important to consider when selling products. It can be used to advertise, promote and protect goods.	Design and make an attractive package for a three dimensional product such as a bottle of perfume.
'Press-out' Model	'Press out' models that can be assembled without the use of adhesives or scissors can often be found in books and gift shops.	Design and make a 'press out' model which can be constructed by slotting the parts together.
Exhibition Stands	At exhibitions, companies or organisations try to attract the public to their stand.	Produce a model of an exhibition stand for a stated company or product.
'Pop-up' Book	Books for children often incorporate a range of different and interesting 'pop-up' mechanisms to make them more appealing.	Produce a 'pop-up' book on a given topic or theme to appeal to children.
Point of Sale Display	Eye-catching displays are frequently located at the sales counter in stores in order to promote a new product or increase sales of an existing product.	Design and make a counter top point of sale display for a stated product.
Flat pack Carrying Aids	A flat pack carrying aid can allow more than one potentially difficult item to be carried easily in one hand.	Design and make an aid for carrying multiple drinks from a hot drinks machine.
Greetings cards	Greetings cards are used on many different occasions such as birthdays and important times in our lives.	Design and produce a suitable idea for a card to mark a special occasion.

# Industrial Technology (R373)

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Themes	Starting Point	Examples of Tasks
Recycling and Sustainability	<p>Many materials and components can be re-used and there is a growing industry that recycles for environmental purposes.</p> <p>In a school situation some processes can be easily demonstrated, especially with some metals, thermoplastics and paper.</p>	<p>Collect old aluminium drink cans, melt down and produce a small simple ornament or trophy using discarded expanded polystyrene in a lost wax process.</p> <p>Using discarded paper that you have shredded and pulped, produce a variety of coloured papers with possibly different textures / various thicknesses. Evidence should show the process of making the papers.</p>
Mechanisms	<p>Machines come in many forms. They can reduce the costs of manufacture to industry, make life easier at home and outside and provide entertainment. Our lives revolve around machines and mechanical advantage.</p>	<p><u>Moving Toy</u></p> <p>Investigate simple mechanical toys and produce a basic mechanical novelty toy that has movement in it. The toy could use one or perhaps two forms of motion, (from rotary, linear, oscillating and reciprocating).</p> <p>Evidence should show the development of the model by the candidate.</p> <p><u>Mechanical advantage tools</u></p> <p>Produce a simple tool that could be used by a person with limited strength in their hands. The tool could assist them in carrying out basic everyday tasks, for example, turning taps on and off.</p>
Batch Production	<p>For economies in industrial production, time, money and labour are the most expensive parts. To make products viable usually requires large quantities of items to be produced. Companies produce their own 'tooling' to achieve an outcome as quickly as possible.</p> <p>Jigs, templates and formers are vital in that process.</p>	<p><u>Bending JIG</u></p> <p>A device for bending batches of hooks made from 1.5 mm thick aluminium strips with a suitable sized hole drilled in one end.</p> <p><u>Templates</u></p> <p>Produce a simple balsa wood or cardboard glider by creating a set of 3 marking out templates that can be re-used for marking out the fuselage, wings and horizontal stabilisers.</p>

Themes	Starting Point	Examples of Tasks
		<p><u>Vacuum forming</u></p> <p>Produce a simple novelty re-useable jelly or blancmange mould to produce a jelly for a children's party.</p> <p>Produce a simple novelty mould that could be used by children playing in a sand pit to create shapes with damp sand, for examples sandcastles, car / boat shapes.</p> <p><u>Press forming</u></p> <p>Produce forming moulds to press form 3mm thick acrylic to:-</p> <p>a) Produce a cereal bowl and spoon suitable to be used for camping or caravanning</p> <p>or</p> <p>b) Produce a simple shallow "multi-compartment" savoury dish/ tray for a variety of 'nibbles'/'finger foods' to be used at a party</p> <p><u>Injection moulding die</u></p> <p>Produce a die for producing plastic novelty shapes such as key rings or in the making of fridge magnets. The die must be self-contained and include a means of clamping the parts together whilst the plastic is injected. The die should be capable of producing batches of the novelty shapes.</p>

## Resistant Materials (R374)

Theme	Starting Point	Examples of tasks
My Environment	A product of personal value or interest.	Design and make a product which is of personal interest or for a family member.
Gardens	Gardening is a popular pastime, from window boxes, tubs, containers as well as larger garden space.	A garden centre is launching a range of products suitable for a small garden. Design and make a product that can be both useful and attractive.
Adornment	Body adornment items continue to be popular with people of all ages.	Design and make an item of jewellery which expresses your creativity and individuality.
Charities	Products are used to help charities in their work.	Design and make a product which could be used by a local charity as an item to assist in fundraising.
Mechanisms	Mechanical toys continue to provide interest, humour and fascination for people of all ages.	Design and make a simple toy which includes moving parts.
Music	Mobles and wind chimes are designed to be visually attractive and help to reduce the stress of modern living.	Design and make a product making comforting sounds.
Home	There are many products in the home that can be purely decorative or serve a given purpose.	Design and make a photograph frame or mirror frame.
Celebrations	Celebrations often include decorations, awards, trophies and/or commemorative items.	Design and make a trophy or award that may be awarded to a teenager for taking part in a school or local activity.
Travel	There are many modes of transportation in modern society.	Produce a wooden/metal model of a vehicle, such as a train or a bus.
Sustainability	Many materials and components can be re-used. These include metals and thermoplastics.	Use materials from existing products, such as aluminium, to design and make new products.

<b>Theme</b>	<b>Starting Point</b>	<b>Examples of tasks</b>
Blast from the Past	Many products are updated as technology improves.	Using an old toy robot or car, produce an updated version of the same toy using resistant materials.
Sport	Many sports use instruments to assist play.	Design and make a set of cricket stumps.
Lighting	Designs for lighting systems/products use low energy bulbs.	Design and make a decorative low voltage lamp for a teenager.
Toys	'Sit on' or 'Push along' toys are very popular with young children. They can help to develop balance and co-ordination.	Design and make a cart using different materials. Design to be suitable for 3 – 8 year olds.
Outdoors	There are many products that are designed for outdoor activities such as camping.	Design and make a product suitable for outdoor living which could be used when camping or having a barbecue.
Displays	Display products are used commercially and non-commercially for a variety of purposes.	Design and make a small display unit that will allow a collector to display their collectable items safely.
Storage	Storage of items can often be a problem in the home and garden/garage/shed.	Design and make a CD or DVD storage rack.  Design and make an unusual money storage system to encourage children to save money

## Textiles (R375)

Themes	Starting Point	Examples of Tasks
Modern Design	There are many designers and fibre artists who have explored new ways of using fibres, textiles, skills and techniques.	Look at the work of a modern designer or textile artist such as Jan Messant and use similar skills and methods, or use as your inspiration to make a textile item.
Soft Toys	Soft toys can provide comfort for a young child and can encourage their development through creative play.	Make a soft toy for a young child.
Travel	Textile products can be used for personal wear as well as accessories such as bags.	Design and make a textile item which can be used 'on the move' or on holiday.
Eco-Friendly and Sustainability	Designers, manufacturers and consumers are becoming increasingly aware of the need to consider the impact on the environment when selecting designs, materials, processes and products.	Explore the use of natural dyes to dye natural fabric / fibres during the making of a textile product.  Make a textile product using materials from a sustainable source such as cotton, jute or wool.
Recycling	Recycling of textile items is an ever popular trend within society in order to make further useful textile products.	Use an old pair of jeans or other garment and make another textile product from it such as a cushion or bag.  Use recycled pre-manufactured components such as buttons, beads, lace and sequined motifs during the making of a textile item.
Traditional Techniques	There are a wide range of traditional textile skills and techniques that have been used in the past and continue to be used in the making of textile products.	Investigate one or more traditional skills or techniques and use in the making of a textile item.
Texture and Pattern	There are many ways of adding texture and pattern to fabric or to a textile product to add interest.  Nature is often an inspiration to designers.  The texture of a textile product can be very important to sensory impaired users.	Explore ways of adding texture and pattern to fabric and then make a textile product using one or more methods.  Look at patterns in the natural world and be inspired by them when designing and making a textile product.

Themes	Starting Point	Examples of Tasks
Celebrations	Textiles and textile products often play an important part when commemorating an event or when celebrating an event.  They can be used in making gift items.	Design and make a textile product to commemorate an event or to use when celebrating an event / give as a gift.
Culture	Textile products often express cultural roots both past and present.	Look at designs and patterns evident in an identified culture or period in history. Use as your inspiration when designing and making a textile product.
Historical Inspiration	Clothing, accessories, furnishings and products from the past can, and have often, inspired designers.	Look at fashion and textiles from a period in history. Design and make a textile item which reflects some aspect of fashion or textile design from the past.

# Appendix D: Guidance for the production of electronic internal assessment

## Structure for evidence

An internal assessment portfolio is a collection of folders and files containing the candidate's evidence. Folders should be organised in a structured way so that the evidence can be accessed easily by a teacher or Moderator. This structure is commonly known as a folder tree. It would be helpful if the location of particular evidence is made clear by naming each file and folder appropriately and by use of an index called 'Home Page'.

There should be a top-level folder detailing the candidate's centre number, candidate number, surname and forename, together with the unit code for the specification(s) chosen, so that the portfolio is clearly identified as the work of one candidate.

Each candidate produces an assignment for internal assessment. The evidence should be contained within a separate folder within the portfolio. This folder may contain separate files.

Each candidate's internal assessment portfolio should be stored in a secure area on the Centre's network. Prior to submitting the internal assessment portfolio to OCR, the centre should add a folder to the folder tree containing internal assessment and summary forms.

## Data formats for evidence

In order to minimise software and hardware compatibility issues it will be necessary to save candidates' work using an appropriate file format.

Candidates must use formats appropriate to the evidence that they are providing and appropriate to viewing for assessment and moderation. Open file formats or proprietary formats for which a downloadable reader or player is available are acceptable. Where this is not available, the file format is not acceptable.

Electronic internal assessment is designed to give candidates an opportunity to demonstrate what they know, understand and can do using current technology. Candidates do not gain marks for using more sophisticated formats or for using a range of formats. A candidate who chooses to use only Word documents will not be disadvantaged by that choice.

Evidence submitted is likely to be in the form of word processed documents, PowerPoint presentations, digital photos and digital video.

To ensure compatibility, all files submitted must be in the formats listed below. Where new formats become available that might be acceptable, OCR will provide further guidance. OCR advises against changing the file format from that in which the document was originally created in. It is the centre's responsibility to ensure that the electronic portfolios submitted for moderation are accessible to the Moderator and fully represent the evidence available for each candidate.

## Accepted File Formats

### Movie formats for digital video evidence

MPEG (\*.mpg)

QuickTime movie (\*.mov)

Macromedia Shockwave (\*.aam)

Macromedia Shockwave (\*.dcr)

Flash (\*.swf)

Windows Media File (\*.wmf)

MPEG Video Layer 4 (\*.mp4)

### Audio or sound formats

MPEG Audio Layer 3 (\*.mp3)

### Graphics formats including photographic evidence

JPEG (\*.jpg)

Graphics file (\*.pcx)

MS bitmap (\*.bmp)

GIF images (\*.gif)

### Animation formats

Macromedia Flash (\*.fla)

### Structured markup formats

XML (\*.xml)

### Text formats

Comma Separated Values (.csv)

PDF (.pdf)

Rich text format (.rtf)

Text document (.txt)

### Microsoft Office suite

PowerPoint (.ppt)

Word (.doc)

Excel (.xls)

Visio (.vsd)

Project (.mpp)