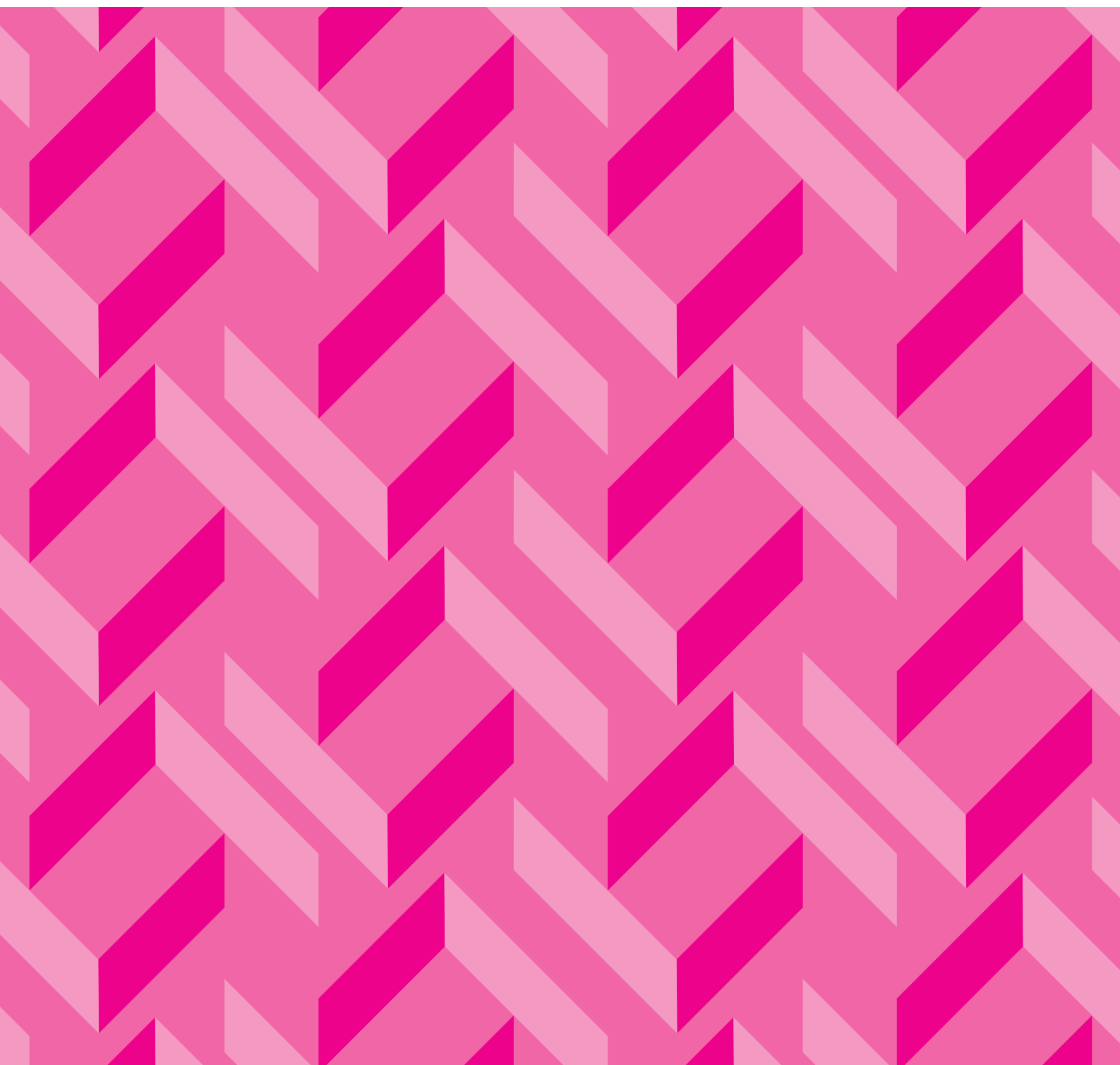




Entry Level Examinations from 2009

Graphical &
Material Studies



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**ENTRY LEVEL CERTIFICATE
GRAPHICAL AND MATERIAL STUDIES
For Examination from 2009**

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**NATIONAL AWARDS RECOGNISING ACHIEVEMENT
TOWARDS GCSE AND GNVQ**

This qualification has been approved following consideration by Awdurdod Cymwysterau, Cwricwlwm ac Asesu Cymru/Qualifications, Curriculum and Assessment Authority for Wales (ACCAC). The specification meets criteria as approved by Ministers as a National Entry Level award. The award is broadly aligned to Level 3 (or the equivalent) and below in the National Curriculum, but is designed to be appropriate to students at age 16 and beyond. The award is intended to encourage progression to higher level qualifications.

| SUMMARY OF ASSESSMENT | | |
|---|--|-----------------------------|
| | <i>Coursework Weighting</i> | <i>Written Paper</i> |
| Board Prescribed Coursework | 20% | |
| Centre Determined Coursework | 60% | |
| Terminal Examination (Core Paper) | | 10% |
| Terminal Examination (Specialist Paper) | | 10% |

I **INTRODUCTION**

1.1 Criteria for Entry Level

Entry Level is designed for lower attaining candidates, broadly speaking those who typically have not reached Level 3 of the National Curriculum at the end of Key Stage 3 and additionally, for whom GCSE and equivalent vocational qualifications are not deemed appropriate.

Awards will be reported; they will appear for certificates at three levels.

- Entry 1
- Entry 2
- Entry 3

with Entry 3 representing the highest level of award.

1.2 Rationale

The specification is designed to allow candidates to work in a variety of materials. The related materials are: Graphics, Wood, Metal and Plastics.

Work undertaken by candidates could be of a single material nature, but it is hoped that wherever possible a multi material approach will be undertaken. It is envisaged that in certain pieces of work some 'basic' technologies could be introduced, i.e. simple electronics, linkages, structures etc. Graphics work could relate to work carried out in the materials course and does not necessarily have to be regarded as a separate entity.

Candidates must produce work which is commensurate with the specification and the course. **All** candidates will be expected to have gained a general knowledge of basic workshop hand tools and machines, as well as related techniques and procedures. Basic drawing, sketching, design, planning, verbal and written skills will also be tested.

Coursework can be chosen from one or a variety of the following areas:

- (a) Personal projects;
- (b) School projects;
- (c) Community projects;
- (d) Group projects.

It is accepted that the teacher will need to utilise a variety of strategies in order to provide appropriate support for individual candidates. Although a degree of self-directed work may be possible, it is anticipated for the most part, considerable teacher involvement will be necessary.

1.3 Progression

The specification is designed to allow progression to vocational qualifications.

1.4 Overlap and Restrictions on Entry

The specification does not overlap with any other qualification by WJEC and there are no restrictions on concurrent entry for other qualifications.

2

AIMS

2.1 General aims

The aims of the specification are to:

- (a) provide a flexible course which covers all possible abilities and facilities;
- (b) develop a systematic approach to problem solving;
- (c) develop a knowledge and understanding of practical and creative skills in accordance with candidates' individual needs and personal interests and ambitions;
- (d) ensure that candidates are able to express and communicate their ideas in two and three dimensional form;
- (e) encourage good practical and manipulative skills and dexterity, coupled with a high regard for personal standards of workmanship;
- (f) provide a wide range of practical experiences and skills in a variety of materials;
- (g) give candidates the opportunity to work as responsible members of a team;
- (h) establish an understanding of basic technological concepts and their applications;
- (i) create an awareness of 'Health and Safety' within the practical environment.

2.2 The spiritual, moral, ethical, social and cultural dimension

This specification provides opportunities for candidates, through the study of their chosen focus area, to develop an understanding of spiritual, moral, ethical, social and cultural issues as they relate to the designer, manufacturer or user.

2.3 Citizenship

In this context citizenship is taken to include the development of social and moral responsibility, participation in community activity and development of political literacy. This specification is designed to make a contribution to the development of the knowledge, skills and understanding of citizenship. In particular, the coursework element will encourage candidates to take an effective part in school-based and community-based activities, showing a willingness and commitment to evaluate such activities critically. Aspects of the project, for example, could be directly related to the needs of the school or local community, which would provide candidates with the opportunity to tackle problems which are real and meaningful to themselves.

2.4 European dimension

This specification supports environmental education, the European dimension and health education, consistent with current EC agreements. Candidates can consider moral, social, environmental and cultural influences on product design.

The approach used in constructing the specification lends itself to the establishment of links with other areas of study, particularly those involving problem solving, the use of ICT skills, knowledge and understanding, for example in the completion of tasks and assignments for other GCSE specifications.

The above approach conforms with the aspirations expressed in the 1998 Resolutions of the European Community and the Ministers of Education meeting within the Council, concerning the European dimension in education and environmental education, particularly those intended at the level of member states.

2.5 Opportunities for use of ICT


This specification gives candidates the opportunity to use their ICT skills for practical purposes, especially in the production of their design folios and associated products. These opportunities will apply particularly to the generation of information, together with its processing and presentation. Depending on resources and the specific project in question, candidates may include CAD and/or CAM work.

ICT can be used as a tool to support the process of designing and making products in any of the materials and graphics areas. Spreadsheet, database, CAD, scanning and word-processing software packages can be used during research and the generation of ideas. Digital cameras can be used during research or to generate a record of otherwise ephemeral evidence during the design and make process. The Internet is an obvious source of information throughout the project. CAM facilities may be used during the manufacturing stage. In some cases, particularly (though not exclusively) in systems and control technology. ICT may be used to control products or systems made by the candidates.

2.6 Cwricwlwm Cymreig

The specification framework allows the use of a Welsh context for course designers in Wales to draw on local examples and priorities, thereby allowing development of the Cwricwlwm Cymreig. Course designers in England and Northern Ireland also have the flexibility to draw on their own locality as a resource.

Opportunities for the development of Key Skills is possible especially in Communication, Information Technology and Problem Solving, either through the medium of English or Welsh.



3

ASSESSMENT OBJECTIVES

The assessment objectives listed below do not imply any priority in the order in which they are written.

Candidates should be able to:

- 3.1 describe and apply facts, principles and concepts related to artefact design, realisation and evaluation;
- 3.2 demonstrate graphical and communication skills;
- 3.3 identify problems which can be solved through practical/technological activities;
- 3.4 undertake enquires, sift information and apply the findings to the solution of practical problems;
- 3.5 identify the resources needed for the solution of practical problems;
- 3.6 produce and interpret sketches and working drawings;
- 3.7 generate and record ideas as solutions to problems;
- 3.8 evaluate, select and develop solutions to a design problem based on an original brief;
- 3.9 demonstrate appropriate skills when working with suitable materials;
- 3.10 work with due regard for Health and Safety regulations.

4

SCHEME OF ASSESSMENT

The examination consists of:

- (a) An assessment of coursework 80%
- (b) Two theory papers of a half hour duration each (2 x 10%) 20%

TOTAL 100%

4.1 Details of Assessment

| | <i>Coursework</i> | <i>Theory Papers</i> | <i>Total %</i> |
|---------------------------------|-------------------|----------------------|----------------|
| Knowledge | 5 | 15 | 20 |
| Subject Related Skills | 45 | 3 | 48 |
| Design and Communication Skills | 30 | 2 | 32 |
| Total | 80 | 20 | 100 |

4.2 Relationship between Assessment Objectives and Content

| | <i>Assessment Objectives</i> | <i>Mark % Allocation</i> |
|---------------------------------|---|--------------------------|
| Knowledge | 3.1, 3.3, 3.5, 3.8, 3.10 | 20 |
| Subject Related Skills | 3.1, 3.2, 3.3, 3.4, 3.6, 3.7, 3.9, 3.10 | 48 |
| Design and Communication Skills | 3.1, 3.2, 3.4, 3.6, 3.7, 3.8 | 32 |
| | Total | 100 |

4.3 Relationship between Assessment Objectives and Assessed Components

Whilst there will be variations in emphasis dependant on the candidate's choice and approach to the board-prescribed project and the centre determined tasks, it is intended that both coursework components will each address all assessment objectives, 3.1 to 3.10.

The examination papers will, in the main, address assessment objectives 3.1; 3.2; 3.5; 3.6; 3.10.

4.4 Theory Examination

The theory examination, to be held in **April** of the final year of the course, will take the form of two half hour papers:

- (i) A Core paper consisting of *multi choice, complete the sentence, write a sentence* and *sketching* type questions based on general workshop tools and equipment, procedures, safety and basic drawing techniques.
- (ii) A Specialist paper consisting of *multi choice, complete the sentence, write a sentence* type questions based on **one** of the specification specialist areas: wood; metal; plastics; graphics.

4.5 Coursework

The coursework consists of two parts:

- (i) A board-prescribed project weighted at 20%,
- (ii) Centre determined tasks weighted at 60%.

For 2007/8, the prescribed theme for (i) is **storage** and candidates should undertake a project which reflects this theme.

In view of the weighting applied to this work it is suggested that candidates should spend about **one term** on this part of the course.

Centres are free to deliver the remaining 60% of the coursework component in a way which best suits their candidates, e.g. a number of straightforward tasks or one or two more involved projects.

It is envisaged that all necessary theory will be covered in conjunction with and during practical sessions. The importance of safety must be stressed at all times. The production of a variety of artefacts is envisaged and candidates should be encouraged to relate these to hobbies, home, school or local community, wherever possible.

Coursework should be assessed using the assessment criteria which follow on pages 12-16. These are applied to both the board-prescribed project and centre determined coursework.

4.6 Standardisation of coursework assessment

At the end of the course, and prior to moderation by the WJEC, centres are responsible for standardising assessments across teachers to produce a single, reliable rank order for all candidates taking the examination.

In recent years many centres have undertaken project/group work. This is to be commended and encouraged. However, care should be taken to ensure that the work of individual candidates can be identified for assessment and moderation purposes.

4.7 Moderation

Candidates will submit for assessment the board-prescribed coursework task and the centre determined coursework. All work must be assessed by the class teacher using the criteria supplied.

Moderation is undertaken by a visit to the centre during **early May** of the final year of the course. The moderator will apply the assessment criteria to the candidate's submissions and compare his assessment with that of the centre. Subsequently, the Principal Moderator will apply any adjustment required to align the centre's marks to the national standard.

4.8 Differentiation

The specification provides scope for positive and measurable achievement by all candidates in the target group in all Assessment Objectives.

All candidates should be encouraged to demonstrate what they know, understand and can do. Coursework assessment will consist of a suitable combination of differentiation by task and differentiation by outcome.

4.9 Awarding and reporting

As with all Entry level courses candidates' achievement is acknowledged through a system of three grades. Entry 1, Entry 2, Entry 3, where Entry 3 is the highest level of award.

To assist student motivation, blank certificates will be circulated to centres for distribution to candidates who satisfactorily complete:

- (i) the board prescribed component;
 - (ii) the centre determined component;
- prior to final submission for the WJEC award.

4.10 Special Arrangements

The only special arrangements for Entry level examinations which centres will be required to apply for will be with respect to visually impaired candidates i.e. requiring enlarged papers, modifications etc. Application forms for these arrangements may be obtained on request and must be returned by **31 October** each academic year.

All other arrangements will be at the discretion of the Head of centre. These arrangements will include:

- extra time (unlimited)
- use of reader/communicator
- use of amanuensis/scribe
- timed breaks
- use of wordprocessor, etc.
- use of practical assistants

4.11 Enquiries and Appeals

If a centre has a concern about a candidate's result, the Head of the centre should contact the Board stating the nature of the concern. All enquiries should be submitted within fourteen days of the publication of results.

4.12 Assessment Criteria

4.12.1 Graphics

(a) *Planning of work*

| | |
|---|------|
| All work planned unaided for each topic | 9-10 |
| Some help given when planning topics | 7-8 |
| Considerable help given during topic work | 4-6 |
| Most work carried out with guidance | 1-3 |
| All work of a prescribed form | 0 |

(b) *Presentation of Folio*

| | |
|--|------|
| Folio complete and presentable in all aspects | 9-10 |
| Folio complete but with some work untidy or misplaced | 7-8 |
| Folio order haphazard and some work unfinished | 4-6 |
| No recognisable Folio order and a considerable amount of work unfinished | 1-3 |
| Individual/unfinished sheets showing no correlation | 0 |

(c) *Verbal/Written Communication*

| | |
|--|-----|
| Answer questions both verbally and written using a satisfactory technical vocabulary | 4-5 |
| Answer questions both verbally and written to a satisfactory standard | 2-3 |
| Answer simple questions verbally | 1 |
| No verbal or written skills evident | 0 |

(d) *Drawing clarity*

| | |
|---|-----|
| All drawing work clearly understandable | 4-5 |
| Most drawing work understandable | 2-3 |
| Simplistic drawings some unreadable | 1 |
| Limited drawing clarity | 0 |

| | | |
|-----|---|-------|
| (e) | <i>Use of equipment</i> | |
| | Complete competence when using all drawing equipment | 9-10 |
| | Specific pieces of equipment cause problems | 7-8 |
| | General capability with most drawing equipment | 4-6 |
| | Difficulties using basic equipment | 1-3 |
| | No drawing equipment skills evident | 0 |
| (f) | <i>Quality of graphical techniques</i> | |
| | Excellent, all work of a very high standard | 12-15 |
| | Work of a good standard | 9-11 |
| | Work of a fair standard | 5-8 |
| | Simplistic drawings and colouring | 1-4 |
| | No work presented | 0 |
| (g) | <i>Variety of graphical techniques</i> | |
| | A large variety of techniques used | 12-15 |
| | A variety of techniques used | 9-11 |
| | Limited techniques used | 5-8 |
| | Only one technique used | 1-3 |
| | No work presented | 0 |
| (h) | <i>Supplementary Material</i> | |
| | A variety of alternative materials used which supplement and complement the Folio | 9-10 |
| | Alternative material used which in most cases complements the Folio | 7-8 |
| | Some alternative material used in a random manner | 4-6 |
| | Little alternative material used | 1-3 |
| | No alternative material used | 0 |

4.12.2 Wood, Metal and Plastics

(a) Design Ideas

| | |
|---|------|
| Totally functional design ideas presented unaided | 9-10 |
| Functional design ideas presented with some help | 7-8 |
| Design ideas presented with considerable help | 4-6 |
| Design idea provided with candidate modifications | 1-3 |
| Drawing provided | 0 |

(b) Planning

| | |
|---|-----|
| All work carried out in a correct predetermined order | 4-5 |
| Work carried out in correct order with minor deviations | 2-3 |
| Work carried out in a haphazard order | 1 |
| Work carried out to a given plan | 0 |

(c) Evaluation

| | |
|---|-----|
| A clear evaluation statement | 4-5 |
| An evaluation statement showing a basic understanding | 2-3 |
| A simplistic evaluation | 1 |
| No form of written evaluation | 0 |

(d) Verbal/Written Communication

| | |
|--|-----|
| Answer questions both verbally and written using a satisfactory technical vocabulary | 4-5 |
| Answer questions both verbally and written to a satisfactory standard | 2-3 |
| Answer simple questions verbally | 1 |
| No verbal or written skills | 0 |


| | | |
|-----|---|-------|
| (e) | <i>Sketching/Modelling</i> | |
| | Use sketching and/or modelling techniques to a good standard | 4-5 |
| | Use sketching and/or modelling techniques to a reasonable standard | 2-3 |
| | Sketch and colour simple line drawings | 1 |
| | Display no sketching skills | 0 |
| (f) | <i>Setting and Marking out</i> | |
| | All work unaided | 9-10 |
| | Some help required in more complex areas | 7-8 |
| | Help required of a general nature | 4-6 |
| | Considerable help required | 1-3 |
| | All work aided | 0 |
| (g) | <i>Cutting, Shaping, Forming</i> | |
| | Choose and use the correct tools and equipment to an accurate standard without supervision | 12-15 |
| | Choose and use the correct tools and equipment to a reasonable standard without supervision | 9-11 |
| | Use tools and equipment with some help | 5-8 |
| | Use basic tools and equipment with considerable help | 1-4 |
| | Almost all work aided | 0 |

(h) Joining, Combining

| | |
|---------------------------------------|-------|
| Carry out all work to a high standard | 12-15 |
| Carry out all work to a good standard | 9-11 |
| Carry out work to a fair standard | 5-8 |
| Carry out work to a poor standard | 1-4 |
| Almost all work aided | 0 |

(i) Finishing

| | |
|---|------|
| Prepare and apply correct finish to a high standard | 9-10 |
| Prepare and apply correct finish to a good standard | 7-8 |
| Prepare and apply a finish to fair standard | 4-6 |
| Prepare and apply a finish to a poor standard | 1-3 |
| No preparation or finish applied | 0 |



5

SPECIFICATION CONTENT

5.1 Ethos

The Graphical and Material Studies examination of the Entry level certificate was originally devised by a Panel of teachers in Mid Glamorgan, under the guidance of the County Adviser and representatives from the WJEC.

The course consisted of 'single material' modules and these were set out in a similar style and with content commensurate with the expected time allocation and the ability of the candidates for whom the examination was intended.

It was apparent from the outset that this form of examination was ideal for the type of candidate for whom it was initiated and that teachers were able to adapt very easily to the course, facilities, candidate capabilities and administration requirements.

Over the past 15 years the course, marking, administration and quality of work has varied very little. There has been a positive advance in the attitude of teachers and candidates towards the course and in many cases candidates have achieved excellent results and reports as a direct result of completing the coursework component.

Addressing the requirements of the National Curriculum has meant that a restructuring of the specification has been necessary. However this has not significantly changed the approach to the subject or indeed the subject matter, either in style or the range of candidates taught.

Other factors have influenced the course, mainly the restricted time now being available for the teaching of 'options'. As a result, it was agreed that the total flexibility of the course should be maintained and that the '*Multi materials*' approach as well as '*Single materials*' and '*Technologies*' must **all** remain viable options within the specification framework. This, it is hoped, will accommodate all Design and Technology departments and ensure the continuance of the good practices already being undertaken.

5.2 Coursework

All work will be completed, marked and moderated as a complete course. Coursework can take many forms: as single material units/artefacts, as multi materials units/artefacts, as artefacts which include simple 'technologies', as group work, or as ongoing project work.


To illustrate some possible courses the following examples are provided:-

- (i) *Wood and Metal*: as single materials units evenly divided over the course.
- (ii) *Graphics and Plastics*: as a joint course, devoting some time to producing Plastic artefacts and then using the techniques learnt and the artefacts made as the theme for, and to enhance the work of, the Graphics Folio.
- (iii) *A multi material/technology artefact*, e.g. a Tipper lorry, (Timber chassis, Metal axles and grille, Acrylic tipper, cam to raise the back).
- (iv) *Production of Garden furniture for an Old People's home*.

The balance of the materials within the course is left to the discretion of the teacher.

5.3 Grade Descriptors

It is important to relate the specification content to the grade descriptors provided on pages 24 and 25.



6

SPECIFIC MATERIAL OBJECTIVES

6.1 Graphics

(a) *Drafting Equipment.*

Should include - types and grades of media, graphical aids and special accessories.

(b) *Drafting Skills.*

Should include - the interpretation of simple drawings, layout, weight of line and general presentation.

(c) *Two and three dimensional drawing.*

Should include - Orthographic, Isometric and Oblique projections.

(d) *One and two point perspective.*

Should include - Eye line and Vanishing points.

(e) *Freehand sketching.*

Should include - drawing straight and curved lines, estimated angles and proportions, building up and drawing using the block/crate method.

(f) *The use of colour and shade.*

Should include - the use of colour/shade to contrast or balance, to give the impression of light and dark, warm and cold and also texture.

(g) *Lettering techniques.*

Should include - freehand printing, stencils and dry print.

(h) *Presentation of drawings.*

Should include - a variety of techniques in mounting and displaying graphical projects.

(i) *Methods of conveying information and data graphics.*

Should include - Logos, graphs and charts.

(j) *Computer aided presentation.*

Should include - the use of the computer and its peripherals to enhance graphical techniques and presentation.

6.2 Wood

(a) *General Bench work.*

Should include - care and correct use of workbench, vice and allied equipment, use of chopping board and bench hook.

(b) *The safe and correct use of common hand tools.*

Should include - a comprehensive list of all hand tools used in the workshop: marking out and measuring, cutting and special tools.

(c) *Workshop machinery.*

Should include - Lathe, Bandsaw, Pedestal Drill, Mortice Machine, Sanding Disc, their uses and safety as well as all allied equipment wherever possible.

(d) *Portable Power tools.*

Should include - Drill, Orbital Sander, Circular Saw and Jigsaw, their uses and safety as well as all allied equipment wherever possible.

(e) *Jointing techniques, specifically for solid timber and manufactured boards.*

Should include - a variety of corner joints, cross and 'T' joints, simple Mortice and Tenon. Housing, Dowel and Edge joints. Permanent and 'Knockdown' joints when used with manufactured boards especially Melamine coated chipboard.

(f) *Fittings and Fastenings.*

Should include - Nails, Screws, Hinges, Locks and Catches.

(g) *Adhesives.*

Should include - a basic list of Glues and Adhesives used in the workshop for a variety of materials and situations.

(h) *Surface preparation and Finishes.*

Should include - Abrasive papers and their manufacture and grading, wire wool. Various types of finishes including Polyurethane, Cellulose, Paint and Oils.

(i) *Simple carving and decorative treatments.*

Should include - use of Gouges, Scrapers, and decorative finishing of edges and mouldings.

(j) *Timber, its growth and defects.*

Should include - tree types and characteristics. Basic defects and diseases.

(k) *Conversion and Seasoning.*

Should include - the main types of conversion and seasoning methods.

(l) *Manufactured boards.*

Should include - Plywood, Blockboard, Chipboard, Hardboard and MDF.

(m) *Purchasing materials.*

Should include - an understanding of the costing and purchasing of all relevant materials and components required to undertake the successful completion of the design.

(n) *Basic maintenance of tools.*

Should include - Plane/Chisel sharpening specifically as well as the need for general maintenance of other workshop tools.

6.3 Metal

(a) *General Bench fitting.*

Should include - the care and correct use of workbench, Engineers vice and allied equipment.

(b) *The safe and correct use of common hand tools.*

Should include - a comprehensive list of all hand tools used in the workshop; marking out and measuring, cutting and special tools.

(c) *Workshop machinery.*

Should include - Lathe, Shaper, Horizontal and Vertical Miller, Mechanical Hacksaw, Grinder, Buffer, Bench and Pedestal Drill.

(d) *Forgework*

Should include - types of Forge and Anvil and all allied tools. Operation of Forge and safety.

(e) *Beaten Metalwork.*

Should include - use of all allied tools and processes, sheet metalwork, seams and joints.

(f) *Casting.*

Should include - a general knowledge of metals used in casting, tools, equipment and methods of casting. Types of sand, powders and specialist techniques need **not** be covered.

(g) *Surface preparation and Finishes.*

Should include - Abrasive Papers and Cloths, Wire Wool and Wire Brush. Painting and Lacquering, Bluing, Plastic Coating, Enamelling and Bronzing. A basic knowledge of Tin Plating, Galvanising and Anodising.

(h) *Heat treatments.*

Should include - Hardening and Tempering, Case Hardening and Annealing.

(i) *The manufacture, use and properties of common Metals.*

Should include - simple production of Iron and Steel, use and colour of 'common' non ferrous metals. A basic understanding of brittleness, elasticity, ductility, hardness, toughness and malleability.

(j) *Permanent and Temporary Fittings and Fixings.*

Should include - methods of Soft and Hard Soldering, Brazing and Welding. Fluxes, Rivets, Nuts, Bolts, Machine Screws, Washers, Taps and Dies, simple locking devices, spanners, wrenches and specialist screwdrivers.

(k) *Purchasing of Materials.*

Should include - an understanding of the costing and purchasing of all relevant materials, fixtures, fastening and fittings required to undertake the successful completion of the design.

(l) *Basic maintenance of tools.*

Should include - Punch, Scriber and Cold Chisel sharpening, changing of Hacksaw blades and the cleaning of 'pinned' files. Also any other tools which may need occasional maintenance, oiling and/or adjusting.

6.4 Plastics

(a) *General Bench work.*

Should include - the care and correct use of the bench, vices and all allied equipment.

(b) *The safe and correct use of common hand tools.*

Should include - a comprehensive list of all tools used in the workshop; marking out, measuring, cutting and special tools.

(c) *Workshop Machinery.*

Should include - Strip Heater, Vacuum Former, Injection Moulder, Hot Wire Cutter, Hot Air Blower, Plastics Oven, Fluidising Bath, Pedestal Drill, Disc Sander.

(d) *The manufacture, properties and common uses of Thermosetting and Thermo-plastics.*

Should include - Polystyrene, Expanded Polystyrene, Acrylic, Polypropylene, Cellulose Acetate, Polyester Resin, Urea Formaldehyde, Melamine Formaldehyde and Phenol Formaldehyde.

(e) *Surface preparation and finishes.*

Should include - planing, filing and abrasive papers, Disc sanders, Scrapers and Polishes.

(f) *The processes involved in the use of resins and glass reinforced polyester.*

Should include - laminating, mould making, gel coating, laying up, curing and trimming.

(g) *Shaping and Forming.*

Should include - bending, press forming, vacuum and drape forming, blow moulding, injection moulding, extrusion and the use of allied jigs and formers.

(h) *Joining techniques.*

Should include - cements, adhesives, heated tools and hot air/gas welding.

(i) *Basic maintenance of tools.*

Should include - all tools which may need occasional maintenance.

7

GRADE DESCRIPTORS

7.1 Graphics

The following simple statements give some indication as to what will be expected within the three grades.

Entry level 1

Candidates would be expected to:

within the Graphics unit answer questions verbally of a basic nature and use basic drawing equipment to produce lettering and line quality to a fair standard. Appropriate use of colour pencils will also produce work of a fair standard.

It is expected that candidates will accumulate in the region of 30% of the available marks to achieve a pass at this grade.

Entry level 2

Candidates would be expected to:

within the Graphics unit answer questions verbally and written and use a range of drawing equipment to produce graphical presentations of a satisfactory standard. A variety of media would be used including felts and simple texturing techniques, simple modelling and 'paste up' techniques.

It is expected that candidates will accumulate in the region of 50% of the available marks to achieve a pass at this grade.

Entry level 3

Candidates would be expected to:

within the Graphics unit answer questions both verbally and written using a satisfactory technical vocabulary. A full range of drawing equipment would be used to produce lettering, line quality and general neatness of drawing to a good standard as well as black/grey shading, texturing and variety of colouring media which should include paint as well as a variety of alternative presentation techniques.

It is expected that candidates will achieve in the region of 70% of the available marks to achieve a pass at this grade.

7.2 Wood, Metal and Plastics

The following simple statements give some indication as to what will be expected within the three grades.

Entry level 1

Candidates would be expected to:

answer questions verbally, sketch line drawings using grid paper and use colour pencils. Use scissors reasonably accurately to cut out shapes and measure in mm reasonably well. Express design ideas verbally and in simplistic pictorial form. Use tools and equipment with some help. Similarly with construction work some help would be required, the finish of the 'artefact' would be to a fair standard. Produce, with help, a simplistic evaluation.

It is expected that candidates will accumulate in the region of 30% of the available marks to achieve a pass at this grade.

Entry level 2

Candidates would be expected to:

answer questions both verbally and written, use sketching and modelling techniques to a satisfactory standard and measure accurately. Express design ideas using appropriate sketching skills to a satisfactory standard with some guidance. Use tools and equipment without constant supervision and carry out construction work with the minimum of help. The finish of the 'artefact' would be of a satisfactory standard. Provide a basic evaluation of the artefact.

It is expected that candidates will accumulate in the region of 50% of the available marks to achieve a pass at this grade.

Entry level 3

Candidates would be expected to:

answer questions both verbally and written using a satisfactory technical vocabulary, use sketching and modelling techniques to a good standard; measure and mark out to a good degree of accuracy but having more complex work checked before proceeding. Express and communicate design ideas using a variety of appropriate sketching skills to a good standard. Use tools and equipment to a good standard with limited supervision and carry out all construction work without help. The finish of the 'artefact' would be of a good standard. Provide a clear evaluation report.

It is expected that candidates will accumulate in the region of 70% of the available marks to achieve a pass at this grade.

GRAPHICAL AND MATERIAL STUDIES

Please enter below the details of all candidates and asterisk those in the sample for moderation.
 Nodwch isod fanylion yr holl ymgeiswyr a rhowch seren gyferbyn ag enwau'r rhai yn y sampl i'w safoni.

GM1

Name of Centre/Enw'r Ganolfan _____ Centre Number/Rhif y Ganolfan _____

| Candidate's Examination No. Rhif Arholiad Yr Ymgeisydd | Candidate's Name (Surname first) Enw'r Ymgeisydd (Cyfenw yn gyntaf) BLOCK CAPITALS - PRIFLYTHRENNAU | Prescribed Project Prosiect Penodol | | Centre Determined Tasks Tasgau a Bennir gan y Ganolfan | | | | | | | | | | |
|---|--|--|---|---|--|--|--|--|--|-------------------|--------------------------------|---|---------------------------|----------------------------------|
| | | Project Mark Marciau'r Prosiect (80) | Moderator's Mark Marciau'r Safonwr (80) | | | | | | | Total Cyfanswm | Average Cyfartaledd (80) | Moderator's Mark Marciau'r Safonwr (80) | Difference Gwahaniaeth | For office use Swyddfa'n unig |
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DECLARATION I certify that the work of all candidates has been carried out under the conditions required by the WJEC and that, to the best of my knowledge and belief, it has been produced by each candidate's own efforts and that the marks awarded represent the level internally standardised at this centre.

DATGANIAD Tystiaf bod gwaith yr ymgeiswyr uchod wedi ei wneud o dan amodau a bennir gan GBAC a'i fod, hyd y gwn ac y credaf, yn gynnrych ymdrechion yr ymgeisydd ei hun a bod y marciau a ddyfarnwyd yn gyson â'r lefelau a safonwyd yn fewnol yn y ganolfan hon.

| | | | |
|-----------------------|------------------------------|--------------|-------------------|
| Headteacher/Prifathro | Subject Teacher/Athro'r Pwnc | Date/Dyddiad | Moderator/Safonwr |
|-----------------------|------------------------------|--------------|-------------------|

WELSH JOINT EDUCATION COMMITTEE
Entry Level Certificate

CYD-BWYLLGOR ADDYSG CYMRU
Tystysgrif Mynediad

Graphical and Material Studies
Mark sheet - Graphics Coursework

GM2g

Centre Name: Centre No.:

Candidate's Name: Candidate's Exam. No.:

Description of Work:

Nature of work - (please tick one box) Board Prescribed Centre Determined

| | | Max. Marks | Centre Marks |
|---------------------------------|--|------------|--------------|
| Planning of Work | All work planned unaided for each topic | 9-10 | |
| | Some help given when planning topics | 7-8 | |
| | Considerable help given during topic work | 4-6 | |
| | Most work carried out with teacher guidance | 1-3 | |
| | All work of a prescribed form | 0 | |
| Presentation of Folio | Folio complete and presentable in all aspects | 9-10 | |
| | Folio complete but with some work untidy or misplaced | 7-8 | |
| | Folio order haphazard and some work unfinished | 4-6 | |
| | No recognisable Folio order and a considerable amount of work unfinished | 1-3 | |
| | Individual/unfinished sheets showing no correlation | 0 | |
| Verbal/Written Communication | Answer questions both verbally and written using a satisfactory technical vocabulary | 4-5 | |
| | Answer questions both verbally and written to a satisfactory standard | 2-3 | |
| | Answer simple questions verbally | 1 | |
| | No verbal or written skills evident | 0 | |
| Drawing clarity | All drawing work clearly understandable | 4-5 | |
| | Most drawing work understandable | 2-3 | |
| | Simplistic drawings some unreadable | 1 | |
| | Limited drawing clarity | 0 | |
| Use of Equipment | Complete competence when using all drawing equipment | 9-10 | |
| | Specific pieces of equipment cause problems | 7-8 | |
| | General capability with most drawing equipment | 4-6 | |
| | Difficulties using basic equipment | 1-3 | |
| | No drawing equipment skills evident | 0 | |
| Quality of graphical techniques | Excellent, all work of a very high standard | 12-15 | |
| | Work of a good standard | 9-11 | |
| | Work of a fair standard | 5-8 | |
| | Simplistic drawings and colouring | 1-4 | |
| | No work presented | 0 | |
| Variety of graphical techniques | A large variety of techniques used | 12-15 | |
| | A variety of techniques used | 9-11 | |
| | Limited techniques used | 5-8 | |
| | One technique used | 1-4 | |
| | No work presented | 0 | |
| Supplementary Material | A variety of alternative materials used which supplement and complement the Folio | 9-10 | |
| | Alternative material used which in most cases complements the Folio | 7-8 | |
| | Some alternative material used in a random manner | 4-6 | |
| | Little alternative material used | 1-3 | |
| | No alternative material used | 0 | |
| Total | | 80 | |

I confirm that this coursework has been produced by the above candidate

Teacher:

Date:

Graphical and Material Studies
Mark sheet - Wood/Metal/Plastics Coursework



Centre Name:

Centre No.:

Candidate's Name:

Candidate's Exam. No.:

Description of Work:

Nature of work - (please tick one box) Board Prescribed Centre Determined

| | | Max. Marks | Centre Marks |
|------------------------------|--|------------|--------------|
| Design Ideas | Totally functional design, ideas presented unaided | 9 - 10 | |
| | Functional design ideas presented with some help | 7 - 8 | |
| | Design ideas presented with considerable help | 4 - 6 | |
| | Design idea provided with candidate modifications | 1 - 3 | |
| | Drawing provided | 0 | |
| Planning | All work carried out in a correct predetermined order | 4 - 5 | |
| | Work carried out in correct order with minor deviations | 2 - 3 | |
| | Work carried out in haphazard order | 1 | |
| | Work carried out to a given plan | 0 | |
| Evaluation | A clear evaluation statement | 4 - 5 | |
| | An evaluation statement showing a basic understanding | 2 - 3 | |
| | A simplistic evaluation | 1 | |
| | No form of written evaluation | 0 | |
| Verbal/Written Communication | Answer questions both verbally and written using a satisfactory technical vocabulary | 4 - 5 | |
| | Answer questions both verbally and written to a satisfactory standard | 2 - 3 | |
| | Answer simple questions verbally | 1 | |
| | No verbal or written skills | 0 | |
| Sketching/Modelling | Use sketching and/or modelling techniques to a good standard | 4 - 5 | |
| | Use sketching and/or modelling to a reasonable standard | 2 - 3 | |
| | Sketch and colour simple line drawings | 1 | |
| | Display no sketching skills | 0 | |
| Setting and Marking out | All work unaided | 9 - 10 | |
| | Some help required in more complex areas | 7 - 8 | |
| | Help required of a general nature | 4 - 6 | |
| | Considerable help required | 1 - 3 | |
| | All work aided/no work provided | 0 | |
| Cutting, Shaping, Forming | Choose and use the correct tools and equipment to an accurate standard | 12 - 15 | |
| | Choose and use the correct tools and equipment to a reasonable standard | 9 - 11 | |
| | Use tools and equipment to an acceptable standard | 5 - 8 | |
| | Use tools and equipment to a basic standard | 1 - 4 | |
| | Almost all work aided/no work provided | 0 | |
| Joining, Combining | Carry out all work to a high standard | 12 - 15 | |
| | Carry out all work to a good standard | 9 - 11 | |
| | Carry out work to a fair standard | 5 - 8 | |
| | Carry out work to a poor standard | 1 - 4 | |
| | Almost all work aided/no work provided | 0 | |
| Finishing | Prepare and apply correct finish to a high standard | 9 - 10 | |
| | Prepare and apply correct finish to a good standard | 7 - 8 | |
| | Prepare and apply a finish to fair standard | 4 - 6 | |
| | Prepare and apply a finish to a poor standard | 1 - 3 | |
| | No preparation or finish applied | 0 | |
| Total | | 80 | |

I confirm that this coursework has been produced by the above candidate.

Teacher:

Date: