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1. **Practical Assignment overview**

This national course project specification provides details of the assessment tasks and the evidence which candidates are expected to produce. It contains a degree of choice in terms of the way the Practical Assignment is taken forward by centres so that it fits available resources and candidates’ interests and personal strengths.

The Practical Assignment is not concerned exclusively with practical activity, but is designed to emphasise skills relating to the application of practical skills, and related knowledge and understanding to a situation that involves task management.

Candidates are provided with a brief and are expected to demonstrate attainment relating to:

- interpreting the brief
- gathering information to clarify the brief
- deciding on a specific product, or activity/event, or performance to develop
- selecting and managing materials/resources
- producing the product, or organising the activity/event or delivering the performance
- evaluating the Practical Assignment

Evidence requirements are as follows:

- a plan of action
- evidence of a product or an organised activity/event or a performance
- evidence which documents the processes underpinning the practical ‘hands-on’ activity
- evidence of the evaluation of the Practical Assignment

Copies of Units are available from the Scottish Qualifications Authority Sales Section, telephone 0141-242 2168; fax 0141-242 2244; e-mail sales@sqa.org.uk

The Scottish Qualifications Authority Helpdesk is available on 0141-242 2214.

**Note:**

Please note that individual project specifications should be read in conjunction with the relevant *Arrangements for Project-based National Courses*. The *Arrangements* document provides an overview of the Project-based National Courses for the given SQA. The guidance document, *Project-based National Courses: procedural guide for centres*, which gives full details of operational procedures, should also be used.

This specification forms part of Section F of the *Arrangements* document. It can be used until such a time that SQA advises centres that a new or revised version is available and should be used in its place.
2. **Recommended entry**

We strongly advise that candidates should have completed the component Units in the National Course prior to embarking on the Practical Assignment. However, there may well be candidates who, for whatever reason, choose to undertake the Practical Assignment on a stand-alone basis. Any such candidates who have not completed or embarked upon the National Course Units prior to undertaking the Practical Assignment should have demonstrated attainment in (and/or attained) the following qualifications:

- Standard Grade: Biology, Chemistry, Geography, Physics or Science at grade 3 or 4
- National Course: Managing Environmental Resources at Intermediate 1 or its component Units

Candidates with a limited horticultural experience might have considerable difficulties due to the breadth of the topics concerned and the need for good underpinning knowledge. This should be taken into account at candidate entry.

Candidates who achieve the National Course assessment will not be certificated for the Course until they have successfully completed the component Units.
3. **Practical Assignment briefs**

The assignment briefs from which candidates may choose are:

**Brief 1**

An organisation regularly holds plant sales in order to boost income. Given a target income of £3,000 the candidate is required to assist with the raising of a range of plants, for sale at this event.

**Brief 2**

An organisation is involved in the creation and maintenance of mixed amenity plantings in the local area. The candidate is required to assist with the production of a range of plants for use in one of these schemes.

**Note:**
Some centres may be delivering both this Course and the Course in Amenity Horticulture at Intermediate 2. It may be sensible for such centres to consider whether it would be possible to fully or partially integrate the production of plants needed for this practical assignment with the delivery of, and Practical Assignment for, the Amenity Horticulture Course at Intermediate 2.

This Practical Assignment allows candidates to develop a more holistic view of the duties and responsibilities of a gardener involved in commercial plant raising. The integrated nature of the assignment should give candidates a range of experience in plant propagation and the ability to relate this to commercial plant raising. Each brief encourages candidates to work to specified deadlines and within fixed budgets.

The Course is suitable both for those undertaking full time college-based programmes and for candidates attending on a work-based block or day release basis.
4. Outcome coverage

<table>
<thead>
<tr>
<th>Course Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit title</strong></td>
</tr>
<tr>
<td>Vegetative Propagation</td>
</tr>
<tr>
<td>Plant Production from Seed</td>
</tr>
<tr>
<td>Bedding Plant Production</td>
</tr>
</tbody>
</table>

All Practical Assignments for Project-based National Courses cover a minimum of two thirds of the outcomes from the component Units. For this project these are:

**Unit: Vegetative Propagation**
1. demonstrate knowledge and understanding of vegetative propagation
2. propagate given plants using accepted vegetative propagation techniques
3. investigate appropriate vegetative propagation techniques for specified plants

**Unit: Bedding Plant Production**
1. identify common bedding plants
2. produce a range of bedding plants from seed
3. produce bedding plants from cuttings
4. describe the production systems for growing half-hardy summer bedding plants
5. prepare a hanging basket suitable for outdoor display purposes
6. identify the important production costs in raising commercial bedding plants

**Unit: Plant Production from Seed**
1. demonstrate knowledge and understanding of the production, structure and storage of seed
2. demonstrate knowledge and understanding of seed germination and seedling growth and development
3. solve problems relating to seed requirements and seed sowing
4. perform seed sowing and seedling husbandry operations

The general outcomes for this project can be summarised as:

1. demonstrate knowledge and understanding of plant propagation techniques
2. propagate plants vegetatively and from seed
3. maintain plants after propagation
4. prepare plants for sale or planting out

It is strongly advised that candidates should have completed the assessments (or, given the seasonal nature of the Units, be on their way to doing so) for the individual component Units before undertaking the National Course assessment.
5. **Subject/occupationally-related knowledge and skills**

The Practical Assignment allows candidates to further develop and apply skills in:

- planning and organising
- use of hand tools
- working to deadlines and within fixed budgets

It also allows candidates to further develop and apply knowledge of:

- plants and plantsmanship
- the propagation and growing requirements of a range of plants
- commercial plant raising systems
6. Candidate evidence requirements and allocation of marks

General information

The three stages of the Practical Assignment for all Project-based National Courses at Intermediate 2 are:

♦ planning
♦ developing
♦ evaluating

Here we describe evidence requirements which apply to each of the three stages of the Practical Assignment for all Project-based National Courses at Intermediate 2. Where there are any specific evidence requirements relating to this Course, these are given later in this section.

Planning

Candidates must produce a 500 word (or equivalent) plan of action. The plan should include an introduction and a main body. Centres should ensure that candidates either already have, or are taught, the necessary skills to devise their own plan before they start the project.

For the introduction of the plan, candidates should:

♦ provide a rationale for selecting a particular brief
♦ interpret the brief
♦ gather information to clarify the brief
♦ define the aims and objectives of the Practical Assignment

For the main body of the plan candidates should:

♦ identify information sources
♦ identify materials and resources
♦ establish timescales for completion of stages of the Practical Assignment

The plan of action should be produced in a supervised environment although candidates may carry out the preparation beforehand. Candidates may communicate with each other when producing their plans of action, but each plan must be tailored to the candidate’s own project and the action points should relate to the work to be carried out by the individual candidate.

The work produced must always be the candidate’s own. However, teachers/lecturers are expected to provide candidates with advice, guidance and constructive criticism as necessary when they are devising their plans. It is important to note that, as the plan underpins the rest of the project, centres should ensure that no candidate proceeds to the development stage until the candidate has devised a plan that is potentially workable.

The level of support that candidates need to devise a viable plan of action will of course vary from candidate to candidate. Centres should indicate the level of support given to each candidate on the flyleaf for the project provided by the SQA. This should not inhibit centres from providing constructive comment nor the candidate from acting on their own initiative and taking on board the advice. In some cases however, if the level of support and intervention...
needed is more than that which would normally be seen as reasonable, the authenticity of the candidate’s work may be called into question.

If the level of input needed from the teacher/lecturer is above normal (for example, the quality of the plan would mean that the project would be unworkable if the plan was not revised) then candidates cannot score more than 20 of the 40 marks allowed for the planning stage.

**Developing**

Candidates must provide evidence that:

- testifies to the quality of the hands-on practical activity
- documents the processes underpinning the activity

Specific evidence requirements for this Course are given later in this section.

All of the evidence should be produced in a supervised environment. Candidates may communicate with each other but should produce work which can be clearly attributed to the candidate as being his or her own.

**Evaluating**

Candidates must produce an evaluation report which should:

- provide a brief summary of what the assignment was about
- review and update the action plan in the light of experience
- assess the effectiveness of the action plan
- summarise any unforeseen events and how they were handled
- identify knowledge and skills which have been gained and/or developed
- assess the strengths, weaknesses and quality of any hands-on activity
- assess the effectiveness of the research methods used
- determine to what extent the assignment met the original brief

The evaluation report should be 500 words (or equivalent) at Intermediate 2. Candidates may carry out the preparation for the report beforehand.

Candidates at Intermediate 2 should be allowed up to 1 hour 30 minutes to complete an evaluation (including the summary).

Candidates should be allowed to take one side of an A4 page of notes (maximum of 200 words or equivalent) which they have prepared, into the room with them. They must not be allowed to take a draft of the evaluation report into the room with them. The centre has the responsibility for ensuring that the notes brought in are the candidate’s own work.

For this activity the accommodation should be arranged to reflect centre-invigilated conditions and candidates should not be allowed to communicate with each other in any way.
Specific evidence requirements and assessment arrangements for the Practical Assignment for Plant Propagation at Intermediate 2

This Practical Assignment is subject to type 1 visiting assessment.

### Planning

| Evidence:          | Plan of action  
|                   | 500 words or equivalent  
|                   | (40 marks) |
| Conditions of National Course assessment: | Supervised |
| Who assesses it?   | Centre and SQA — plan for sample of candidates to be sent to SQA for marking* |

### Developing

| Evidence: | For hands-on activity:  
|           | Tasks associated with plant propagation  
|           | Work in progress — eg bedding plants - and completed work (photographic and/or physical evidence)  
|           | (See next page for further details)  
|           | For processes underpinning the activity:  
|           | Logbook/diary/workcharts as appropriate  
|           | (120 marks in total for this stage) |
| Conditions of National Course assessment: | Supervised |
| Who assesses it? | Subject to type 1 visiting assessment* |

### Evaluating

| Evidence: | Evaluation report — including summary.  
|           | 500 words or equivalent  
|           | (40 marks) |
| Conditions of National Course assessment: | Centre-invigilated |
| Who assesses it? | Centre and SQA — report for sample of candidates to be sent to SQA for marking* |

It is important that candidates know that they will be penalised for submitting evidence that significantly exceeds the stated word count.

* Centres should refer to *Project-based National Courses: procedural guide for centres* for full procedural details of type 1 visiting assessment.
Specific additional information and requirements

Plant Propagation: planning stage  
(total 40 marks)

This should comprise a short introduction (150 words) and the assignment plan itself (350 words). The plan must make reference to the following:

♦ work schedules  
♦ identification of other appropriate project management tools (eg work charts)

Note: total word count of 500 words (or equivalent) for planning stage.

Plant Propagation: development stage  
(total 120 marks)

Evidence

Marks allocated
Hands-on activity (work carrying out the various tasks associated with plant propagation): 60

Evidence for the hands-on activity and evidence for underpinning processes could include:

♦ appropriate project management tools  
♦ checklists  
♦ class registers  
♦ resource requisitions and receipts  
♦ photographic evidence of work in progress  
♦ examples of work such as trays of bedding plants and nursery stock

Completed work (physical and/or photographic/video evidence*) 40

Log books/work diaries/work charts 20

* Examples of completed work — for example, trays of bedding plants, nursery stock — should be available wherever possible for the visiting assessor (photographic or video evidence is acceptable if seasonality difficulties are encountered).

Candidates should draw up and use work schedules they have referenced during the planning stage.

Practical tasks should be carried out to a commercially acceptable level of competence.

Plant Propagation: evaluating stage  
(total 40 marks)

This should comprise an evaluation report of approximately 250 words accompanied by completed plans and work charts and/or completed project management tools and/or completed work schedules (approximately 250 words).

Note: total word count of 500 words (or equivalent) for evaluating stage.
7. Marking and grading for Practical Assignments with visiting assessment

The assessment evidence for this Practical Assignment is subject to visiting assessment by SQA. Centres are strongly advised to read *Project-based National Courses: procedural guide for centres* for further information about the processes and procedures for visiting assessment.

Visiting assessors will be trained by SQA to apply national standards. As candidate evidence becomes available, exemplars will be issued to centres as guidance.

Centres must mark all three stages of the Practical Assignment for each individual candidate and decide on the mark, band and grade they think should be given to that candidate. SQA will provide detailed marking instructions for centres. The SQA visiting assessor will mark all three stages for a sample of candidates.

As the Practical Assignment will be marked by centres, centres do not need to provide estimates for Practical Assignments with visiting assessment. Nor should there normally be any need for appeals as the SQA visiting assessor and the centre should have negotiated and resolved any differences of opinion during the visiting assessment process.

The internal assessor uses the same processes for deciding on marks, grades and bands as any SQA visiting assessor. The final assessment decision must be based on accurate assessment of all the available candidate evidence. No candidate will be certificated for these Practical Assignments until the assessment decision is in line with national standards.

The total mark for the Practical Assignment is 200 (this makes it easier to discriminate effectively between performances of candidates across the three stages of the assessment). These marks will be allocated as follows in *Table A*.

<table>
<thead>
<tr>
<th>Practical Assignment Stage</th>
<th>Assessment Evidence</th>
<th>Mark Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Plan of action</td>
<td>40</td>
</tr>
<tr>
<td>Developing</td>
<td>Evidence arising from the hands-on practical activity and from documenting the underpinning processes involved</td>
<td>120</td>
</tr>
<tr>
<td>Evaluating</td>
<td>Evaluation report</td>
<td>40</td>
</tr>
</tbody>
</table>

SQA will provide detailed marking instructions in addition to the information given earlier in this specification. SQA will also provide a form (Attendance Register, Form Ex 6) for submission of marks.

The internal assessors must:

♦ mark each stage of the project using the marking instructions provided by the SQA
♦ maintain a detailed record of the marks given for each of the three stages (for internal moderation purposes and for SQA visiting assessor)
♦ add the marks for each stage for the candidate to give a total mark out of 200
♦ divide that total mark by 2 to give a percentage
♦ convert the overall % mark for each candidate into a grade and band using *Table B*
Table B

<table>
<thead>
<tr>
<th>% Mark range</th>
<th>Grade</th>
<th>Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>85–100</td>
<td>A (upper)</td>
<td>1</td>
</tr>
<tr>
<td>70–84</td>
<td>A (lower)</td>
<td>2</td>
</tr>
<tr>
<td>65–69</td>
<td>B (upper)</td>
<td>3</td>
</tr>
<tr>
<td>60–64</td>
<td>B (lower)</td>
<td>4</td>
</tr>
<tr>
<td>55–59</td>
<td>C (upper)</td>
<td>5</td>
</tr>
<tr>
<td>50–54</td>
<td>C (lower)</td>
<td>6</td>
</tr>
<tr>
<td>45–49</td>
<td>Fail (near miss)</td>
<td>7</td>
</tr>
<tr>
<td>40–44</td>
<td>Fail</td>
<td>8</td>
</tr>
<tr>
<td>Less than 40</td>
<td>Fail</td>
<td>9</td>
</tr>
</tbody>
</table>

♦ Check the grade given to candidate against the grade descriptions given in Table C, using the grade descriptions as a touchstone. The final grade should reflect the grade descriptions.

♦ Provide marks, bands and grades for each candidate.

Although it is possible for a candidate to be given a band 7, 8 or 9 which would be classified as ‘fail’, this would not appear on the certificate. If a band 7 is given, the centre should ensure that it gives feedback to the candidate for remediation purposes.
# Grade Descriptions for a Practical Assignment at Intermediate 2

## Table C

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content and scope appropriate for Intermediate 2</strong></td>
<td><strong>Looking at the evidence as a whole:</strong></td>
<td><strong>Looking at the evidence as a whole:</strong></td>
</tr>
<tr>
<td><strong>A Practical Assignment at Grade A:</strong></td>
<td><strong>A Practical Assignment at Grade B:</strong></td>
<td><strong>A Practical Assignment at Grade C:</strong></td>
</tr>
<tr>
<td>• produces high quality, clearly inter-related, documented and process or product-related evidence for the three essential phases of planning, developing and evaluating</td>
<td>• produces good quality, inter-related, documented and process or product-related evidence for the three essential phases of planning, developing and evaluating</td>
<td>• produces adequate, fairly well inter-related, documented and process or product-related evidence, for the three essential phases of planning, developing and evaluating</td>
</tr>
<tr>
<td>• is an exercise to which candidates have brought an accurate, innovative and enthusiastic interpretation of the Practical Assignment brief</td>
<td>• is an exercise to which candidates have brought an accurate and fairly innovative and enthusiastic interpretation of the Practical Assignment brief</td>
<td>• an exercise to which candidates have brought an acceptable interpretation of the Practical Assignment brief</td>
</tr>
<tr>
<td>• is tightly structured, relevant to the content of the Units and displays a high level of subject/occupational expertise</td>
<td>• is well structured, relevant to the content of the Units and displays a good level of subject/occupational expertise</td>
<td>• is reasonably well structured, relevant to the content of the Units and displays an adequate level of subject/occupational expertise</td>
</tr>
<tr>
<td>• applies integrated and consolidated knowledge, understanding and skills effectively and consistently from the Course Units to situations and/or design specifications with varying degrees of complexity</td>
<td>• applies integrated and consolidated knowledge, understanding and skills fairly effectively and consistently from the Course Units to situations and/or design specifications with varying degrees of complexity</td>
<td>• applies integrated and consolidated knowledge, understanding and skills from the Course Units with some lack of continuity and consistency</td>
</tr>
</tbody>
</table>
**Internal moderation**

The internal moderator should:

- Oversee the internal moderation process to ensure consistency of judgement or *reliability of assessment*. This process will vary according to the nature of the evidence and the number of assessors and sites. It is likely to involve agreement trials and/or Marker standardisation. The internal Moderator should normally be a specialist in the subject. (It may be helpful in the first few years of these Project-based National Courses to do a cross-subject moderation of samples of like parts such as the plans of action and evaluation reports. Such additional cross-subject internal moderation is, however, not mandatory.)

- Ensure that all candidates have been fairly treated. For example, some candidates may have produced more fully integrated projects than others but have similar overall marks/bands; this may lead to a reconsideration of marking of the individual components for some candidates.

- Oversee the finalisation of marks, bands and grades and submission of candidate evidence for sample candidates.

(See *Guide to Assessment and Quality Assurance for Colleges of Further Education* or *Guide to Assessment and Quality Assurance for Secondary Schools*, SQA December 2001 for further information relating to internal moderation. A guide to good practice for internal moderation is also under development.)

**Submitting candidate evidence to SQA**

Specific information on this part of the process is available to centres in *Project-based National Courses: procedural guide for centres*. Where materials have to be sent to SQA for marking you will be provided with any necessary packaging materials.

The following must be sent to SQA for the Practical Assignment for a sample of candidates:

- plan of action
- evaluation report

**Note:** In addition, centres will be expected to submit all notes used by the sample of candidates during write-up sessions.
8. Ensuring evidence is authentic

The following methods should be used to ensure that the evidence produced by a given candidate is all their own work. These methods are for use outwith any situation where the candidate’s work will be produced under supervised or invigilated conditions already stipulated by the SQA (eg the plan of action and the evaluation).

♦ **Work plans:**
  Should be of a good quality, neat and well presented. Plans should contain the following information: candidate name; resource requirements; labour requirements; timeliness of all operations. Plans should be accompanied by details of resource requisitions, costings etc.

♦ **Practical work:**
  Should be teacher/lecturer supervised at all times. Observations of practical work should be recorded regularly on checklists and candidates should keep a record of all practical work carried out.
9. Investigating tools

Candidates may want to make use of the following information sources during the Practical Assignment:

Information sources

- *Spon's Landscape Work and External Price Book*
- *The Modern Nurseryman*, Stanley and Toogood
- *Hillier’s Manual of Trees and Shrubs*
- *Modern Nursery Stock Production*, Lila Dick
- *Plant Propagation: Principles and Practice*, Hartmann, Kester, Davies and Geneve
- *Plants from Test Tubes*, Kyte and Kleyn
- professional seed catalogues
- professional plant catalogues
- internet
- video
- research reports — Horticultural Development Council
- technical/professional/trade journals
- television programmes
References supplied by candidates

Please note that it is legitimate for candidates to quote from information sources such as articles (in print or stored electronically) or books. Such quotations must be placed within quotation marks followed by the reference, including the chapter and/or section and page number. Texts referred to should be included in the bibliography.

The following format for references should be used:

**Books**
Author’s surname, followed by forename or initials, title of book (in italics or underlined), place of publication, name of publisher, year of publication.

For example:

**Articles**
Author’s surname, followed by forename or initials, title of the article (in inverted commas), title of the periodical (underlined or in italics), volume number, part number, year of publication, page number(s).

For example:

**Maps and Diagrams**
Sources should be given on each map and diagram and should be stated in the same format as for books and articles, as appropriate.

For example:
Microsoft Encarta 1997

**Internet**
If a website has been used then the address (URL) must be disclosed.

For example:
[www.sqa.org.uk](http://www.sqa.org.uk)

It is important to note that unacknowledged copying will be penalised, usually by cancellation of the candidate entry.
10. Materials and resources

Candidates are expected to select from the following materials and resources as appropriate.

A designated plant propagation unit of a commercial quality including:

- seed germination facilities
- growth room
- mist propagation bench
- heated glasshouses
- hardening-off facilities
- cold frames
- lining out area
- tree or shrub nursery
- work benches
- sun tunnels
- fog units
- plants
- seeds
- a range of growing media
- fertilizers
11. Core Skills

It is possible that successful attainment of this Course would lead to the automatic certification of particular Core Skills or Core Skill components. A final statement will be provided at a later date by the Scottish Qualifications Authority once full validation procedures are complete.

It should be noted that this project, in common with other Project-based Courses, follows the planning/developing/evaluating cycle. As a result of this, it is likely that successful completion of the project will lead to automatic certification of the Problem Solving Core Skill at Intermediate 2. The final Core Skills statement, as above, will confirm this.