

## National Unit Specification: general information

**UNIT** Minerals and Rocks (Higher)

**NUMBER** D8XK 12

**COURSE** Geology (H)

### SUMMARY

This unit seeks to develop knowledge and understanding of the properties of minerals and rocks. The unit will develop skills in interpreting the features of rocks seen in the field.

### OUTCOMES

- 1 Demonstrate knowledge and understanding related to minerals and rocks.
- 2 Solve problems related to minerals and rocks.

### RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained Intermediate 2 Geology or its component units. It would, however, be possible for able students to enter the course with no prior knowledge of geology. Previous experience of a science or Geography at Credit or Higher Level would be advantageous.

### CREDIT VALUE

1 credit at Higher.

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### Administrative Information

**Superclass:** RD

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## National Unit Specification: general information (cont)

**UNIT** Minerals and Rocks (Higher)

### CORE SKILLS

This unit gives automatic certification of the following:

<b>Complete core skills for the unit</b>	None	
<b>Additional core skills components for the unit</b>	Critical Thinking	Higher
	Using Graphical Information	Higher

Additional information about core skills is published in the *Catalogue of Core Skills in National Qualifications* (SQA, 2001).

## **National Unit Specification: statement of standards**

### **UNIT Minerals and Rocks (Higher)**

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**

Demonstrate knowledge and understanding related to minerals and rocks.

##### **Performance criteria**

- (a) The description of atomic properties and atomic bonding is correct
- (b) The chemical classification of minerals is correct
- (c) The properties of minerals are correctly related to their atomic structures
- (d) The description of the structures and modes of formation of igneous, sedimentary and metamorphic rocks is correct.

##### **Evidence requirements**

Evidence is produced from a closed book test which demonstrates successful achievement of all of the above performance criteria.

#### **OUTCOME 2**

Solve problems related to minerals and rocks.

##### **Performance criteria**

- (a) Relevant information is selected and presented in an appropriate format
- (b) Information is accurately processed using calculations where appropriate
- (c) Valid conclusions are drawn and explanations given are supported by evidence
- (d) Predictions and generalisations are made based on the available evidence.

##### **Evidence requirements**

Evidence is produced from a closed book test which demonstrates successful achievement of all of the above performance criteria, including the interpretation and communication of graphical information at the appropriate level. With reference to PCs c and d, the candidate's answers must include valid conclusions and explanations based on an evaluation of supporting evidence.

## National Unit Specification: support notes

### UNIT Minerals and Rocks (Higher)

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this unit, and on learning and teaching approaches, is given in the table in the Content section of the course details.

### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Outcomes 1 and 2 will be assessed by means of an integrated end of unit assessment. The end of unit assessment has no specified mark allocation. However, the following approximate percentage mark allocations are recommended. (Note that the numbers given express a ratio of marks allocated. Candidates would not be expected to undertake test items with the actual mark allocations shown.)

#### **Outcome 1 (knowledge and understanding) 60%**

*PC:*

- |   |      |
|---|------|
| (a) Atomic properties and bonding                         | (4)  |
| (b) Chemical classification of minerals                   | (4)  |
| (c) Mineral properties related to their atomic structures | (8)  |
| (d) Rocks (structures and modes of formation).            |      |
| Igneous rocks.  | (16) |
| Sedimentary rocks.  | (16) |
| Metamorphic rocks.  | (12) |

#### **Outcome 2 (problem solving) 40%**

*PC:*

- |   |      |
|---|------|
| (a) Selecting and presenting information    | (5)  |
| (b) Processing information                  | (10) |
| (c) Drawing conclusions and explaining      | (15) |
| (d) Making predictions and generalisations. | (10) |

Test items should be constructed to allow candidates to generate evidence relating to the performance criteria as follows:

- Selecting and presenting information
  - sources of information include text, tables, charts, graphs, maps, diagrams
  - formats of presentation include written responses, tables, graphs, diagrams
- Calculations include percentages, averages and ratios. Significant figures, rounding and units should be used appropriately
- Conclusions drawn should include some justification and explanations should be supported by evidence
- From given situations, candidates should be able to predict and generalise eg by predicting the effects of change on structures, by generalising a relationship between pebble shape and water flow.

## **National Unit Specification: support notes**

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### **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 Arrangements* (SQA, 2001).