



**PROBLEM SOLVING**  
**SCQF Level 2**  
**40 Hour Unit (F3GD 08)**

# **CORE SKILLS UNIT**

## **ASSESSMENT SUPPORT PACK**

### **Part 1: Information for tutors**

#### **What is involved?**

Problem Solving is about using skills to solve problems in personal, workplace, social, and educational situations. The focus of the Unit is on transferable problem solving skills. The Unit can be broken down into the following:

- ◆ critical thinking
- ◆ planning and organising
- ◆ reviewing and evaluating

This Unit is designed for delivery in schools, colleges, workplaces, community, and other learning environments. At this level, learners are expected to be able to work with very simple problems and will require support to carry out the work involved. The Unit is designed for those who have little or no skill and experience in using problem solving skills.

Learner motivation can be maximised by making the problem solving activities as relevant as possible to the learner. The activities should relate to the learner's personal, workplace, social, or educational situation. In addition, integration of the problem solving activities with those of other SQA qualifications being undertaken should be explored. For example, where a learner is undertaking other National Qualifications, motivation for problem solving can be increased if the activities are related to these National Qualifications and the learner can see the direct relevance of problem solving. If you do decide to adopt this approach, separate records of assessment

decisions must be kept for this Unit and evidence for this Unit should be clearly accessible.

## Assessment and evidence

Learners at SCQF level 2 are required to deal with finding a solution to a very simple situation or issue in a context that is simple and familiar to them. They will need support to carry out the problem solving activity.

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.

You should try to identify naturally occurring opportunities for assessment where possible. For learners who are also working towards vocational Units or subject-specific Units, opportunities for assessment of problem solving skills could arise while completing tasks which provide evidence for both the vocational/subject-specific Unit and this Unit. Some of the exemplars in this pack could be used or contextualised for this purpose.

Assessment is likely to be by one or more of:

- ◆ written tasks
- ◆ oral questioning
- ◆ observation

Assessment of the Unit should be based as far as possible on the everyday interests of the learner. You can find guidance in Part 2 of this pack on suitable assessment examples.

When you are assessing by observation, it is essential to keep a detailed checklist. When you are assessing by oral questioning, you must keep a copy of the questions asked and the answers given.

All items of evidence must be signed and dated by you.

Part 3 of this pack supplies exemplar forms that you can use to record successful completion of each stage of the assessment. You can sign and date these to keep a record of the learner's progress.

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**

You will support learners to recognise some of the main factors affecting a very simple situation or issue in a context that is familiar to them. There will be a small number of obvious variables and the relationship between these variables will be clear to the learners. With your support learners will decide on a course of action to solve the problem, basing this on their own experience.

### **Planning and organising**

You will support learners in deciding on a course of action and in preparing an action plan to solve the problem. At this level the action plan should include a small number of clear steps. You should discuss resources with the learners and these should be selected from a familiar range appropriate to the problem solving activity. Resources might include sources of information, set procedures, people, equipment and physical resources. Once the action plan has been worked out you will support the learners in carrying it out.

### **Reviewing and evaluating**

On completion of the problem solving activity you will support the learners in identifying the strengths and weaknesses of their action plan. You should use simple, given criteria for this and encourage learners to be aware that the skills they have used in solving this problem are transferable to other situations or issues in the wider context of life. Examples of criteria you might use are keeping within the time allocation, using appropriate resources, and keeping within a budget.

Evidence could take the form of a log of the steps undertaken. You should retain other supporting evidence, eg notes of discussions, minutes or records of meetings, questionnaires, and observation checklists. Examples are given in Part 3.

## Guidance on the Unit

### What learners need to know or be able to do

The Unit states that learners will:

- ◆ recognise some of the main factors that affect a very simple situation or issue (eg what are the causes of the problem and why has the situation arisen)
- ◆ decide on a course of action to deal with the problem, asking for help if they need it
- ◆ work out some steps for an action plan (eg who will do what, and when will they do it)
- ◆ choose what they need to carry out the action plan (eg equipment, information, money, or help from other people)
- ◆ carry out the action plan
- ◆ decide how good their action plan was and how well it solved the problem, using a checklist suggested by their tutor

Assessment guidance, together with some suggested activities, is contained in Part 2.

The notes contained in the following paragraphs provide general guidance on each of the three stages.

## Critical thinking

Learners will be able to demonstrate their ability, with support, to apply critical thinking to the first stage of the problem solving process. They will be able to investigate and analyse a very simple situation or issue to identify some of the main factors that affect the problem. These factors may include identifying the causes of the problem, looking at why the situation has arisen, and identifying who is involved. Learners will need to know what resources are available to them so they can carry out their action plan. They should be aware of time constraints and any other limitations. Resources may include information, money, equipment, and help from other people.

## Planning and organising

Learners will be able to use the results of their critical thinking, with support, to work out an action plan to deal with the problem. In the action plan learners will be able to clearly identify what steps need to be carried out, who should do them, and the order in which they need to be carried out. Learners will be able to identify the appropriate resources required and will indicate a timescale to be followed. When the action plan is in place, learners should then be able to put it into practice.

## Reviewing and evaluating

Once all the steps identified in the action plan have been completed, learners will be able to decide, with support, on the effectiveness of the action plan. Simple criteria for evaluating the overall success of the action plan should be given by the tutor. These may include keeping to a timescale and using appropriate resources. Learners should be able to focus on the strengths and weaknesses of what they have done in light of the chosen criteria.

## Gathering evidence

Learners must use only one problem solving activity to prove that they can meet the requirements of the Unit. They should not gather evidence from different problem solving activities. At this level learners will need support throughout. It may be appropriate for you to gather written evidence produced by learners while carrying out the problem solving activity. However, written evidence is not essential for this Unit and is inappropriate if it disadvantages the learner. You may wish instead to use oral questioning. This requires you to create and complete record sheets comprising a checklist, questions asked, and the learner's responses.

From the learner's point of view, it is useful to have the means of keeping all the work of this Unit together. You can help here by creating and providing a workbook that includes all the evidence-gathering items. An alternative would be to provide worksheets that can be made into a portfolio.

If you have chosen to integrate the problem solving work with that of other Units being undertaken by the learners, it may be possible to assess the problem solving as part of a larger single activity. In this case you must keep separate records for this Unit.

The Unit requires learners to investigate a problem (which could be in a personal, workplace, social, or educational situation), draw up and carry out an action plan to solve the problem, and finally review how effective their action plan has been.

This may be achieved in many ways. Some typical problem solving activities might be:

- ◆ organising a birthday celebration for a friend, fellow student or colleague, taking account of what this person would like to do and the budget available
- ◆ arranging for a friend to come along to a group that the learner is a member of, to talk about his/her charity work overseas
- ◆ working out a study plan for revision before an examination
- ◆ the learner rearranging his/her own work area to make it easier to carry out his/her work

## 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](http://www.sqa.org.uk/assessmentarrangements).

## Part 2: Assessment guidance

You can use the exemplar assessments given in this section in several ways:

- ◆ to help identify the type and amount of evidence that the learner needs to produce
- ◆ to help identify the level of complexity in evidence required for the Core Skill at this level
- ◆ to help you create an assessment task related to the learner's own situation

Some possible contexts for the problem solving activity are suggested overleaf. Part 3 contains generic exemplar record sheets and assessment checklists that you may use as they are. However, you may also adapt these to reflect the detail of the problem solving activity.

## Using skills to solve a very simple problem

### Contexts

#### Personal/social context

The learner is asked to solve the following problem:

Parts of the town centre where you live are to be closed for road repairs. This means that bus times and bus routes will be changed while the work takes place. Find out the new times and bus stops for the buses that you will need to take.

Here are some of the steps within the action plan that the learner might have to carry out:

- 1 Make a list of the buses you normally take.
- 2 Make a list of the times you take them.
- 3 Find out where to get the information about the changes to the timetable.
- 4 Look at the new bus routes and decide which stops are best for you.
- 5 Look at the new times and decide which are best for you.
- 6 Make a note of what you have found.
- 7 Make a second copy of this so you have a copy with you and can leave another copy at home.

#### Educational context

The learner is asked to solve the following problem:

You have been at college for several weeks now and have built up a considerable amount of notes, books, and other equipment for your different classes. Decide what you need to take with you each day and make a chart to show this information clearly.

Here are some of the steps within the action plan that the learner might have to carry out:

- 1 Look at your timetable for the week and make a note of what you need each day.
- 2 Organise your materials for each class.
- 3 Make a new timetable, leaving space to note on it the things you need to take to college.
- 4 Write a note on your new timetable to show what you need to take each day.

- 5 Remember to note where some things are needed on more than one day.
- 6 Label your college materials with the days they are required.
- 7 Review how you got on after your first week.

### Workplace context

The learner is asked to solve the following problem:

You work in a business with 20 employees. People have moved to different offices and work areas, and the receptionist is complaining that the information on where staff are based is out of date. You make up a list of personnel, their new locations, and their e-mail and telephone extension numbers.

Here are some of the steps within the action plan that the learner might have to carry out:

- 1 Get a list of all the people who work in your organisation.
- 2 Draw up a form asking for information about office/workplace, telephone extension, and e-mail.
- 3 Distribute the forms with a date for their return.
- 4 Collect the forms and check you have all of them back.
- 5 Check all the forms are complete.
- 6 Sort through the information.
- 7 Make up a new list.
- 8 Give the list to the receptionist.

## Stages

As the tutor, you might find it useful to think about these points when you are managing the assessment.

### Critical thinking: Stage 1 of the problem solving activity

- ◆ You could encourage the learner to think of situations where they have been called upon to solve problems.
- ◆ You could explain the problem solving process in the light of the learner's prior experiences.
- ◆ You could explain how the Unit will be assessed, eg by the learner keeping logs and/or providing written notes.
- ◆ You could observe and ask questions,
- ◆ The learner, with your support, will consider the problem solving activity and identify factors that affect the situation, eg what are the causes of the situation, who is involved, and why has the situation arisen.
- ◆ The learner, with your support and help, and based on previous experience, will decide on a course of action to solve the problem.

### Planning and organising: Stage 2 of the problem solving activity

- ◆ You could help the learner to work out an action plan of steps to help them solve the problem.
- ◆ You could help the learner to identify and obtain any resources needed.
- ◆ The learner will work through the steps in the action plan.
- ◆ You could help the learner check that the steps in the action plan have been completed.

### Reviewing and evaluating: Stage 3 of the problem solving activity

- ◆ You will help the learner to decide how effective the action plan has been by suggesting criteria such as did the plan keep to time and did you allocate appropriate resources.
- ◆ The learner will review the action plan, focusing on its strengths and weaknesses.

## Part 3: Exemplar recording documentation

This section provides sample forms that can be used by learners and tutors to gather evidence and record assessment decisions.

### Assessment record sheets

Assessment record sheets are provided for each of the following stages:

- ◆ Stage 1: Critical thinking
- ◆ Stage 2: Planning and organising
- ◆ Stage 3: Reviewing and evaluating

The learner can provide written answers on these forms. Alternatively, if you use oral questioning, you may use the forms to write down the learner's answers.

### Assessment checklists

You can use these to record the learner's achievement through each stage. Each checklist identifies the skills that learners must demonstrate.

### Summary checklist

The summary checklist enables you to record the results from the assessment checklist on a single form.

## Assessment record sheet – Stage 1

<b>Learner:</b>	
<b>Tutor:</b>	
<b>Stage 1: Critical thinking</b>	
What is the problem you have been given to solve?	
What are some of the main factors affecting your problem? You could consider what are the causes of the problem, why has the problem arisen, and who is involved.	
What can you do to solve the problem? Think about your previous experience to help you with this.	
<b>Tutor comments:</b>	
<b>Tutor signature:</b>	<b>Date:</b>

## Assessment record sheet – Stage 2

<b>Learner:</b>			<b>Tutor:</b>	
<b>Stage 2:</b> Planning and organising				
Work out an action plan to solve your problem. The headings at the top of the first four columns ask for information on your action plan. The last column is for you to keep a record of what happened as you carried out your action plan.				
<p>What needs to be done? You should show what steps need to be carried out in the correct order.</p>	<p>Who might I need to ask for help, advice, or information?</p>	<p>What resources might I need?</p>	<p>What limitations are there? Consider the effect limitations such as time or cost might have.</p>	<p>What happened? As you carry out the steps in your action plan make a note of what happened.</p>
<b>Tutor comments:</b>				
<b>Tutor signature:</b>			<b>Date:</b>	

## Assessment record sheet – Stage 3

<b>Learner:</b>	
<b>Tutor:</b>	
<b>Stage 3:</b> Reviewing and evaluating	
<p>Now you have completed your action plan to solve your problem, decide how effective your action plan has been. You should think about the strengths and weaknesses of different parts of your action plan and how it worked out. Your tutor will suggest what parts of your solution you should look at. Keep a record of your review and evaluation on the sheet below using the appropriate columns.</p>	
Tutor's criteria	
Strengths	
Weaknesses	
<b>Tutor comments:</b>	
<b>Tutor signature:</b>	<b>Date:</b>

## Assessment checklists

<b>Learner:</b>	
<b>Checklist for Stage 1: Critical thinking</b>	
<b>Skills:</b>	<b>Achieved</b>
Recognise some main factors affecting a very simple situation or issue	
Decide on a course of action to deal with the problem, asking for help if you need it	
<b>Tutor signature:</b>	<b>Date:</b>

<b>Learner:</b>	
<b>Checklist for Stage 2: Planning and organising</b>	
<b>Skills</b>	<b>Achieved</b>
Identify some steps in order to create an action plan to deal with the problem	
Choose the resources you will need to carry out the action plan	
Carry out the action plan	
<b>Tutor signature:</b>	<b>Date:</b>

<b>Learner:</b>	
<b>Checklist for Stage 3: Reviewing and evaluating</b>	
<b>Skills</b>	<b>Achieved</b>
Decide how good your action plan was and how well it solved the problem, using criteria suggested by your tutor.	
<b>Tutor signature:</b>	<b>Date:</b>

## Summary checklist

<b>Learner:</b>	
<b>Learner number:</b>	
<b>Centre:</b>	
<b>Problem Solving at SCQF level 2</b>	<b>Date achieved</b>
Critical thinking	
Planning and organising	
Reviewing and evaluating	
<b>Tutor signature:</b>	<b>Date:</b>

## ADMINISTRATIVE INFORMATION

### Credit value

6 SCQF credit points (1 SQA credit) at SCQF level 2



**Unit code:** F3GD 08  
**Superclass:** HB  
**Publication date:** August 2009  
**Source:** Scottish Qualifications Authority  
**Version:** 02

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