APPENDIX

THE EXEMPLIFICATION OF KEY SKILLS

The following tables give some examples of Geology contexts in which naturally occurring key skills evidence could be accumulated.

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Note: If producing certain types of evidence creates difficulties due to disability or other factors, the candidate may be able to use other ways to show achievement. The candidate should ask the tutor or supervisor for further information.

The first table focuses on Communication (Level 3). Candidates must provide evidence to meet the standards for C3.1a, C3.1b, C3.2 and C3.3:

- Take part in a group discussion
- Make a formal presentation of at least eight minutes using an image or other support material
- Read and synthesise information from at least two documents (minimum 1000 words) about the same subject
- Write two different types of documents (one of which must be at least 1,000 words), each one giving different information about complex subjects

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COMMUNICATION: LEVEL 3

C3.1a TAKE PART IN A GROUP DISCUSSION			
Candidates must:	**Evidence must show that candidates can:**	**Examples of evidence:**	**Suggested context**:
Take part in a group discussion	3.1a.1 make clear and relevant contributions in a way that suits their purpose and situation 3.1a.2 respond sensitively to others and develop points and ideas 3.1a.3encourage others to contribute.	A record from someone who has observed discussion or has made video/ audiotape of discussion.	Classroom or fieldwork discussion showing either two clearly defined viewpoints, or specialism in one aspect of the discussion e.g., risk assessment of a natural hazard. UNIT AS GL3-Geology and the Human Environment Discuss the attempts made to predict and control hazardous geological events in order to reduce the risk of loss of life or property damage. Natural Resources Discuss the effects of the extraction of geological raw materials on the environment. FIELDWORK Discuss the geological history/ sequence of events at a known fieldwork site.

C3.1b MAKE A FORMAL PRESENTATION			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Make a formal presentation of at least eight minutes using an image to other support material	3.1b.1 speak clearly and adapt their style of presentation to suit his /her purpose, subject, audience and situation 3.1b.2 structure what they say to progress logically through each stage of their presentation 3.1b.3 use an image or other material to support or enhance what he/she is saying.	A record from someone who has observed the presentation including a description of the image/support material or a video/ audiotape or preparatory notes with images/support material.	Will include any examples of topics provided for C3.1a plus **Unit AS GL1 Matter** Presentation on the recognition of a group of minerals. **2 Evolution of Britain** Presentation on the evidence for changes in the climate of Britain in the geological past.

C3.2 READ AND SYNTHESISE INFORMATION			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Read and synthesise information from at least two documents about the same subject. Each document must be at least 1000 words long	3.2.1 select and read relevant documents 3.2.2 identify accurately and compare the main points and lines of reasoning 3.2.3present their own interpretation of the subject in a way that is coherent and brings together information from different documents to suit their purpose	• a record of what was read and why, including a note of the image. • Notes, highlighted text or answers to questions about material read. • evidence of synthesising information from notes of a presentation or a written document.	Select two sources with/without images for a complex subject – (i) one textbook, (ii) one magazine/journal e.g. Geology Today (iii) one newspaper cutting (iv) one specialist paper. Topics suitable are those for discussion/presentation or your field or laboratory investigation.

C3.3 WRITE TWO DIFFERENT TYPES OF DOCUMENTS			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Write two different types of documents, each one giving different information about complex subjects **One** document must be at least 1000 words long.	3.3.1 select and use a format, and style of writing that is appropriate to the purpose and complexity of the subject matter 3.3.2 organise material coherently to suit the length, complexity and purpose of their document 3.3.3 spell, punctuate and use grammar correctly 3.3.4 make their meaning clear.	The two different documents might include an extended essay, a piece of research, complex letters, PowerPoint slides, handouts.	Extended essay or report on a complex geological subject from any unit in the specification, or your laboratory or fieldwork report.

APPLICATION OF NUMBER: LEVEL 3

Candidates must:
Plan and carry out one or more activities that each includes tasks for all three of the N3.1, N32. (a,b,c or d) and N3.3.
Overall through one or more activities, candidates must:

- use two different types of sources, including a large data, i.e. over 50 items of data (N3.1
- carry out calculations to do with a,b,c and d (N3.2)
- present findings in two different ways using charts, graphs or diagrams (N3.3)

N3.1 PLAN AN ACTIVITY AND GET RELEVANT INFORMATION FROM RELEVANT SOURCES			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Plan an activity and get relevant information from relevant sources.	3.1.1 plan how to get and use the information needed to meet the purpose of the activity 3.1.2 obtain the relevant information 3.1.3 choose appropriate methods to get the results needed and to justify choice	A plan with a clear description of the activity, its purpose and how information will be obtained. Copies of source materials.	Planning an activity and interpreting information is integral to GL6, the laboratory and fieldwork investigations. Candidates can also provide evidence from a study of textures in rock samples; quantification of fossil morphology; gravestone/building stone survey; analysis of geochemical or geophysical data.

N3.2 USE THIS INFORMATION TO CARRY OUT MULTI- STAGE CALCULATIONS			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Use this information to carry our multi-stage calculations to do with: a. amounts or sizes b. scales or proportions c. handling statistics d. using formulae.	3.2.1 carry out calculations to appropriate levels of accuracy clearly showing their methods 3.2.2 check methods and results to help ensure that errors are found and corrected	Multi-stage calculations for each of a, b, c and d showing methods, appropriate rounding and levels of accuracy; how the candidate checked that the methods and results made sense.	Carry out multi-stage calculations to do with: • amounts and sizes – any exercise measuring grain sizes and amounts of phenocrysts in an igneous rock, or pebbles in a conglomerate/breccia, or Quaternary deposit, or a permeability /porosity exercise related to rock type or sediment type; • scales and proportion –mapwork either geological maps with construction of cross section, or hazard maps. Scale is also used in fieldwork sketching; • handling statistics can be from any investigation where data sets are collected; • rearranging and using formulae can be used in seismology, and in stress strain analysis of folds and faults.

Comment [W1]:

N3.3 INTERPRET THE RESULTS OF YOUR CALCULATIONS, PRESENT YOUR FINDINGS AND JUSTIFY YOUR METHODS			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Interpret the results of their calculations, present their findings and justify their methods	3.3.1 select appropriate levels of accuracy clearly showing their methods 3.3.2 present their findings effectively 3.3.3 describe what their results tell them and whether they meet their purpose	Findings presented in two different ways. An explanation of the results with reference to their plan in N3.1. Notes on how the results from the calculations met the purpose of the activity.	Any laboratory investigation or practical task generating data. e.g. • orientation of phenocrysts exercise • collection of data on pebbles to produce a rose diagram • fossil exercise quantifying morphological characteristics • using seismological data to locate epicentre • using radiometric half life data to calculate absolute age

INFORMATION and COMMUNICATION TECHNOLOGY: LEVEL 3

Candidates must plan and carry through a number of different tasks, one of which must be a major task covering ICT3.1, ICT3.2 and ICT3.3. Each component ICT3.1, ICT3.2 and ICT3.3 must be covered at least twice and ICT3.3 must be covered for at least two different audiences. Smaller tasks may be used to ensure each component is covered.

Overall, through two or more activities, the candidate must:

- include at least one ICT based information source
- include at least one non ICT based information source
- use at least one example of text, one example of number and one example of image
- use one example of combined information such as text and number, or image and number or text and image
- present evidence of purposeful use of email, one of these emails must have an attachment related to the task.

ICT 3.1 SEARCH FOR INFORMATION, USING DIFFERENT SOURCES			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Search for information, using different sources, and multiple search criteria in at least one case.	3.1.1. plan how to obtain and use information required for the task 3.1.2 make selections based on judgements of relevance and quality.	• a plan showing how the resources will be best used and how information is suited to the task • appropriate and effective searches for relevant information from ICT and non ICT sources • annotated printouts, copies of sources material, records from observing the candidate.	• One substantial task showing evidence from all three elements i.e. field/ laboratory investigation. - using CD ROMs (e.g. UK Earth Science Courseware Consortium, The Geology of the United Kingdom) - using the Internet (e.g. www.geolsoc.org.uk)

ICT 3.2 ENTER AND DEVELOP THE INFORMATION AND DERIVE NEW INFORMATION			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Enter and develop, explore and derive new information	3.2.1 enter and bring together information using formats that help development 3.2.2 use software features to improve the efficiency of their work 3.2.3 annotate/document their work to show that they understood the process and have taken account the views of others.	Print-outs or record of someone who observed use of ICT showing how information has been explored, developed and new information derived	Any investigation in the laboratory or field will allow the candidate to enter and bring together information in a consistent form (e.g. lists, tables, types of images) and use automated routines (e.g. macros, icons, database query and report routines, validation for database entries).

ICT 3.3 PRESENT COMBINED INFORMATION			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Present combined information such as text with image, text with number, image with number	3.3.1 develop the presentation so that it is accurate, clear and presented consistently, taking into account the views of others 3.3.2 present their final output effectively using a format and style that suit their purpose and audience.	• annotated working drafts, records of screen displays that show development of structure and content in response to feedback • print-outs or a static or dynamic screen display of final work, including text, images and numbers.	Again, a task sharing evidence from all three elements - field/laboratory/ investigation. • A report on the hazard and risk associated with a named natural hazard.

WORKING WITH OTHERS: LEVEL 3

Candidates must provide at least one example of meeting the standards for WO3.1, WO3.2 and WO3.3, to include work in a group or team situation. They must check progress on two occasions (for WO3.2).

W03.1 PLAN WORK WITH OTHERS			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Plan work with others	3.1.1 agree realistic objectives for working and what needs to be done to achieve them 3.1.2 share relevant information to help agree roles and responsibilities 3.1.3 agree suitable working arrangements with those involved	• a plan showing an understanding of the objectives, working arrangements and responsibilities . • records from someone who observed the process • Reports from team members, responses to assessor questioning, audio/video recordings.	Investigative Geology Unit GL2. Plan an enquiry and work with others in the field to: 1. Investigate and develop a geological picture. e.g. palaeoenvironment of a locality based upon lithology, facies etc. 2. Prepare a site investigation report on a civil engineering report. Similar to old SATIS limestone Inquiry for quarrying.

W03.2 SEEK TO DEVELOP CO - OPERATION AND CHECK PROGRESS TOWARDS YOUR AGREED OBJECTIVES			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Seek to develop co - operation and check progress towards their agreed objectives	3.2.1 organise and carry out tasks efficiently to meet their responsibilities 3.2.2 seek effective ways to develop co-operation including ways to resolve conflict 3.2.3 share accurate information on progress agreeing changes where necessary to achieve objectives	Records of how the candidate organised and carried out tasks, maintained cooperative working relationships and how conflict was resolved. These can include a log, statements written by others with whom the candidate worked	See above.

W03.3 REVIEW WORK WITH OTHERS AND AGREE WAYS OF IMPROVING			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Review work with others and agree ways of improving collaborative work in future	3.3.1 agree the extent to which work with others has been successful and the objectives have been met 3.3.2 identify factors, including the role in influencing the outcome 3.3.3 agree ways of improving the work with others in the future, including interpersonal skills	• statement written by the candidate and others involved in the process. • report, written with others, on ways to improve future collaborative work	See above.

IMPROVING OWN LEARNING AND PERFORMANCE: LEVEL 3

Candidates must provide at least one example of meeting the standard for LP3.1, LP3.2 and LP3.3 (the example should cover at least three targets). Overall, candidates must show they can use at least two different ways of learning to improve their performance.

LP3.1 SET TARGETS USING INFORMATION FROM APPROPRIATE PEOPLE			
	Evidence must show candidates can:	**Examples of evidence:**	**Suggested context**:
Set targets using information from appropriate people and plan how these will be met	3.1.1. seek information on ways to achieve what they want to do, and identify factors that might affect their plans 3.1.2. use this information to set realistic targets and identify clear action points 3.1.3. plan how they will manage their time use, support, review progress and overcome possible difficulties.	• an action plan that includes three learning targets, deadlines and dates for reviewing progress • records to show that the candidate sought and used information from others to set targets • response to assessor questioning on factors that might affect the planning	Two examples of study-based learning (with evaluation) (a) Essay (b) Booklet for geology topic - rock family/structures.

LP3.2 TAKE RESPONSIBILITY FOR YOUR LEARNING			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Take responsibility for their learning, using their plan to help meet targets and improve performance.	3.2.1 manage their time effectively to meet deadlines, revising their plan as necessary 3.2.2. choose ways of learning to improve their performance, working at times independently and adapting approaches to meet new demands 3.2.3 reflect on their progress, seeking feedback and relevant support to help them meet their targets.	A log of learning with notes of: • how the candidate used at least two different leaning styles • how the candidate sought feedback and support and how they implemented it. • any revisions made to the plan • records from those who have seen the effective management of time	Two examples of activity-based learning (with evaluation) (a) Laboratory or a Field investigation (b) monitoring volcano/ earthquake activity. Internet.

LP3.3 REVIEW PROGRESS AND ESTABLISH EVIDENCE OF YOUR ACHIEVEMENTS			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Review progress and establish evidence of their achievements.	3.3.1 provide information on the ways they have used their learning to meet new demands and on factors affecting quality of their outcomes 3.3.2 identify targets they have met and gather evidence of their achievement. 3.3.3 Consult appropriate people to agree ways to improve further their performance.	Notes, records to show: • the candidate achieved what they set out to do using their different leaning styles • how they used their learning to meet new demands • how they agreed with others to improve future performance	One example of using learning from at least two different contexts to meet demands of new situation. (a) using IT skills in specialist room (b) visiting speaker at local G.A. event/Geological Society or in school (c) site visit/presentation

PROBLEM SOLVING: LEVEL 3

Candidates must provide at least one example of meeting the standard for PS3.1, PS3.2 and PS3.3. The example should include exploring at least three different ways of tackling a problem (for PS3.1).

PS3.1 EXPLORE A PROBLEM AND IDENTIFY WAYS OF TACKLING IT			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Explore a problem and identify ways of tackling it.	3.1.1 identify, analyse and accurately describe the problem and agree with others how they will know it has been solved 3.1.2 select and use a variety of methods to come up with different ways of tackling the problem 3.1.3 compare the main feature and risks of ach approach and justify the methods they decide to use.	• description of the problem, analysis of its features, and methods used for exploring it. • statements endorsed by appropriate people of how the candidate will know the problem has been solved • description of three different options for solving the problem • responses to assessor questioning	Investigative Geology Unit GL2 Problem solving exercise.

PS3.2 PLAN AND IMPLEMENT AT LEAST ONE WAY OF SOLVING THE PROBLEM			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Plan and implement one way of solving the problem	3.2.1 plan their chosen way of solving the problem and get the go-ahead from an appropriate person 3.2.2 put their plan into action, effectively using feedback from others to help tackle the problem 3.2.3 regularly check progress towards solving the problem, and revising their approach as necessary	• a plan to show how the problem will be solved using the option chosen , including any revisions • records of getting the go-ahead to solve the problem from the appropriate person and how support was sought and used • records to show that progress was checked.	Unit GL3 K1 3 Case Study or site investigation of waste disposal. - ground water pollution - contamination

PS3.3 CHECK IF THE PROBLEM HAS BEEN SOLVED AND REVIEW YOUR APPROACH TO PROBLEM SOLVING			
Candidates must:	**Evidence must show candidates can:**	**Examples of evidence:**	**Suggested context**:
Check if the problem has been solved and review their approach to problem solving	3.3.1 apply systematic methods (agreed with an appropriate person), to check if the problem has been solved 3.3.2 describe fully the results and draw conclusions on how successful they were in solving the problem 3.3.3 review their approach to problem solving, including whether other approaches might have proved more effective	• description of methods used and whether the problem was solved • review of problem solving methods and whether these could be improved • responses to assessor questioning.	Unit GL3 KL 3 Problems associated with extraction rock and mineral.

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