

**ADVANCED SUBSIDIARY GCE UNIT  
GENERAL STUDIES**

The Scientific Domain (Coursework)

**RESOURCE BOOKLET**

**JUNE 2007**

**OPEN ON RECEIPT**

**2963/RB**



**RESOURCE BOOKLET**

- Assignment Theme: 'Science as a problem solver'.
- This booklet contains guidance on the production of a key skills portfolio of evidence. Suggested recording sheets are also included.

This document consists of **20** printed pages.

## **Production of a Key Skills Portfolio of evidence**

Candidates entering Unit 2963 The Scientific Domain (Coursework) or Unit 2967 The Social Domain 2 (Coursework) may use the coursework produced as a source of evidence for key skills.

The assignment brief for Unit 2963 is detailed in question paper 2963/AS. Guidance for teachers is contained in 2963/IT.

The planning, preparation and execution of the assignment offers candidates the opportunity to produce portfolio evidence for all parts of all six key skills (Communication, Application of Number, Information Technology, Working with Others, Improving Own Learning and Performance and Problem Solving) at levels 2 or 3.

The assignment brief has been drawn up with all six key skills in mind, but the extent to which evidence is generated will depend upon the approach followed by the individual candidate. The assignments are not intended to produce forced opportunities for the demonstration of key skills, but to provide freedom and scope for candidates to develop their individual portfolios of evidence.

Teachers should note that in certain areas (eg Communication) it may be necessary to organise some form of group activity in order to meet the key skills requirements.

Centres are also reminded that teachers may be required to authenticate candidates' submissions for key skills purposes, in particular for Information Technology.

Centres are advised to retain securely copies of candidates' individual assignments if it is intended to use them as key skills evidence.

Teachers are advised to refer to the key skills specifications for detailed guidance on assessment of key skills. Appendix A of the OCR GCE General Studies (3831/7831) specification also provides guidance on incorporating key skills in the General Studies teaching programme.

The attached recording sheets are designed to assist candidates to track their own progress. Recording sheets are provided for each of the generic key skills (Communication, Application of Number and Information Technology) at both levels 2 and 3. Recording sheets for the wider key skills (Working with Others, Improving Own Learning and Performance and Problem Solving) are provided at level 3.

These recording sheets are designed to be used with the key skills units specified in 2004. Centres should ensure that evidence submitted for key skills certification has been assessed against the current key skills specification.

**Summary of Key Skills portfolio evidence  
Communication Level 2**

Centre Number:	Candidate Number:
Centre Name:	Candidate Name:
Date:	Candidate Signature:

<i>Candidate to enter</i>		
<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>	
<b>C2.1a Contribute to a group discussion about a straightforward topic</b>		
Description of topic discussed		
Number and description of participants		
Make clear and relevant contribution		
Listen and respond appropriately to others		
Awareness of other speakers' intentions		
Keep the discussion going		
Help to move the discussion forward		
<b>C2.1b Give a talk about a straightforward subject, using an image (5–6 minutes)</b>		
Subject of talk		
Talk is clearly structured		
Image used		
Appropriate language used		
Speaking clearly		
Keeping to the subject		
Using image to make points		
Evidence people could follow the talk		
Witness statements		

<i>Candidate to enter</i>		
<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>	
<b>C2.2 Read and summarise information from two extended documents (at least 500 words each)</b>		
Can locate and select texts		
Different reading strategies used		
Material selected and read		
Lines of reasoning identified		
Main points from text		
Main points from images		
Summary of information		
<b>C2.3 Write two different types of documents about straightforward subjects, one of which must be at least 500 words long</b>		
Write extended document including image (3 or more pages)		
Present information in relevant form		
Structure writing to suit purpose		
Appropriate style of writing		
Ensure text is legible		
Spelling, punctuation and grammar accurate		
Meaning is clear		

**Summary of Key Skills portfolio evidence  
Communication Level 3**

Centre Number:	Candidate Number:
Centre Name:	Candidate Name:
Date:	Candidate Signature:

<i>Candidate to enter</i>		
	<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>
<b>C3.1a Contribute to a group discussion about a complex subject</b>		
Description of complex topic discussed		
Number and description of participants		
Make clear and relevant contributions		
Listen and respond sensitively to others		
Develop points and ideas		
Create opportunities for others to contribute		
Shows awareness that others may have opinions and ideas which may be different from their own		
Conclusion of the discussion		
<b>C3.1b Give a talk about a straightforward subject, using an image (5–6 minutes)</b>		
Title of the presentation		
Size and description of audience		
Notes and illustrations available		
Availability of witness statements		
Speaking clearly on complex matters		
Adapt style to suit purpose		
Adapt style to suit subject		
Invite and respond to audience participation		
Adapt style to suit audience		

	<i>Candidate to enter</i>	
	<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>
Adapt style to suit situation		
Structure the sequence so that it is easy to follow		
Use a range of techniques to engage the audience		
Use images effectively		
Could the audience follow the presentation?		
<b>C3.2 Read and synthesise information from two extended documents (each at least 1000 words) about a complex subject (one document should include at least one image)</b>		
Select and read material		
Identify accurately and compare lines of reasoning		
Identify the main points from text and images		
Synthesise key information		
Include your own interpretation		
<b>C3.3 Write two different types of documents about complex subjects, one of which must be at least 1000 words long</b>		
Description of complex subject		
Abstract or sensitive issues considered		
Write an extended document including one image		
Select and use appropriate form and style of writing		
Organise relevant information clearly and coherently		
Use specialist vocabulary where appropriate		
Ensure text is legible		
Accurate spelling, punctuation and grammar		

**Summary of Key Skills portfolio evidence**  
**Application of number Level 2**

Centre Number:	Candidate Number:
Centre Name:	Candidate Name:
Date:	Candidate Signature:

Carry through at least **one** activity that includes straightforward tasks for N2.1, 2.2, 2.3. Candidates should be able to work **with** and **without** a calculator.

<i>Candidate to enter</i>		
	<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>
<b>N2.1 Interpret information from two different sources, including material containing a graph</b>		
Description of straightforward activity		
Source containing a graph		
Choose how to obtain information		
Obtain the relevant information: Source 1		
Obtain the relevant information: Source 2		
Select methods to achieve results needed		
Copies of source materials		
<b>N2.2 Carry out calculations involving two or more steps, showing methods and levels of accuracy</b>		
Describe data set of more than 20 items		
Calculate amounts or sizes		
Calculate scales or proportions		
Handle statistics		
Use formulae		
Show methods		
Show levels of accuracy		
Check methods		

	<i>Candidate to enter</i>	
	<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>
Correct errors		
Check results make sense		
<b>N2.3 Interpret the results of calculations and present findings</b>		
Use at least one graph		
Use at least one chart		
Use at least one diagram		
Select ways to present findings		
Present findings, using a chart, graph or diagram		
Describe methods used		
Explain how results meet your purpose		



**Summary of Key Skills portfolio evidence**  
**Application of number Level 3**

Centre Number:	Candidate Number:
Centre Name:	Candidate Name:
Date:	Candidate Signature:

Candidates should be able to work **with** and **without** a calculator.

<i>Candidate to enter</i>		
	<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>
<b>N3.1 Plan and interpret information from two different sources, including a large data set (over 50 items)</b>		
Purpose of activity: formulate question		
Source 1 (including large data set)		
Source 2 (e.g. graphical, printed, direct measurement)		
Plan how to obtain information to meet purpose (e.g. sequence of tasks)		
Plan how to use information		
Obtain relevant information		
Note expected problems		
Choose appropriate methods for obtaining results		
Justify choice of method		
<b>N3.2 Carry out multi-stage calculations to appropriate level of accuracy showing methods</b>		
Amounts or sizes		
Scales or proportions		
Handling statistics		
Rearranging and using formulae		
At least two stage calculations		
Checking results for errors		
Working with large data set		

<i>Candidate to enter</i>		
<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>	
<b>N3.3 Interpreting results</b>		
Select method of presentation		
Justify method of presentation (strengths and weaknesses of activities)		
Present findings effectively in two different ways using charts, graphs <b>or</b> diagrams		
Explain how results of calculations relate to purpose		
Assess accuracy, approximation and scales of error		
Use at least one graph		
Use at least one chart		
Use at least one diagram		

**Summary of Key Skills portfolio evidence  
Information Technology Level 2**

Centre Number:	Candidate Number:
Centre Name:	Candidate Name:
Date:	Candidate Signature:

<i>Candidate to enter</i>		
	<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>
<b>IT2.1 Search for and select information for two different purposes</b>		
Describe Purpose 1		
Identify information needed (P1)		
Identify suitable sources (P1)		
Carry out effective searches (P1)		
Select relevant information (P1)		
Search records included (P1)		
Use of multi-criteria for searching (P1)		
Note of sources used (P1)		
Describe Purpose 2		
Identify information needed (P2)		
Identify suitable sources (P2)		
Carry out effective searches (P2)		
Select relevant information (P2)		
Search records included (P2)		
Use of multi-criteria for searching (P2)		
Note of sources used (P2)		

<i>Candidate to enter</i>		
<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>	
<b>IT2.2 Explore and develop information and derive new information for two purposes</b>		
Enter and bring together information (P1)		
Check helpful format (P1)		
Explore information (P1)		
Develop information (P1)		
Derive new information (P1)		
Enter and bring together information (P2)		
Check helpful format (P2)		
Explore information (P2)		
Develop information (P2)		
Derive new information (P2)		
<b>IT2.3 Present combined information for two different purposes</b>		
One example of text		
One example of images		
One example of numbers		
Select appropriate layout		
Use appropriate layout		
Combine information		
Check accuracy		
Check clarity		
Save your work		

**Summary of Key Skills portfolio evidence  
Information Technology Level 3**

Centre Number:	Candidate Number:
Centre Name:	Candidate Name:
Date:	Candidate Signature:

You need to plan and carry through **one** substantial activity to include IT3.1, 3.2 and 3.3.

<i>Candidate to enter</i>		
<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>	
<b>IT3.1 Plan and use different sources to search for, and select, information required for two different purposes</b>		
Describe the purpose of the activity		
Plan how to obtain information		
Plan how to use the information		
Choose appropriate sources for finding information		
Name the sources		
Choose appropriate techniques for finding information		
Carry out effective searches		
Describe scope of searches		
Make selection based on judgements of relevance and quality		
Include printout of sources		
Assess the quality of sources		

<i>Candidate to enter</i>		
<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>	
<b>IT3.2 Explore, develop and exchange information and derive new information to meet two different purposes</b>		
Enter and bring together information in a consistent form		
Use automated routines where appropriate		
Provide evidence of use of software features to improve efficiency		
Create structures and procedures to explore information		
Create structures and procedures to develop information		
Use effective methods of exchanging information		
Provide evidence of use of email with attachments		
<b>IT3.3 Present information from different sources for two different purposes and audiences</b>		
Include one example of text		
Include one example of images		
Include one example of numbers		
Develop the structure and content of your presentation		
Use the views of others to guide refinements		
Include witness statements of views		
Use format and style that suits your purpose		
Use format and style that suits your audience		
Present information effectively		
Ensure accuracy		
Ensure presentation makes sense		

**Summary of Key Skills portfolio evidence**  
**Working with others Level 3**

Centre Number:	Candidate Number:
Centre Name:	Candidate Name:
Date:	Candidate Signature:

Provide at least **one** example of meeting the standard of WO3.1, 3.2 and 3.3.

<i>Candidate to enter</i>		
<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>	
<b>WO3.1 Plan complex activity with others, agreeing objectives, responsibilities and working arrangements</b>		
Description of one to one situation		
Description of group working situation		
Number and description of group members		
Agreement on objectives of working together		
Agree action to achieve objectives		
Exchange information based upon evidence		
Agree responsibilities		
Provide at least one example of meeting the standard to include work in a group <b>or</b> team situation		
Agree working arrangements		
<b>WO3.2 Seek to establish and maintain co-operative working relationships</b>		
State extended period of time		
State your responsibilities		
State responsibilities of others		
Organise tasks to be effective		
Carry out your tasks to be effective		
Produce and check on quality of your work		

<i>Candidate to enter</i>		
	<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>
Maintain co-operative working		
Agreement on ways to overcome difficulties		
Agree changes to achieve objectives		
Exchange accurate information on progress		
<b>WO3.3 Review work with others and agree ways to improve collaborative working in future</b>		
Agree extent to which work with others has been successful		
Agree objectives that have been met		
Identify factors influencing outcome		
Agree ways for improvement in future		



**Summary of Key Skills portfolio evidence  
Improving Own Learning and Performance Level 3**

Centre Number:	Candidate Number:
Centre Name:	Candidate Name:
Date:	Candidate Signature:

Provide at least **one** substantial example of meeting the standard of LP3.1, 3.2 and 3.3.

<i>Candidate to enter</i>		
<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>	
<b>LP3.1 Agree targets and plan how these will be met over an extended period of time, using support of appropriate person</b>		
State time period of targets		
Develop individual learning plan		
Name supporting people		
State targets		
Ways to achieve information to meet targets		
Identify factors affecting plans		
Agree realistic targets with appropriate people		
Agree use of support to meet targets		
State possible difficulties		
List alternative action plans		
<b>LP3.2 Take responsibility for your plan, seek feedback and support</b>		
Study of a complex subject		
Learning through complex practical activity		
Evidence of independent learning		
Time management plan		
Revisions to time management plan		

	<i>Candidate to enter</i>	
	<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>
Use of feedback to help meet targets		
Evidence of adaptation to meet new demands		
<b>LP3.3 Review progress on two occasions, establish evidence of achievements and how you have learned</b>		
Information on your learning		
Provide at least one substantial example covering at least three different targets		
Factors affecting your learning		
Identify targets met (Review 1)		
Information and evidence of your achievements (Review 1)		
Exchange of view with appropriate people (Review 1)		
Agree ways to further improvements (Review 1)		
Identify targets met (Review 2)		
Information and evidence of your achievements (Review 2)		
Exchange of view with appropriate people (Review 2)		
Agree ways to further improvements (Review 2)		
Show awareness of at least two different ways of learning to improve performance		

**Summary of Key Skills portfolio evidence**  
**Problem Solving Level 3**

Centre Number:	Candidate Number:
Centre Name:	Candidate Name:
Date:	Candidate Signature:

Provide at least **one** example of meeting the standards of PS3.1, 3.2 and 3.3.

<i>Candidate to enter</i>		
	<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>
<b>PS3.1 Explore a complex problem, come up with three options for solving it, justify selected option</b>		
Description of complex problem		
Exploration of the problem		
Analysing features of the problem		
Agree how to show success in solving problem		
Option 1 for solution		
Option 2 for solution		
Option 3 for solution		
Compare solutions		
Assess risk factors		
Selected option		
Justification of selection		

<i>Candidate to enter</i>		
<i>Portfolio Reference/ Page number</i>	<i>Comment Brief description of how this was achieved</i>	
<b>PS3.2 Plan and implement at least one option for solving problem, review progress, revise approach as necessary</b>		
Plan to carry out chosen solution		
Obtain agreement of appropriate person		
Implement plan		
Use the support of others		
Obtain feedback from others		
Review progress towards solution		
Revise approach as necessary		
<b>PS3.3 Apply agreed methods to check if problem solved, describe results and review approach to problem solving</b>		
Agree with appropriate person methods of checking		
Apply checking methods accurately		
Draw conclusions		
Describe results		
Review approach used		
Consider whether alternative methods might have been effective		

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