

National Unit Specification: General Information

UNIT Numeracy (Access 2)

NUMBER D01C 08

COURSE

SUMMARY

This unit seeks to develop skills in reading and communicating basic graphical information and performing basic numerical calculations in familiar everyday contexts.

OUTCOMES

- 1 Read and use a basic scale.
- 2 Identify basic graphical information.
- 3 Communicate basic graphical information with teacher/lecturer support.
- 4 Apply a range of basic numerical skills in familiar everyday contexts.

RECOMMENDED ENTRY

Entry is at the discretion of the centre.

CREDIT VALUE

1 Credit at Access 2.

CORE SKILLS

Information on the automatic certification of core skills is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

The attainment of this unit will lead to the automatic award of:

- Numeracy at Access 2

Administrative Information

Superclass: RB

Publication date: December 1998

Source: Scottish Qualifications Authority

Version: 01

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National unit specification: statement of standards

UNIT Numeracy (Access 2)

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the Scottish Qualifications Authority.

OUTCOME 1

Read and use a basic scale.

Performance Criteria

a) Read and use a basic scale to the nearest marked number.

Note on range for the outcome

Basic scale: scale where every division is numbered.

Evidence Requirements

Oral, written and/or performance evidence that the candidate can either:

- read and use a basic scale on a familiar measuring instrument to measure to the nearest marked number.

OR

- read and use a basic scale on a graph to determine quantities to the nearest marked number.

The candidate must use a basic scale on two occasions.

OUTCOME 2

Identify basic graphical information.

Performance Criteria

- a) Identify information in a basic table.
b) Identify information in a basic diagram.

Note on range for the outcome

Basic table: a table with one category of information.

Basic diagram: a diagram of basic 2D shapes or basic maps.

Evidence Requirements

Oral, written and/or performance evidence that the candidate can make one correct identification of information from a table and one from a diagram.

National unit specification: statement of standards (cont)

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OUTCOME 3

Communicate basic graphical information with teacher/lecturer support.

Performance Criteria

- a) Communicate information in a basic table.
- b) Communicate information in a basic diagram.

Note on range for the outcome

Form of communication: specified by the teacher/lecturer and partially completed.

Evidence Requirements

Evidence that the candidate can communicate one piece of information by completing a given table and one by completing a given diagram.

OUTCOME 4

Apply a range of basic numerical skills in familiar everyday contexts.

Performance Criteria

- a) Recognise and use some basic numerical notation.
- b) Decide the operation to be carried out.
- c) Carry out basic numerical calculations.

Evidence Requirements

Oral, written and/or performance evidence that the candidate can:

- recognise and use notations for two of: whole numbers, decimals, simple fractions (ie, $\frac{1}{4}$, $\frac{1}{2}$) as applied in everyday measurement
- carry out calculations for each of addition, subtraction, simple multiplication and simple division of whole numbers.

Each calculation should involve one operation.

National unit specification: support notes

UNIT Numeracy (Access 2)

This part of the unit specification is offered as guidance. None of the sections of the support notes is mandatory.

GUIDANCE ON CONTENT AND CONTEXT

The content and context for this core skills unit should be appropriate to the personal needs of the candidate and set in familiar, everyday situations.

Core skills units are stated at five levels of attainment, with activities becoming progressively more demanding in breadth and depth, and in the extent of individual autonomy required. The appendix to this unit shows the relationship between the levels in Numeracy.

This unit is designed to develop numeracy skills at a basic, introductory level.

Outcome 1

At this level, scales on measuring instruments and graphs should be clearly marked with every division numbered. Candidates should read scales to the nearest marked division. For measuring instruments, rulers, measuring tapes, metre sticks could be marked in cm and read to the nearest cm, bathroom scales could be marked in kg and read to the nearest kg and thermometers could be marked to the nearest °C and read to the nearest °C. Suitable activities could be personal measurement of height, weight or temperature. The graphs should be simple line graphs. They should be marked and read to the nearest division.

Outcome 2

At this level, information should be clearly presented and set in a context familiar to the candidate. An example of a suitable table could be bus or train departure or arrival times; bus or train fares according to distance; or cost of hiring videos. A basic diagram could be a simple plan of a room or houses or shops in a street.

Outcome 3

At this level and above, the candidate should be familiar with simple tables and diagrams commonly used in everyday situations. An example of a suitable table could be bus departure times where the bus frequency is given and the tutor draws up a timetable giving the first few times and the candidate completes the timetable. Another example could be a conversion table for British and Continental shoe sizes partially completed by the teacher/lecturer to be fully completed by the candidate. Candidates could complete basic room plans or street plans with teacher/lecturer support.

National unit specification: support notes (cont)

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Outcome 4

At this level and above, the candidate should be able to:

- add and subtract whole numbers
- multiply and divide whole numbers
- understand the basic decimal and fraction systems.

The candidate should be instructed on the method of calculation, ie. mental, written or calculator, depending on the difficulty of the calculation. This outcome could sit well in a shopping context where the candidate would be familiar with basic decimal and whole number notation and the operations could be demonstrated on whole numbers ie. complete pounds or pence. It may be appropriate to integrate Outcome 1 with Outcome 4 in a shopping context. Calculations should be checked against estimates or by using the inverse algorithm. Evidence of checking procedures is not required.

The use of calculators

The sensible use of numeric calculators should be encouraged. Tables, graphs, charts and diagrams should not be drawn using IT tools at this level.

GUIDANCE ON TEACHING AND LEARNING APPROACHES

The learning and teaching approaches should encourage candidates to identify evidence of their attainment and to transfer the skills acquired to other contexts.

Where appropriate, numeracy topics should be taught and skills developed in real-life contexts. Candidates should be encouraged throughout the unit to make use of skills in mental and written calculations, to make efficient use of calculators and to apply the strategy of checking. The outcomes should be demonstrated in situations which the candidate may reasonably be expected to encounter everyday.

This unit should be activity based with opportunities to develop the skills in real or simulated situations.

Where the Numeracy unit is being combined with another unit to create an enhanced learning and teaching programme, care must be taken to ensure that all aspects of each unit are covered and adequate time must be allowed for the coverage of both units. Such a programme would create opportunities to consolidate the skills gained in this unit.

National unit specification: support note (cont)

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GUIDANCE ON APPROACHES TO ASSESSMENT

The statement of satisfactory performance for each outcome indicates the minimum required for the purpose of summative assessment. However, the number of activities undertaken by the candidate in the course of the unit should not be limited to those specified for assessment purposes. In awarding the candidate Numeracy at Access 2 the teacher/lecturer must be confident that the candidate will be able to demonstrate these skills in any appropriate context and set of circumstances.

Teachers/lecturers must remember to distinguish between their differing roles in formative and summative assessment. In the former, as much help and support as is required by the candidate may legitimately be given by the teacher/lecturer. Tasks which are used to provide evidence for summative assessment must be completed by the candidate unaided.

Evidence of attainment should be gathered, wherever possible, from integrated activities whether this unit is being studied as a stand alone unit or in combination with other units in the candidate's programme. Where an integrated approach to assessment is adopted, teachers/lecturers should provide a matrix of evidence which shows clearly where each PC is covered. This will be necessary for internal and external verification.

SPECIAL NEEDS

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements* (SQA, 1998).

**Numeracy core skills units
Progression chart**

Appendix

Skill	Access 2	Access 3	Intermediate 1	Intermediate 2	Higher
Use graphical information	<p>Read and use a basic scale.</p> <p>Identify basic graphical information.</p> <p>Communicate basic graphical information with teacher/lecturer support.</p>	<p>Read and use a simple scale.</p> <p>Extract simple graphical information.</p> <p>Communicate simple graphical information.</p>	<p>Read and use a straightforward scale.</p> <p>Interpret straightforward graphical information.</p> <p>Communicate straightforward graphical information.</p>	<p>Interpret graphical information when presented as a number of related but straightforward forms or in a complex form.</p> <p>Select and use appropriate forms of table, graph, chart or diagram to communicate information.</p>	<p>Analyse and interpret graphical information.</p> <p>Select and use appropriate graphical forms to communicate information.</p>
Apply numerical skills	<p>Apply a range of basic numerical skills in familiar everyday contexts.</p>	<p>Apply a range of basic numerical skills in everyday contexts.</p>	<p>Apply a range of basic numerical skills in everyday contexts.</p>	<p>Apply a wide range of numerical skills.</p>	<p>Apply in combination a wide range of numerical and statistical skills.</p>