



Kingdom of Lesotho  
Ministry of Education and Training

# LESOTHO GENERAL CERTIFICATE OF SECONDARY EDUCATION

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## Lesotho General Certificate of Secondary Education Syllabus

Design and Technology

**0189**

For examination in November 2020

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**National Curriculum Development Centre**  
in collaboration with  
**Examinations Council of Lesotho**



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## **1. Introduction**

### **1.1. Rationale**

Lesotho General Certificate of Secondary Education (LGCSE) Design and Technology syllabus enables learners to identify, consider and solve problems through creative thinking, planning and design and by working with different media, materials and tools and understand how these skills can be used. Through this syllabus, learners gain technical and design awareness, develop skills such as initiative, innovation, resourcefulness, enquiry and ingenuity. They also develop the communication skills central to design making and evaluation.

LGCSE syllabus is designed to support learners in becoming;

- confident in working with information and ideas – their own and those of others
- responsible for themselves, responsive to and respectful of others
- reflective as learners, developing their ability to learn
- innovative and equipped for new and future challenges
- engaged intellectually and socially, ready to make a difference

The LGCSE syllabus places emphasis on broad and balanced study across a wide range of subject areas. The syllabus is structured so that candidates attain both practical skills and theoretical knowledge.

Candidates following this syllabus focus on problem-solving design activities which involve practical, manipulative work using a range of materials. As a result, they learn about:

- Design and graphics.
- The use of different materials (plastics, wood and metals).
- The practical processes involved in workmanship and construction.

Candidates also learn about the possible hazards associated with practical workshop activities, thereby encouraging safe working habits

### **1.2. Availability**

This syllabus will be examined in the October /November examination session.

It is not available to private candidates.

### **1.3. Equity and inclusion**

Disabled candidates may be able to complete this syllabus provided facilities are available for them.

### **1.4. Combining with other syllabuses**

This syllabus cannot be taken with:

6043 Cambridge O'Level Design and Technology

0445 Cambridge IGCSE Design and Technology

7048 Cambridge O' Level CDT Design and Communication

## 2. Syllabus aims and objectives

### 2.1. AIMS

The syllabus aims to;

- promote problem-solving activity
- develop appropriate technical skills to enable the realisation of solutions to design problems knowledge using a range of materials and the appropriate technical and manipulative skills
- develop an understanding of some aspects of technological activity
- develop appropriate graphical skills to enable full engagement in design activity
- develop awareness of possible hazards associated with practical workshop activities and to encourage habits of safe working
- develop an awareness of Lesotho heritage and culture

### 2.2. Assessment objectives

Candidates should be able to:

#### **AO1** Investigate, research, identify and define design problems

- Identify clearly, from a problem situation, a specific need for which a solution is required.
- Define and analyse a problem by considering any relevant functional, aesthetic, human, economic and environmental factors.
- Investigate research, collect and record relevant information.

#### **AO2** Apply knowledge to new situations

- Demonstrate the ability to apply previously learned knowledge to solve problems or provide solutions.
- Exercise judgement relating to appropriate functional, technological and aesthetic factors.

#### **AO3** Explore and develop ideas

- Develop ideas towards a final solution.

#### **AO4** Formulate production plans and manufacture artefacts

- Plan and organise the work procedures and processes involved in the realisation of a solution.
- Realise a solution in appropriate material(s), using suitable techniques.
- Demonstrate knowledge of materials, by showing an understanding of their characteristics in relation to using appropriate techniques and processes.
- Demonstrate safe working practices

#### **AO5** Understand technological and cultural responsibilities

- Demonstrate knowledge and awareness of the supporting technologies.
- Increase awareness of the environment and culture of Lesotho

#### **AO6** Evaluate performance

- Evaluate design ideas, test and evaluate design solutions.

#### **AO7** Communicate effectively

- Demonstrate ability to use various media and techniques to communicate information.

### 2.3. Assessment Objectives across papers

The approximate weightings allocated to each of the assessment objectives are summarised below.

Assessment Objective	Paper 1	Paper 2	Weighting for qualification
AO1 Investigate, research, identify and define design problems	5%	7.5%	12.5%
AO2 Apply knowledge to new situations	22.5%	7.5%	30%
AO3 Explore and develop ideas	2.5%	7.5%	10%
AO4 Formulate production plans and manufacture artefacts	10%	20%	30%
AO5 Understand technological and cultural responsibilities	2.5%	2.5%	5%
AO6 Evaluate performance	2.5%	2.5%	5%
AO7 Effectively communicate	5%	2.5%	7.5%
Total	50%	50%	100%

### 2.4. Grade Descriptions

Grade descriptions are provided to give a general indication of the standards of achievement likely to have been shown by candidates awarded particular grades. The grade awarded will depend in practice upon the extent to which the candidate has met the assessment objectives overall. Shortcomings in some aspects of the candidate's performance in the assessment may be balanced by better performances in others.

#### Grade A

Candidates:

- select and communicate detailed knowledge and demonstrate a thorough understanding of design and technology
- apply relevant knowledge, understanding and skills in a range of situations to plan and carry out investigations and tasks effectively
- test their solutions, working safely and with a high degree of precision
- analyse and evaluate the evidence available, reviewing and adapting their methods when necessary
- present information clearly and accurately, making reasoned judgments and presenting substantiated conclusions.

#### Grade C

Candidates:

- select and communicate sound knowledge and demonstrate an understanding of design and technology
- apply knowledge, understanding and skills in a range of situations to plan and carry out investigations and tasks
- test their solutions, working safely and with precision

- review the evidence available, analysing and evaluating some information clearly, and with some accuracy
- make judgments and draw appropriate conclusions.

## Grade F

Candidates:

- select and communicate knowledge and demonstrate an understanding of basic aspects of design and technology
- apply limited knowledge, understanding and skills to plan and carry out simple investigations and tasks, with an awareness of the need for safety and precision
- modify their approach in the light of progress
- review their evidence and draw basic conclusions.

### 3. Assessment Guide and Description of papers

#### 3.1. Assessment Guide

LGCE Design and Technology candidates take two compulsory components, that is paper 1 and paper 2

Components	Weighting
<p><b>Paper 1 Tools, materials and processes</b> 2 hours 30 minutes</p> <p>This paper will be marked out of 100 marks and it represents 50% of the total marks for the subject.</p> <p>A formal, timed examination in which candidates will be required to show their knowledge and understanding of tools, materials and processes associated with the use of metal, wood and plastics in the production of artefacts made to satisfy needs.</p> <p>Candidates are expected to study the three main materials – metal, plastic and wood – with one material being treated as the first discipline. They should also have a good working experience of a second material, and some knowledge of the third is expected.</p> <p><b>Part A</b> (28 marks) Ten short-answer questions, which will cover general aspects of the syllabus.</p> <p><b>Part B</b> (72 marks) <b>Section 1: Tools and materials</b> Candidates choose two out of three questions (each question 18 marks).</p> <p><b>Section 2: Processes</b> Candidates choose two out of three questions (each question 18 marks).</p> <p><b>Total 100 marks</b> Externally assessed The examination will use Metric Units.</p>	50%

<p><b>Paper 2 Design project</b> Coursework</p> <p>The Design Project is completed by the candidate in response to a project theme which is set by ECoL and issued to schools in January each year for examinations taken in November. The candidates' projects are completed over two terms. It is important that candidates have the opportunity to access facilities whereby the realisation of their products can be achieved; they will be expected to produce a personally identified project within the thematic topic set by ECoL.</p> <p>The folio will be marked by the candidates' teacher, who must use the criteria given at the end of this syllabus. The forms necessary for the recording of marks for both Part A and Part B are included at the end of this syllabus.</p> <p>The project will comprise of two interrelated components: Part A: The design folio (60 marks) Part B: The design artefact. (40 marks)</p> <p>Total 100 marks Internally assessed/externally moderated.</p>	<p>50%</p>
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### 3.2. Coursework

#### 3.2.1 Part A: The design folio

The candidate is expected to explore a theme, set by ECoL, in order to identify a design problem area which is then further analysed to identify a specific design brief. The design brief is developed and clarified by the candidate to a point where the candidate can manufacture an artefact.

The folio shows progression from the initial analysis of the theme through a detailed design brief and specification. Once the problem brief has been clarified the candidate generates a range of ideas which are then evaluated to allow the development of a final proposed solution; details of materials, sizes and construction methods need to be included at this stage. This work then leads to a detailed production plan which could be presented in the form of a flow diagram which is further elaborated by sketches to clarify some of the critical stages.

The folio should finally include a section on evaluation and testing which follows the completion of the artefact. The candidate should identify a method which can be used to test the artefact and so allow the performance to be checked against the original specification which was set out at the design brief stage of the folio. Conclusions leading to proposals for further development are also expected.

The candidate should use appropriate graphical methods throughout the folio, including shading and colour where appropriate. Sequential, exploded or enlarged sketches may help clarify detail. Notes should generally be succinct and used where details are not clear from graphical representation.

To aid effective communication and to ensure the folio can provide comprehensive evidence for the assessment objectives, it is important that candidates are advised to set out their folio in a clear and logical format.

### **3.2.2 Part B: The Artefact**

The candidate is expected to complete the developed design solution (artefact) to demonstrate refined workmanship, sensitive use of materials and appropriate construction methods.

Candidates need not restrict their design solutions to the three main materials identified in the syllabus (wood, metal and plastics). The syllabus encourages a wide knowledge of supporting technologies which may, for example, include simple control systems, electronic circuits, pneumatics and the general application of mechanical principles.

## **4. Syllabus Content**

In order to meet the requirements of this examination, all candidates should have followed the Core syllabus in order to gain sound working knowledge and understanding of plastics, wood and metals. This syllabus should be completed before the adoption of the final project, which it is expected will call for further research and specialisation. With this in mind, the syllabus aims to encourage the inclusion of other materials and technologies when appropriate.

### **Safety**

It is assumed that a proper and appropriate concern for safety codes and practices will be maintained throughout a course following this syllabus.

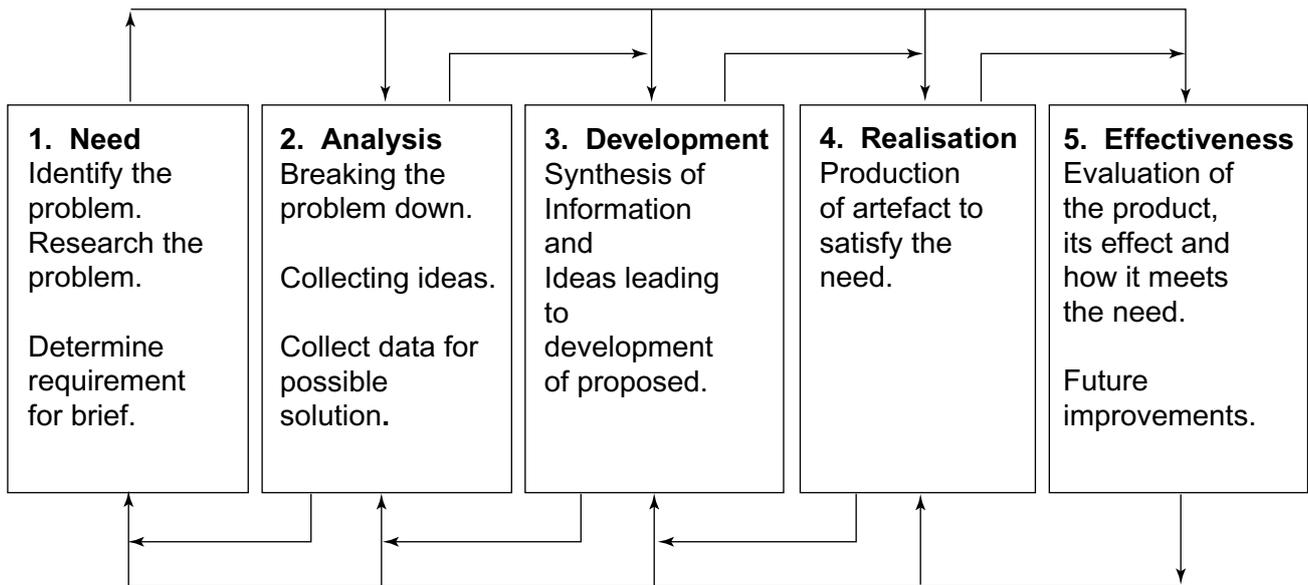
### **Design and technology in society**

It is important that candidates obtain an appreciation of aesthetics and a pride in craftsmanship, along with understanding of the responsibility and place of the designer craftsman and technologist in society and industry. Some effects of the rapid developments in technology on the individual, and future trends and expectations, should be considered. This should also relate design and technology to Lesotho in the areas of transport, infrastructure, health, communication, environment, banking, economy, e-learning and agriculture.

## 4.1. Design method

Designing is concerned with creating change and is undertaken in many different ways. It involves rationale thought undertaken in a logical sequence, but it also involves intuitive responses. For this examination, design is concerned with problem-centred situations calling for solutions that can be realised through manufactured artefacts. The solutions may be arrived at through diverse methods, but each will include the statement of a BRIEF, ANALYSIS, SYNTHESIS and EVALUATION.

A convenient model to help learners engage in design activity might be:



The arrows show that it is not always a linear series, that there is frequent looping back, particularly an ongoing reappraisal of the nature of the need. The arrows at the top showing forward links indicate, for example, that when considering the nature of the need (box 1) the resources available for realisation (box 4) and the constraints must be kept in mind. Similarly, the likely effects (box 5) need to be anticipated at every stage.

Essential to the activity is the ability to use graphical techniques. There is often a need to model in other ways, so as to visualise a possible solution or part solution.

The production stage calls for logical planning of the practical processes and the evaluation must be as objective as possible including, where appropriate, quantifiable testing.

## 4.2. Design Content

4.1. Design Content	
<b>Aesthetics</b>	A basic appreciation of the use of line, shape, form, proportion, space, colour and texture.
<b>Anthropometrics and ergonomics</b>	An appreciation of the concept of ergonomics and the incorporation of anthropometric data in design, where appropriate.
<b>Information</b>	Practice in gathering relevant information by searching out data from reference sources and enquiry through research and observation.  The influence of natural forms on the man-made environment.  The influence of materials and processes on the shape of man-made artefacts.
<b>Awareness</b>	A basic understanding of common mathematical shapes in product design, the use of triangulation and the modular principle.  A basic appreciation of design evolution through a recognition of how designers respond, as time progresses, to changing pressures and influences.

*Teachers and candidates are asked to take particular note of the Assessment Objectives, the Teacher's Guide to Assessment and the Criteria for the Assessment of the Project*

### 4.3. Graphics

This area aims to develop skills that designers use within the context of their design activities in the design studio. It also aims to develop an awareness of the importance of communication and modelling skills within the design process.

Candidates should develop the ability to show ideas and constructions by pictorial drawing, orthographic projection exploded and sectional views by recognised methods, the principle aim being to achieve fluency. This does not preclude the ability to produce measured orthographic drawings where appropriate

The use of ink, colouring media, line, shape, form and texture should be encouraged, so that candidates come to understand the importance of good presentation. Explanations using sequential sketches and flow diagrams are required.

#### 4.4. Materials

General physical, working properties and the applications of common constructional materials, especially plastics, wood and metal. Simple comparative testing leading to the reasoned selection of materials. A broad understanding with practical experience, rather than an in-depth knowledge of any particular material, technology or media. Examples of areas which should be covered are given as guidance. Local materials that can be used in practical work may include: stone, clay, grass, leather and cloth.

In addition, candidates should develop an understanding of environment and sustainability issues relating to the sourcing, working and disposal of each group of materials.

Theoretical knowledge	
<b>Plastics</b>	Show a working knowledge of the following: thermoplastics – nylon, polythene, polyvinylchloride, acrylic and polystyrene. thermosets – polyester resin including G.R.P., melamine, urea and phenol formaldehyde.
<b>Wood</b>	Show working knowledge of: natural timbers and understand their classification, properties and uses. understand why timber is seasoned and how to care for timber during, storage and construction. Understand steaming and bending of timber and have knowledge of adhesives, curing times and strengths. show a working knowledge of: Manufactured boards (processed wood) – plywood, blackboard, chipboard, veneer and hardboard, medium density fibreboard (MDF). Understand advantages and disadvantages of working with manufactured boards compared with solid wood.
<b>Metals</b>	Show a working knowledge of the following metals: Ferrous – mild steel, medium carbon steel, high carbon steels, wrought iron and cast iron Non-ferrous – aluminium and the alloy Duralumin, along with the common casting Alloys such as lead free pewter, copper and its alloys, zinc, lead and tin. Understand how the following processes can change the molecular structure of a material making it more or less suitable for the task it has to perform: <ul style="list-style-type: none"> <li>- Work hardening</li> <li>- Annealing all metals</li> <li>- Case hardening of mild steel</li> <li>- Hardening and tempering tool steel (HCS)</li> </ul> <p>Show knowledge of different and appropriate properties and uses, rather than methods of manufacture.</p>

#### 4.5. Practical processes

Experience in the use of hand and machine tools, operations and processes should cover the major materials – metal, plastic and wood – in sufficient detail to enable candidates to fulfil the realisation of their designs with sensitivity and manipulative skill, to produce artefacts showing a high degree of design awareness and of craftsmanship and regard for the environment and sustainability. Indigenous Technological practises may be employed in practical work or design project.

Area of activity	Core knowledge and capability	Expansion – extended knowledge and capability
<p><b>1. Preparation of materials</b>            Knowledge of available forms, types, sizes – efficient conversion/cutting ready for use – datum surfaces/ lines for future use – preparation for machine processes.</p>	<p>Appropriate selection and safe use of hacksaw, guillotine, tenon saw, cross cut and panel saws.</p>	<p>Safe support of work. Selection and safe use of purpose-built portable powered tools such as hand held drills, jigsaws, sanders and planers.</p> <p>Filing/planing of datum edge/surface.</p>
<p><b>2. Setting/marking out</b>            Measuring and/or marking of work so that future operations can be carried out successfully, accurately and speedily with minimum of waste.</p>	<p>Rule, try-square, marking fluid, scribe, chinagraph pencil, fineline permanent marker, marking knife and pencil. Centre punch.</p>	<p>Marking of datum line, by surface plate and scribing block or calipers. Vernier gauge. Micrometer. Dividers, marking gauge and mortise gauge. Use of templates.</p>
<p><b>3. Shaping</b>  <b>(a) Deforming/reforming</b>            Methods which rely on a rearrangement of material, rather than its removal, to give the desired shape, form or contour.</p>	<p>Hollowing, bending, forming by the application of heat and pressure, simple casting– gravity and die casting, steam bending and lamination.</p>	<p>Principles in the use of moulds, formers and dies. Vacuum forming, blow moulding, press forming. Casting to form by heat, pressure, chemical process or in combination.</p>
<p><b>(b) Wastage/addition</b>            Various forms of cutting and removal of, or joining and adding to, a material, to give the desired shape, form or contour.</p>	<p>Hand snips, saws, files, rasps, basic planes and abrasive cutters. Simple hole boring by hand and machine. Hand threading and tapping.</p>	<p>Pilot, clearance, tapping and counterbored holes. Screw cutting. Turning of metals to include facing off, reducing, taper turning, centre drilling, drilling and knurling. Wood turning to include between centres and use of faceplate. Special purpose planes, chisels, gauges, saws, abrasive mops, discs and belts, in addition to special files and rasps.</p>

<p><b>4. Special treatments</b> Those which change molecular structure of a material so as to make it more suitable for the work it is needed to perform.</p>	<p>Annealing, case hardening, hardening and tempering.</p>	<p>Annealing of metals during working. Heat treatment of mild steel and tool steel (HCS). Plastic memory. <i>Steaming and bending times for timbers.</i> Adhesive types, curing time and relative strengths.</p>
<p><b>5. Joining and assembly</b> Those methods of fabricating and fitting together with the various parts of a job to form the desired structure, or give the required movement, to enable it to perform its task satisfactorily, both permanent and temporary.</p>	<p>Methods of frame and box (carcase) construction. Permanent and temporary fixtures. Fittings and adhesives.</p>	<p>Use of jigs, formers and holding devices to assist these methods. Application of 'knock down' and 'self-assembly' fittings as used with processed timber. Locking and pinning methods and friction fixings.</p>
<p><b>6. Finishing</b> The preparation for, and application of, the surface treatment necessary for the material to perform its designed role most satisfactorily.</p>	<p>Surface finishes available, or made, to withstand both interior and exterior use. Environmental considerations relating to the selection, use and disposal of finishing materials.</p>	<p>Special finishes available to withstand corrosion, heat, liquids, stains, etc. Applied finishes as well as the role of 'as bought' finishes (oils, paints, lacquers, stains, dip-coating, satin polishes, etc.).</p>

#### 4.6. Supporting technologies

The technologies of structures, pneumatics, mechanisms, electronics, materials processing and micro-computing are increasingly being used in Design and Technology departments, as aids in graphics, design, control and realisation. Candidates should, whenever possible or appropriate, be given the opportunity to keep abreast of developments in these areas, both within school and industry, and to make use of that knowledge within their projects.

## 5. Paper 2 - Design Project Assessment

### 5.1. Organisation of assessment

- Teachers are expected to act as advisers throughout the project period.
- Candidates will not be penalised if working drawings show evidence of use.
- The teacher's assessment for both Part A and Part B should be made on an assessment form which is at the end of this syllabus.
- It is expected that practical work will be completed by 15 October of examination year.
- Centres to be visited by examiners will be notified in good time.

Part A: Design folio

Part A is to be marked internally, with external moderation. The design folio must also contain sufficient photographs of the finished artefact, especially in use, showing an overall view together with detailed views of evidence to support the award of marks for Part B, workmanship and evaluation).

Part B: Design artefact.

Part B is also to be marked internally, using given criteria provided.

#### 5.1.1 Assessment of project

The criteria upon which the marking scheme will be built include:

- The extent of research and ability shown to use the material realistically in response to the problem being confronted.
- The appropriateness and quality of the techniques employed in the resolution of practical project work.

#### 5.1.2 Assessment scheme

<b>Part A: The design folio</b>	<b>Marks</b>
General analysis of the topic	5
Formulation of design brief and specification	10
Exploration of ideas	10
Detailed development of proposed solution including suitability of chosen materials and construction	15
Production planning	10
Communication	10
<b>Total (Part A)</b>	<b>60</b>
<b>Part B: The artefact</b>	
Workmanship	30
Evaluation	10
<b>Total (Part B)</b>	<b>40</b>
<b>Total (Paper 2)</b>	<b>100</b>

### **5.1.3 External moderation for all other Centres**

ECoL will carry out external moderation of internal assessment.

Centres must ensure that ECoL receives the internally-moderated marks for all candidates by 31 October each year.

Centres may submit these marks by using MS1 mark sheets.

Once ECoL has received the marks, ECoL will select a sample of candidates whose work should be submitted for external moderation. ECoL will communicate the list of candidates to the Centre, and the Centre should despatch the work of these candidates to ECoL immediately. Individual Candidate Record Cards and Coursework Assessment Summary Forms (a copy of which is at the back of this syllabus booklet) must be enclosed with the work.

**All records and supporting written work should be retained until after the publication of the results.**

### **5.2. Teachers' guide to assessment**

The assessment is to reflect:

- (i) The extent of research and the ability to use the material realistically in response to the problem confronted.
- (ii) The appropriateness and quality of the techniques employed in the resolution of the practical project work.

The following guidance is given to teachers for making the assessment and completing the form.

Part A: The design folio	
Candidates should:	
General analysis of topic	Show, through a general examination of the theme, sensitivity to possible problems and the ability to analyse situations.
Formulation of design brief and specification	Demonstrate the ability to define the problem, formulate a design brief and list a detailed specification.
Exploration of ideas	Record the investigation made, and show an ability to explore a variety of existing and possible solutions.
Detailed development of proposed solution including suitability of chosen material(s) and construction	Show engagement in the development of ideas towards a working solution. Showing through reasoned judgement, the ability to select materials, technologies and construction methods appropriate to the selected project. Creating detailed drawings for use in production planning.
Production planning	Produce a plan setting out a sequence for the technical production of the artefact. The plan, which may be in the form of a flow chart or list, should identify and describe the more complex tasks.
Communication	Have used appropriate techniques for achieving clarity of communication. These might include, for example, the use of colour, 'mock-ups' and models. An understanding of suitable drawing techniques, as revealed in the formal presentation of the final solution (assembly drawing, etc.). The use of words should be succinct.

Part B :The artefact	
Candidates should:	
<i>Suitability of proposed solution</i>	Show that they have responded to the aesthetic and technical requirements of the design brief and specification.
<i>Workmanship</i>	Demonstrate an ability to manipulate materials sensitively and apply technologies with accuracy of workmanship and quality of finish.
<i>Evaluation</i>	Write a succinct evaluation of the realised solution. The candidate should refer back to the requirements, originally specified, to assess how well the solution satisfies the brief. The evaluation should include: <ul style="list-style-type: none"> <li>(a) an assessment, based on objective testing, of how well the specification has been satisfied;</li> <li>(b) a reappraisal of the brief, including proposals for amendments to the brief, where appropriate;</li> <li>(c) comments on the modifications made as the project developed;</li> <li>(d) comments on any possible improvements that would improve the solution as made;</li> <li>(e) any effects brought about by the solution that were not foreseen.</li> </ul>

### 5.3. Criteria for the assessment of the project

#### Part A: The design folio

Criterion	Description	Mark range	Maximum mark
<b>General analysis of the theme</b>	Thorough investigation with several potential design problem areas identified.	4–5	5
	Relevant investigation with one or more potential design problem areas identified.	2–3	
	Superficial research which remains unfocussed, no design problem areas identified.	1	
	No creditable work.	0	
<b>Formulation of design brief resulting in a specification</b>	Concise design brief, with evidence of relevant investigation which identifies the design need and the intended users, leading to a precise list of measurable specification points.	8–10	10
	Consideration of the design need or intended users, leading to a specification which includes the key features of the proposed product.	4–7	
	A statement of what is to be made with unfocussed specification points.	1–3	
	No creditable work.	0	
<b>Generation and exploration of ideas</b>	A wide range of appropriate potential solutions. Detailed evaluation and development of the ideas with some consideration of the specification.	8–10	10
	A range of appropriate potential solutions. Some aspects of some ideas explored.	4–7	
	A limited range of ideas with a tendency to focus on a single concept. Little or no evaluation of ideas.	1–3	
	No creditable work.	0	

<b>Detailed development of the proposed solution, including suitability of materials and construction</b>	Clarification of details using testing and modelling where appropriate, resulting in reasoned decisions about form, materials and construction. Inclusion of detailed drawings and materials list.	11–15	15
	As a result of some investigation, appropriate decisions about form, materials and construction. Detailed drawings and a materials list.	6–10	
	Some decisions about form, few details regarding materials or construction decisions. A drawing giving basic details.	1–5	
	No creditable work.	0	
<b>Production planning</b>	All main stages identified and presented in an effective order for the processes required including the materials, tools and equipment required.	8–10	10
	A clear plan showing the main stages of production with the key materials, tools and equipment identified.	4–7	
	Basic list of some processes with some tools and materials identified.	1–3	
	No creditable work.	0	
<b>Communication</b>	The overall folio effectively communicates information using a variety of techniques including colour and shading and annotation. Presentation of information is clear and concise.	8–10	10
	The folio uses a variety of techniques to effectively communicate information; drawing, sketching and annotation are effective. Some colour and shading used.	4–7	
	The folio uses a limited range of techniques; drawing, sketching and annotation lack detail.	1–3	
	No creditable work.	0	

**Part B: The artefact**

Criterion	Description	Mark range	Maximum mark
<b>Artefact realisation</b>	The artefact will be completed to a high standard with precision and accuracy. It will meet the overall requirements of the original design brief and the majority of the specification points.	21–30	30
	The artefact will be complete and function as intended, there may be some blemishes and inaccuracies. It will meet the overall requirements of the design brief and most of the specification points.	11–20	
	The artefact will exhibit a reasonable standard, be mainly complete and satisfy some of the aspects of the original design brief.	1–10	
	No creditable work.	0	
<b>Evaluation</b>	Objective testing with reference to the design brief and specification points.	8–10	10
	Detailed conclusions leading to proposals for further development.		
	Some testing with appropriate comment on some of the specification points. Some thoughts on further development.	4–7	
	Little or no evidence of testing. General points with little reference to specification points.	1–3	
	No creditable work.	0	

## **6. ADDITIONAL INFORMATION**

### **6.1. Guided learning hours**

LGCSE syllabuses are designed on the assumption that candidates have about 120 guided learning hours per subject over the duration of a week (based on 5 periods per week). ('Guided learning hours' include direct teaching and any other supervised or directed study time. They do not include private study by the candidate.)

However, this figure is for guidance only, and the number of hours required may vary according to local curricular practice and the candidates' prior experience of the subject.

### **6.2. Recommended prior learning**

Candidates beginning this course are recommended to have studied Junior Certificate Basic Handcrafts or Woodwork or Technical Drawing previously.

### **6.3. Progression**

LGCSE Certificates are general qualifications that enable candidates to progress either directly to employment, or to proceed to further qualifications.

Candidates who are awarded grades C to A\* in LGCSE Design and Technology are well prepared to follow courses leading to AS and A Level Design and Technology, or the equivalent.

### **6.4. Grading and reporting**

LGCSE results are shown by one of the grades A\*, A, B, C, D, E, F and G indicating the standard achieved, Grade A\* being the highest and Grade G the lowest. The letters A (result pending); X (no results) may also appear on the statement of results but not on the certificate.



### **INSTRUCTIONS FOR COMPLETING COURSEWORK ASSESSMENT SUMMARY FORMS**

1. Complete the information at the head of the form.
2. List the candidates in an order which will allow ease of transfer of information to ECOL at a later stage (i.e. in candidate index number order, where this is known). Show the teaching group or set for each candidate. The initials of the teacher may be used to indicate group or set.
3. Transfer each candidate's marks to this form as follows:
  - (a) Where there are columns for individual skills or assignments enter the marks initially awarded (i.e. before internal moderation took place).
  - (b) In the column headed 'Total Mark', enter the total mark awarded before internal moderation took place.
  - (c) In the column headed 'Internally Moderated Mark', enter the total mark awarded after internal moderation took place.
4. Both the teacher completing the form and the internal moderator or moderators (where required) should check the form and complete and sign the bottom portion.

### **PROCEDURES FOR EXTERNAL MODERATION**

Teachers should work with their exams officer to make sure the coursework samples are selected and submitted along with the supporting forms according to the instructions on the ECOL website.

ECOL reserves the right to ask for further samples of Coursework.

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