



PROBLEM SOLVING
SCQF Level 6
40 Hour Unit (F3GD 12)

CORE SKILLS UNIT

What are Core Skills?

Core Skills are skills and abilities that everyone uses in their family and personal life, at work, in public, in the community, and in education and training.

The Core Skills are:

- ◆ Communication
- ◆ Numeracy
- ◆ Information and Communication Technology
- ◆ Problem Solving
- ◆ Working with Others

They are important because they help you to be effective in almost everything you do. That's also why employers value them.

Improving your Core Skills helps you cope with today's quickly changing world. It will make you more confident, help you to learn more easily, and improve your career prospects.

What is this Core Skills Unit about?

This Unit is about solving complex problems in everyday settings.

What should I know or be able to do before I start?

You may have achieved the Core Skills Unit in Problem Solving at SCQF level 5. Alternatively, you may be able to show that you have similar experience of solving problems, for example tackling the causes of falling membership numbers at a club; devising a personal revision and study plan; investigating the causes of wastage in your business and implementing a plan to reduce wastage.

What do I need to do?

You will:

- ◆ identify the factors affecting a complex situation or issue (for example, what are the causes of the problem, why has the situation arisen, who and what is involved, and what is the effect of the problem)
- ◆ assess the relevance and comparative importance of these factors
- ◆ analyse and identify possible ways of solving the problem
- ◆ select and justify your approach to solve the problem
- ◆ work out an action plan to deal with the problem (for example, identify and decide on the steps involved and the order in which they should be done; which steps can be undertaken simultaneously; who should carry out each step; any limitations you have to work within; managing time; managing people)
- ◆ choose and obtain the resources you will need to carry out the action plan (for example, people, equipment, and physical resources) and consider the procedures for obtaining these
- ◆ carry out the action plan, reviewing and amending it continuously, as appropriate
- ◆ choose criteria by which you can judge how effective every aspect of your problem solving activity has been (for example, was your original analysis of causes correct, did your action plan address all these factors, did the action plan keep to the specified timescale, did everyone carry out their allotted steps, did you correctly identify the resources and best ways of getting them, did you use resources effectively, did the action plan keep

within budget, and did any amendments to the action plan improve its effectiveness)

- ◆ gather evidence, relevant to your chosen criteria, to judge the effectiveness of all aspects of your problem solving activity (for example, by making comparisons with other systems, market research, product testing, and quantitative and qualitative research)
- ◆ decide how effective every aspect of your problem solving activity has been in resolving the situation or issue, justifying your conclusions from the evidence you have gathered
- ◆ make recommendations for possible improvements to solving similar problems in future (for example, the need for fuller initial investigation; the use of an alternative strategy)

How do I get this Unit?

You will need to show that you have all the skills in the Unit.

You will investigate a problem, draw up and carry out an action plan to solve the problem, and finally review how effective your problem solving activity has been.

You may have written evidence, such as notes of discussions with others, the action plan itself, and records of steps you undertook and your thoughts on how well things went. In addition, your assessor may ask you questions and make notes or a recording of what you have said.

What might this involve?

Here are some examples of problems you might solve:

- ◆ Your local community centre is considering setting up a pre-school playgroup on weekday mornings. You have been asked to assess the feasibility of this and produce a report outlining the factors to be taken into consideration and the likely costs of running the facility.
- ◆ You are planning to go on to higher education once you have completed your school/college course. You will research the degree options, taking account of the credit value of your current qualifications and how they relate to courses available and your long-term career plan. You will research and analyse various methods of funding open to you. You will select a higher education course and justify your selection based on course content, accommodation costs, duration of degree course, and affordability.
- ◆ The social enterprise using Fair Trade products at your college is losing customers. You are asked to investigate the reasons for this. You will make some hypotheses as to reasons this, for example products are out of date, local companies are undercutting you on price, your supply times are too long so your enterprise has limited stock, and the service from the students is not as good as at local outlets. You will devise a strategy for investigating the validity of these hypotheses and, based on the evidence you gather, produce a report with recommendations on future actions by the social enterprise.

What can I do next?

You could move on to the other Core Skills Units in:

- ◆ Communication
- ◆ Information and Communication Technology
- ◆ Numeracy
- ◆ Working with Others

Your tutor can advise you about this.

Guidance for tutors

At SCQF level 6 learners are expected to work with complex problems with a high degree of independence and initiative. The factors affecting the situation will be complex and may be unfamiliar to the learner. The relationship between these factors will require to be clarified.

There are three stages to the problem solving process that are assessed by this Unit: the critical thinking stage, the planning and organising stage, and the reviewing and evaluating stage.

Critical thinking

Learners will identify and analyse the factors affecting a situation or issue. They may have to make decisions on competing demands, for example time, quality, and cost. The learners will then evaluate the situation and develop and justify an approach to deal with it. At this level learners will need to undertake research from various sources to analyse the problem and support the decision on an appropriate approach.

Planning and organising

Learners will develop an action plan to deal with the factors affecting the situation or issue. The learners will firstly identify the steps involved and then devise the action plan, making clear the order in which the steps need to be carried out and the relationship between them. The action plan may include steps that can be carried out simultaneously. Learners will identify who is to carry out the steps. Learners will identify resources to be used; these may include equipment, information, people, and money.

Reviewing and evaluating

On completion of the action plan, the learners will decide on criteria to judge how effective each stage of the problem solving activity has been. Learners may also consider the effectiveness of any amendments made to the action plan during its implementation.

Learners will gather evidence to support their evaluation. They will consider the evidence, make their evaluation based on this, and will then suggest modifications or alternatives for improving future problem solving activities. Learners will justify their evaluation and provide recommendations from the evidence they have gathered.

Learners must use only one problem solving activity to prove that they can meet all of the requirements of the Unit. They should not gather evidence from different problem solving activities.

Further guidance is available in the accompanying Assessment Support Pack.

Disabled learners and/or those with additional support needs

The additional support needs of individual learners should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

ADMINISTRATIVE INFORMATION

Credit value

6 SCQF credit points (1 SQA credit) at SCQF level 6



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