

-SQA- SCOTTISH QUALIFICATIONS AUTHORITY

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NATIONAL CERTIFICATE MODULE DESCRIPTOR

-Module Number- 7150003 **-Session-1993-94**
-Superclass- NG

-Title- DESIGN AND MAKE (HOME ECONOMICS)

-DESCRIPTION-

Purpose A general module which introduces the design process and allows a range of chosen topics to be integrated.

Preferred Entry Level No formal entry qualifications.

Outcomes The candidate should:

1. select and use relevant technical information for a design project;
2. plan the manufacture of the product;
3. manufacture, test and if necessary modify the design;
4. comply with regulations and procedures and use safe working practices specified for equipment and work areas.

Assessment Procedures Acceptable performance in this module will be satisfactory achievement of all the Performance Criteria specified for each Outcome.

The following abbreviations are used below:

PC Performance Criteria
IA Instrument of Assessment

Note: The Outcomes and PCs are mandatory and cannot be altered. (Where a range of performance is indicated, this should be regarded as an extension of the PCs and is therefore mandatory.)

**OUTCOME 1 SELECT AND USE RELEVANT TECHNICAL
INFORMATION FOR A DESIGN PROJECT**

- PCs
- (a) The purpose of a design brief is explained accurately.
 - (b) The identification of the source of relevant technical information is correct.
 - (c) A design brief is prepared which is relevant to the article being designed.
 - (d) Sketches and specifications are prepared relevant to the article being designed.

IA Project

The candidate will undertake a project on a design brief appropriate to his/her needs and interests. The candidate should provide evidence of planning and implementing the project and should report on conclusions drawn. A project file should be compiled, containing the design brief, relevant technical information, sketches and specifications, and a record of progress.

Satisfactory performance in this outcome will be that the candidate achieves all Performance Criteria correctly in terms of the selected design brief.

OUTCOME 2 PLAN THE MANUFACTURE OF THE PRODUCT

- PCs
- (a) The outline of the sequence of the steps for preparation for the manufacture of the product is accurate.
 - (b) The identification of the resources required is accurate.
 - (c) The timetable for completion of the manufacture of the product is realistic and allows sufficient time for any required alterations to the plan.

IA Assignment

The candidate will present a detailed planning sheet in written and/or graphical form.

Satisfactory performance in this Outcome will be that the candidate achieves all the Performance Criteria correctly.

OUTCOME 3 MANUFACTURE, TEST AND IF NECESSARY MODIFY THE DESIGN

- PCs
- (a) The manufacture of the article is carried out in accordance with the design specification.
 - (b) The article is tested against the design specification.
 - (c) Modifications to the design, if necessary, are accurate in terms of the design specification.

IA Project

The candidate will manufacture an article to a selected design brief. The candidate should also provide evidence of testing the article against the design specification and of modifying the design if necessary. A report on the testing and modifying should be prepared.

Satisfactory performance will be achievement of all Performance Criteria.

OUTCOME 4 COMPLY WITH REGULATIONS AND PROCEDURES AND USE SAFE WORKING PRACTICES SPECIFIED FOR EQUIPMENT AND WORK AREAS

- PCs
- (a) All necessary safety clothing and equipment are used correctly.
 - (b) The adoption of a manner appropriate to the working environment is evident.
 - (c) Tools and equipment are used safely.

IA Project (in conjunction with Outcome 3)

The candidate should be observed undertaking the project and a checklist should be maintained of his/her compliance with regulations and procedures and of his/her use of safe working practices. Where further or clearer evidence is required from the candidate to secure full evidence of ability to meet the criteria, observation of the candidate should be supplemented by questioning. Questioning would not be appropriate where observation of the candidate clearly showed the candidate's inability to meet the criteria.

Satisfactory performance will be the achievement of all the Performance Criteria.

**The following sections of the descriptor are offered as guidance.
They are not mandatory.**

CONTENT/CONTEXT

Corresponding to Outcomes 1-4:

The content should include the development of skills in problem solving techniques.

A range of design briefs should be provided appropriate to the level, needs and interests of the candidate.

Examination of the stages of the design process - how to set about solving problems - how to test ideas and identify solutions.

Determination of the factors influencing the design process - identify relevant technical information and the purpose of a design brief.

Brief writing and documentation, including;

- a record of progress
- sketches and/or specifications
- sequence of preparation
- implementation
- testing
- evaluation, making modifications if necessary.

Hygiene/safety precautions applicable to the practical activities should be an integral part of the module.

As this module develops process skills, it may be delivered in a variety of contexts. For example:

Technological Investigations: possible areas could include:

- packaging design
- school meals
- information package
- design a new fast food
- design a wheelchair for the Home Economics room
- design an aid for a disability

Design a New Food Product: develops skills in/includes information on:

- market research
- additives
- preservatives
- recipe development
- packaging
- nutrition information
- food labels
- food hygiene
- consumer testing
- nutrition analysis
- evaluation

Sports and Leisure;

- design leisure wear for a specific group
- fibres - testing - suitability
- garment design
- logos

Creative sewing: computer link sewing machine provides scope for imaginative design in traditional crafts.

SUGGESTED LEARNING AND TEACHING APPROACHES

The module activities should be experienced in an environment appropriate to the Outcomes. Candidates should be encouraged to discuss problems, exchange ideas, assist each other and make decisions. Role playing is recommended.

Candidates should have ready access to up-to-date manufacturers' catalogues, technical publications and other relevant sources of information. Exemplars should be available for the candidate to relate and compare standards.

Safety, safe practices and the care and use of equipment should be an integral part of all module activities.

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