

# Level 3 Essential Skills Wales in Application of Number (3768)

## Candidate logbook

500/7629/2



Your name:

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City & Guilds enrolment number:

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Unique Learner Number (ULN):

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Date of registration for 3768:

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Date portfolio started:

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Date portfolio completed:

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Assessor's name:

Internal verifier's name:

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# 1 How do I use this logbook?

This logbook will help you work towards Level 3 Essential Skills Wales in Application of Number. It contains:

- an **evidence record form** detailing the evidence you must provide to complete this qualification. You should use this to record and organise your evidence.
- a **skills checklist** containing all of the skills you need to have in order to show that you are competent. You can use this to help show how you have learnt and gained confidence in these skills.

The evidence and skills requirements for ESW are set out in full in the DCELLS document 'Essential Skills Wales'. This can be downloaded from [www.cityandguilds.com/esw](http://www.cityandguilds.com/esw). Your assessor/tutor will also be able to explain to you in more detail what you need to do.

## About ESW

The Essential Skills Wales (ESW) qualifications are designed to help you develop and demonstrate the skills to needed make the most of your learning, work and life.

This qualification will help you improve your **number** skills. You will be required to demonstrate your skills in:

- understanding numerical data
- carrying out calculations
- interpreting results and presenting findings

in order to tackle problems or tasks that you meet in education, training, work and social roles.

## About City & Guilds

City & Guilds is your awarding organisation for Essential Skills Wales. City & Guilds is the UK's leading awarding body for vocational qualifications. You may also be working towards other City & Guilds qualifications at the same time as completing ESW and in some cases you may be able to use work completed for those qualifications towards your ESW portfolio.

Information about City & Guilds and our qualifications is available on our website [www.cityandguilds.com](http://www.cityandguilds.com).

## 2 Level 3 Essential Skills Wales in Application of Number

### 2.1 Evidence record

Your portfolio must include **all** of the following. Please use this sheet to record what your evidence is and where it can be found. The Declarations on page 5 **must** be completed.

Standard	Description of evidence presented	Location/reference	Confirmed met and date (assessor use only)
<b>Overall</b> You must carry out at least one activity that shows your skills in all three components (N3.1, N3.2, N3.3). If you need to carry out additional activities to meet all of the requirements for N2.2 (a, b, c, d) <b>each</b> activity must include tasks for either N2.1 and N2.2 <b>or</b> N.3.2 and N3.3.			<input type="checkbox"/> $\geq 1$ task covers all three components <input type="checkbox"/> all cover $>1$ component <hr/> <hr/>
<b>N3.1.1</b> Identify, analyse and accurately describe at least one practical problem or task that involves a range of numerical data and information.			<input type="checkbox"/> $\geq 1$ prob independently ID/described <input type="checkbox"/> range of data/info <hr/> <hr/>
<b>N3.1.2</b> Plan how you will tackle it.			<input type="checkbox"/> plan devised, including how to obtain relevant data/info <input type="checkbox"/> clear sequence of tasks showing how info used <hr/> <hr/>
<b>N3.1.3</b> Collect relevant numerical data and information from a range of sources to meet the purpose of your task. Your sources must include at least <b>two</b> of a table, a chart, a graph or a diagram, of which at least one must be complex, and a large data set.			<input type="checkbox"/> relevant data/info collected from $\geq 3$ sources <input type="checkbox"/> $\geq 1$ appropriate data set grouped <input type="checkbox"/> includes $\geq 2$ of table/chart/graph/diagram <input type="checkbox"/> $\geq 1$ complex/large data <hr/> <hr/>
<b>N3.2.1</b> Choose and use appropriate methods to get the results you need and justify the methods you have used.			<input type="checkbox"/> $>1$ method chosen/used to get results needed <input type="checkbox"/> methods and purpose explained <hr/> <hr/>
<b>N3.2.2</b> Use the data and information you have obtained to carry out calculations relevant to your task to do with: a) amounts or sizes b) scales or proportion c) handling statistics d) using formulae.			<input type="checkbox"/> relevant data/info from N3.1 used <input type="checkbox"/> amounts or sizes <input type="checkbox"/> scales or proportions <input type="checkbox"/> handling statistics (incl. use of grouped data) <input type="checkbox"/> using formulae <input type="checkbox"/> methods/accuracy justified <input type="checkbox"/> checked methods/calcs <input type="checkbox"/> results chkd for sense <hr/> <hr/>

Standard	Description of evidence presented	Location/reference	Confirmed met and date ( <i>assessor use only</i> )
<p><b>N3.3.1</b> Select and justify two different ways to present your results, using charts or graphs, and tables or diagrams appropriate to your audience.</p>			<ul style="list-style-type: none"> <li><input type="checkbox"/> <math>\geq 2</math> of chart/graph/table/diagram selected</li> <li><input type="checkbox"/> Appropriateness of each explained and justified</li> </ul> <hr/> <hr/>
<p><b>N3.3.2</b> Present and explain your methods and findings and justify how they meet the purpose of your task and are appropriate to your audience.</p>			<ul style="list-style-type: none"> <li><input type="checkbox"/> methods/findings explained effectively</li> <li><input type="checkbox"/> meaning described/explained/justified in relation to problem</li> </ul> <hr/> <hr/>

## 2 Level 3 Essential Skills Wales in Application of Number

### 2.2 Declarations

The candidate and assessor declarations below **must** be completed in all cases.

Candidate name: \_\_\_\_\_

#### **Candidate declaration:**

I confirm that the evidence produced for this portfolio is entirely my own work.

Candidate signature: \_\_\_\_\_ Date: \_\_\_\_\_

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#### **Assessor declaration:**

I confirm that the candidate has met / not met (as applicable) all of the evidence requirements for this Essential Skills Wales qualification. Assessment is valid, authentic, reliable, current and sufficient.

Assessor signature \_\_\_\_\_ Date \_\_\_\_\_

#### **Internal verifier declaration:**

*(if sampled)*

I confirm that the candidate has met / not met (as applicable) all of the evidence requirements for this Essential Skills Wales qualification. I have internally verified this work.

Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### **External verifier declaration:**

*(if sampled)*

I confirm that the candidate has met / not met (as applicable) all of the evidence requirements for this Essential Skills Wales qualification. I have externally verified this work.

External verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_

## 2 Level 3 Essential Skills Wales in Application of Number

### 2.3 Skills checklist

This checklist is designed to help you show you have learnt all of the skills needed for this qualification. Unlike the Evidence record, this list is not a formal part of your assessment although you and your assessor/tutor should be confident that you can do all of these things by the time you complete your portfolio.

In order to show you are competent, you need to know how to:	Tick if you can	Further guidance
a) identify, analyse and accurately describe the problem or task and its sub-problems b) plan how you will tackle the problem by breaking it down into a series of tasks c) plan how you will obtain the data and information you need	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p><b>Problem</b> At this level, problems must include sub-problems. The techniques you need to tackle the problem must be relatively sophisticated (eg interrelated multi-stage calculations rather than those that require two or more separate steps), and must require you to consider carefully the nature and sequence of tasks when you are planning how to obtain and use information to meet your purpose. Problems must offer different possible approaches which you must evaluate to decide how best to tackle the problem.</p> <p>If you choose to tackle a problem of your own, rather than one given by your teacher/tutor/trainer, you must take their advice about whether your chosen problem is appropriate.</p> <p><b>Plan</b> You need to know to break down an activity into a series of interrelated tasks, and identify the problems to be tackled. It may not be immediately clear what these problems are, and you may need to extend your knowledge of methods and approaches. You will need to take time to specify the problem, formulate questions in terms of the data you need, plan how you will obtain this information and what you are going to do (eg methods you will use for organising data, such as tabulating and grouping, types of calculations, how you will take account of variability or bias) to meet the purpose of your activity.</p>
a) read, understand and extract information from tables, diagrams, charts and graphs b) collect, obtain, read, understand, select and record relevant data and information from different sources, including at least one data set of a size appropriate to a planned activity, and use this to meet the purpose of the activity c) make accurate and reliable observations over time and use suitable equipment to measure in a variety of appropriate units d) group data into classes of width appropriate to the data e) use estimation to help you plan, multiplying and dividing numbers of any size f) read and understand ways of writing very large and very small numbers g) understand compound measures.	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p><b>Collect, record</b> You must know how to select and use suitable equipment for making accurate measurements and observations, as well as how to interpret a variety of numerical, written and graphical material, including complex tables and charts (ie those that present very detailed information relating to a large data set), in order to decide about their relevance to the purpose of your activity. You must record measurements and observations accurately and in a way that is fit for the purpose of your task.</p> <p><b>Sources</b> Sources can include graphical and/or written material (eg reference books and journals; organisations that collate their own statistical information; the internet; and newspapers) and/or direct measurements or observations, depending on the context in which you are working. This material must include at least two of: a table, a chart, a graph, or a diagram. You must be able to deal with scales, such as 1:1250 (as on large-scale maps), graphs with several graph lines on the same axes (eg power outputs compared with speed for different temperatures, weights against heights for a range of body mass indexes).</p> <p><b>Data set</b> The 'large data set' must be of a size appropriate to your activity, sufficiently complex to be challenging to interpret, and large enough to enable you to carry out statistical calculations relating to grouped data.</p>



In order to show you are competent, you need to know how to:	Tick if you can	Further guidance
<p>r) use checking procedures to identify and correct errors in methods, calculations and results</p> <p>s) check that your results make sense.</p>	<input type="checkbox"/>  <input type="checkbox"/>	<p>d) Using formulae Solving simultaneous linear equations with two variables, using formulae with letters and rearranging them so as to change the subject (output) of a formula, such as making <math>w</math> or <math>h</math> the subject rather than <math>b</math> in <math>b = hw^2</math> as well as finding the value of <math>W</math> given the values of <math>h</math> and <math>b</math>.</p> <p><b>Levels of accuracy</b> You must decide what levels of accuracy to work to (eg nearest whole number, nearest pound, one place of decimals) and be able to justify your choice.</p> <p><b>Multi-stage</b> Where you use the results from one stage to provide data for calculations at the next stage, the stages can involve calculations from any of the four categories.</p> <p><b>Use checking procedures</b> You must always check the accuracy of your calculations. This is often a mental process and you do not have to produce evidence every time you do it. Where there is a series of calculations of the same type, you must record evidence of checking at least the first few of each type. For the remainder, accurate results should confirm that you have checked effectively. You must be aware of the importance of checking your results and your methods and be familiar with different methods of carrying out checks.</p> <p><b>Check that results make sense</b> While your results may be based on accurate calculations, they may not 'make sense' or be fit for purpose in relation to the problem or task that you have tackled. You must check this.</p>
<p>a) understand what the results of your calculations mean in the context of your problem or task</p> <p>b) select and use appropriate methods to present and illustrate your findings, showing trends and making comparisons, including numerical, graphical and written formats</p> <p>c) justify your choice of methods of presentation</p>	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p><b>Select and justify</b> You must be able to identify, describe and consider different ways to present your results (eg graphs, chart, tables, diagrams) to at least two different audiences. You must choose and use the two ways (ie charts and/or graphs, <b>and</b> tables and/or diagrams) that are most appropriate to your actual audience, to the nature of the data you want to present, and to the features you want to highlight. You must be able to give reasons that justify your choice. Evidence that you have considered different ways and that explains your choice must be in the form of notes, written by hand or electronically.</p>
<p>a) construct and label tables, charts, graphs and diagrams using accepted conventions</p> <p>b) describe and justify your choice of methods</p> <p>c) describe what your results tell you</p> <p>d) draw appropriate conclusions based on your findings, including how possible sources of error might have affected your results explain how far your results meet your purpose</p> <p>e) respond constructively to feedback.</p>	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p><b>Describe and justify</b> You must be able to describe your methods and justify them in relation to the problem you have tackled.</p> <p><b>Draw appropriate conclusions</b> At this level, not only must you support your conclusions with evidence, but you must also assess the accuracy and dependability of the results, taking into account approximations in calculations and possible inaccuracies in the original information.</p> <p><b>Respond constructively</b> You must be able to respond constructively to feedback, whether it is positive or negative, eg by being assertive rather than aggressive or dismissive.</p>





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