

Specification

Essential Skills Wales

Edexcel Entry Levels 1-3 Essential Skills Wales in Application of Number

January 2011

Issue 2

Edexcel, a Pearson company, is the UK's largest awarding body, offering academic and vocational qualifications and testing to more than 25,000 schools, colleges, employers and other places of learning in the UK and in over 100 countries worldwide. Qualifications include GCSE, AS and A Level, NVQ and our BTEC suite of vocational qualifications from entry level to BTEC Higher National Diplomas, recognised by employers and higher education institutions worldwide.

We deliver 9.4 million exam scripts each year, with more than 90% of exam papers marked onscreen annually. As part of Pearson, Edexcel continues to invest in cutting-edge technology that has revolutionised the examinations and assessment system. This includes the ability to provide detailed performance data to teachers and students which helps to raise attainment.

This specification is Issue 2. Key changes are sidelined. We will inform centres of any changes to this issue. The latest issue can be found on the Edexcel website: www.edexcel.com

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Qualification titles covered by this specification

Edexcel Entry Level 1 Essential Skills Wales in Application of Number

Edexcel Entry Level 2 Essential Skills Wales in Application of Number

Edexcel Entry Level 3 Essential Skills Wales in Application of Number

These qualifications have been developed in line with the Welsh Assembly Government (WAG) and accredited by DCELLS and are eligible for public funding. The Qualifications Accreditation Number (QAN) should be used by centres when they wish to seek public funding for their learners. The QANs for the qualifications in this publication are:

Edexcel Entry Level 1 Essential Skills Wales in Application of Number	500/8912/2
Edexcel Entry Level 2 Essential Skills Wales in Application of Number	500/8920/1
Edexcel Entry Level 3 Essential Skills Wales in Application of Number	500/8926/2

The qualification titles are as they will appear on learners' certificates. Learners need to be made aware of this when they are recruited by the centre and registered with Edexcel. Providing this happens, centres are able to describe the programme of study leading to the award of the qualification in different ways to suit the medium and the target audience.

Additional Edexcel Essential Skills Wales qualifications available

Edexcel Entry Level Essential Skills Wales in Communication

Edexcel Entry Level Essential Skills Wales in ICT

Edexcel Levels 1-4 Essential Skills Wales in Application of Number

Edexcel Levels 1-4 Essential Skills Wales in Communication

Edexcel Levels 1-4 Essential Skills Wales in ICT

For the specifications and further information please visit our website at www.edexcel.com.

Introduction

This document contains the required outcomes, content and associated guidance for the Edexcel Entry Levels 1-3 Essential Skills Wales in Application of Number. It contains further details of the assessment and quality assurance of these qualifications and includes advice about Edexcel's policy regarding access to its qualifications.

Essential Skills Wales (ESW) qualifications are designed to meet a range of different needs. They:

- aim to improve the skills of young people and adults, and to rationalise the qualifications available
- bring together the current Key and Basic Skills into a single suite of skills standards and qualifications, suitable for all learners, both young and adult, and across all contexts
- provide a better guarantee of the skills young people need to participate and progress in education, training and employment
- develop and secure the broader range of aptitudes, attitudes and behaviours that will enable learners to make positive contributions to the communities in which they live and work.

The Essential Skills Wales suite of qualifications consists of three individual skill areas, with standards/qualifications available at each level within these skills:

- Application of Number
- Communication
- Information and Communication Technology (ICT).

The new suite of skills qualifications will replace the current Key Skills in Application of Number, Communication and ICT and the Basic Skills of Adult Literacy, Adult Numeracy and Skills for Life ICT from September 2010 in Wales.

Structure of the qualifications

Edexcel Entry Levels 1-3 Essential Skills Wales in Application of Number

Each level within the Essential Skills Wales in Application of Number is made up of three components:

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

To achieve the qualification at each level, a learner must demonstrate that they have met the minimum standard for each component area.

The aim of the Application of Number standards is to encourage learners to develop and demonstrate their skills in using number to tackle a task, activity or problem by collecting and interpreting information involving numbers, carrying out calculations, interpreting results and presenting findings. The standards are essentially concerned with developing and recognising learners' ability to select and apply numerical, graphical and related mathematical skills in ways that are appropriate to their particular context. However, they can also be used to help individuals make connections with less familiar contexts and develop their ability to progress to higher levels of competence.

Techniques such as being able to measure and read scales, carry out specific calculations, or draw a particular type of diagram, are essential, but so too are the skills of interpretation (eg of information from tables, graphs or charts), selecting appropriate methods to process data, describing what findings show, and taking account of purpose and audience when presenting results (whether on paper, on screen, or to a live audience). The techniques and skills of application contribute both to understanding a task, activity or problem and to deciding on the best course of action. The standards are designed to recognise learners' progression in terms of both underpinning techniques and of the skills of application.

Progression through the levels is demonstrated by increasing ability to manage the whole process:

Understand and tackle a problem → Collect and interpret data → Carry out calculations → Check results → Interpret results → Present finding → Reflect/review.

Each skill level incorporates and builds on the previous levels. Details of all the levels are provided to show the inter-relationship and the differentiation between the levels.

It is important to note that, where the wording of a standard is identical at different levels, progression is inherent in another aspect of the standard. For example, the requirement to 'check that your results make sense' appears at all levels from Entry Level 1 to Level 3. The progression is inherent in the fact that the complexity and detail of the results to be checked will be more demanding at each level.

At the three Entry levels learners are required to use number skills in familiar and accessible contexts. The number skills demanded by the situation or problem are clear and straightforward. Guidance and direction are provided by a tutor, teacher or trainer.

At Level 1 learners are required to handle simple numerical and graphical information and apply techniques in the context of short activities. Calculations will usually involve only one or two steps. Much of the numerical content will be concerned with whole numbers and the use of decimals in everyday contexts (eg in using money or taking measurements), and the use of common units of measurement.

At this level, learners must cover all three of N1.1, N1.2 and N1.3, but are not required to combine them in a single task or activity. Evidence for each of these components may be presented separately.

At Level 2 learners are required to demonstrate and evidence their use of number skills in the context of at least one activity that covers all three of N2.1, N2.2 and N2.3. Such an activity will give them more scope to make decisions on how to identify and find the information they need, what calculations to use, and how best to present their findings. Calculations will involve two or more steps and a more demanding range of techniques and understanding. Learners must know how to work with numbers of any size, including addition and subtraction of fractions, calculations involving area and volumes, ratio, unit conversions, percentages and scaling, as well as the use of formulae and graphs.

At Level 3 there is an increase in the complexity of activities and techniques needed to tackle the problem or task and in the independence required of the learner. Learners are required to be responsible for planning and carrying through their use of number in the context of one or more activities that cover all three of N3.1, N3.2 and N3.3, including handling data from a relatively large data set. Compared with Level 2, calculations will involve several steps and rearranging formulae. Learners must justify their approaches and methods, in addition to presenting, justifying and evaluating their findings. As at Level 2, at least one piece of work must show evidence of the whole process described above.

At Level 4 the focus of the standard is on learners developing and applying their number skills to their work, study or other activities over an extended period of time (eg about three months) with substantial independence. The extended timeframe is to ensure that there are sufficient opportunities for the work to develop, as well as for learners to monitor and critically reflect on their progress and the effectiveness of their number skills, so that they can adapt their strategy in response to new demands and feedback from others.

Learners need to show that they can:

- plan their use of number skills strategically
- apply these skills effectively and for a purpose over time
- monitor and review their work, including the development of their skills
- reflect critically on their progress.

Qualification format

Each qualification level has a standard format which is designed to provide clear guidance on the requirements of the qualification for learners, tutors, assessors and those responsible for monitoring national standards.

Each qualification is set out in the following way.

Qualification level

This is the level of study of the qualification as determined by DCELLS.

Credit value

This is the volume of learning achievement through completion of the qualification as determined by DCELLS.

Guided learning hours

Guided learning hours is 'a notional measure of the substance of a qualification'. It includes an estimate of time that might be allocated to direct teaching, instruction and assessment, together with other structured learning time such as directed assignments or supported individual study. It excludes learner-initiated private study. Centres are advised to consider this definition when planning the programme of study associated with this specification.

About this qualification

This states explicitly what skills a learner will develop through completing the qualification. It provides amplification of the evidence requirements for the qualification level.

Skills components

These expand the skills a learner needs to develop to achieve the qualification, as set out in the *About this qualification* section. These are taken directly from the ESW qualification standards and provide the skills statement in the first column that the learner needs to provide evidence of, the skills needed to be able to provide this evidence in the second column, and the form the evidence must take in the third column.

Guidance

This supports the requirements of the skills components for the qualification. It provides explanations of some of the requirements of the standards that may be useful when learners are developing skills for the qualification and producing evidence for their portfolios.

Assessment

General principles

Assessment must be targeted at a specific Entry level (Entry 1, Entry 2 and Entry 3). It must provide a reliable measure of proficiency at the level by providing significant evidence of success against the requirements of the ESW standards at the specified level.

The level of an ESW qualification is determined by four factors:

- the learner's familiarity with the context, task or activity
- the complexity of the situation and the task or activity
- the degree of independence shown by the learner in deciding which skills they will use and how they will apply them to suit different tasks and activities
- the range and complexity of the techniques and skills the learner uses in completing the task or activity.

These four factors interrelate so that, to some extent, relatively low demand in one factor may be compensated by relatively high demand in another. However, the skills are demonstrated through performance so the key determinant of the overall level is the learner's ability to select, use and apply their skills when carrying out a task or activity.

Evidence of a learner's skills must:

- be set in realistic and interesting contexts and scenarios that are relevant to the learner
- require learners to tackle a purposeful task or tasks that are relevant to the contexts/scenarios
- require the application of knowledge, skills and understanding for the purpose of the task/s
- assess process skills and the outcome of their application.

Assessments must comply in full with the Evidence Requirements of the ESW standards, including Amplification of Evidence Requirements and Mandatory Definitions, at the relevant level. They must not include any additional requirements.

Learners must submit a portfolio of evidence for assessment to demonstrate competence for all skills. Learners must adhere to the Evidence Requirements detailed in this specification.

The assessment for the Edexcel Entry Levels 1-3 Essential Skills Wales in Application of Number is criterion referenced, based on the achievement of specified skills.

The overall grading for the Edexcel Entry Levels 1-3 Essential Skills Wales in Application of Number is a pass, based upon the successful completion of all skills.

The Edexcel Entry Levels 1-3 Essential Skills Wales in Application of Number are internally assessed and internally verified. Centre processes will be quality assured by Edexcel.

Accreditation of Prior Learning (APL)

Edexcel encourages centres to recognise learners' previous achievements and experience through APL. Learners may have evidence that has been generated during previous study or in their previous or current employment or whilst undertaking voluntary work that relates to one or more of the units in the qualification. Assessors should assess this evidence against the national standards in the specifications in the normal way. As with all evidence, assessors should be satisfied about the authenticity and currency of the material when considering whether or not the outcomes of the unit have been met.

Full guidance about Edexcel's policy on APL is provided on our website: www.edexcel.com.

Quality assurance of centres

Details of quality assurance procedures are set out in the *Edexcel Quality Assurance Handbook* published annually.

Edexcel's qualification specifications clearly set out the standard to be achieved by each learner in order to achieve the award of the qualification. Edexcel operates a quality assurance process which is designed to ensure that these standards are maintained by all assessors and verifiers.

For the purposes of quality assurance all individual qualifications are considered as a whole. Centres delivering these qualifications must be committed to ensuring the quality of the qualifications they deliver, through effective standardisation of assessors and verification of assessor decisions. Centre quality assurance and assessment is monitored and guaranteed by Edexcel.

The Edexcel quality assurance processes will involve:

- centre approval for those centres not already recognised as a centre for Edexcel qualifications
- centre risk assessment by Edexcel of overarching processes and quality standards (this would usually be via self-assessment, but will include visits on occasions)
- programmed sampling of internal verification and assessor decisions.

Centres are required to declare their commitment to ensuring quality and appropriate assessment opportunities for learners that lead to valid and accurate assessment outcomes. In addition, centres will commit to undertaking defined training and online standardisation activities. Centres already holding Edexcel approval are able to gain qualification approval online. New centres must complete a centre approval application.

The key principles of quality assurance are that:

- a centre delivering Edexcel programmes must be an approved centre and must have approval for the programmes or groups of programmes that it is operating
- the centre agrees as part of gaining approval to abide by specific terms and conditions around the effective delivery and quality assurance of assessment; it must abide by these conditions throughout the period of delivery
- Edexcel makes available to approved centres a range of materials and opportunities intended to exemplify the processes required for effective assessment, and examples of effective standards. Approved centres must use the materials and services to ensure that all staff delivering Edexcel qualifications keep up to date with the guidance on assessment
- an approved centre must follow agreed protocols for standardisation of assessors and verifiers; planning, monitoring and recording of assessment processes; and for dealing with special circumstances, appeals and malpractice.

Approval

Centres must be approved with Edexcel to offer Essential Skills Wales. Centres should complete an approvals form via www.edexcel.com or email approvals@edexcel.com.

Where centres are approved to offer Edexcel Apprenticeships they will be automatically approved to offer Essential Skills Wales.

The approval contract is a formal commitment by the head or principal of a centre to meet all the requirements of the specification and linked codes or regulations.

Sanctions and tariffs will be applied if centres do not comply with the contract. This could ultimately result in the suspension of certification or withdrawal of approval.

Programme design and delivery

Centres are free to offer the qualifications using any mode of delivery that meets the needs of their learners. This may be through traditional classroom teaching, open learning, distance learning or a combination of these. Whatever mode of delivery is used, centres must ensure that learners have appropriate access to the resources identified in the specifications and to subject specialists where applicable.

Staff delivering programmes and conducting the assessments should be fully familiar with current practice and standards. Centres will need to meet any specialist resource requirements when they seek approval from Edexcel.

Access and recruitment

Edexcel's policy regarding access to its qualifications is that:

- the qualifications should be available to everyone who is capable of reaching the required standards
- the qualifications should be free from any barriers that restrict access and progression
- there should be equal opportunities for all wishing to access the qualifications.

Centres are required to recruit learners to the qualifications with integrity. This will include ensuring that applicants have appropriate information and advice about the qualification and that the qualification will meet their needs. Centres should take appropriate steps to assess each applicant's potential and make a professional judgement about their ability to complete the programme of study successfully and achieve the qualification. This assessment will need to take account of the support available to the learner within the centre during their programme of study and any specific support that might be necessary to allow the learner to access the assessment for the qualification. Centres should also show regard for Edexcel's policy on learners with particular requirements.

Restrictions on learner entry

There are no restrictions on entry.

Access arrangements and special considerations

Edexcel's policy on access arrangements and special considerations aims to enhance access to the qualifications for learners with disabilities and other difficulties (as defined by the Disability Discrimination Act 1995 and the amendments to the Act) without compromising the assessment of skills, knowledge, understanding or competence.

Learners with particular disabilities may be unable to show that they are competent by providing all their evidence in the form specified. For these learners, reasonable adjustments to the evidence requirements may be allowed in appropriate circumstances. In some cases, exemptions may be permissible. Such arrangements must be agreed in advance with Edexcel.

Further details are given in Edexcel's policy *Access Arrangements and Special Considerations for BTEC and Edexcel NVQ Qualifications* which is on the Edexcel website (www.edexcel.com). This document will apply to the Essential Skills Wales qualifications. This policy replaces the previous Edexcel policy (*Assessment of Vocationally Related Qualifications: Regulations and Guidance Relating to Learners with Special Requirements, 2002*) concerning learners with particular requirements.

Professional development and training

Edexcel supports UK and international customers with training related to Edexcel qualifications, including ESW. This support is available through a choice of training options offered in our published training directory or through customised training at your centre.

The support we offer focuses on a range of issues including:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing student-centred learning and teaching approaches
- building in effective and efficient quality assurance systems.

The national programme of training we offer can be viewed on our website (www.edexcel.com/training). You can request customised training through the website or by contacting one of our advisers in the Training from Edexcel team via Customer Services to discuss your training needs.

Our customer service numbers are:

BTEC and NVQ	0844 576 0026	(ESW queries should be directed here)
GCSE	0844 576 0027	
GCE	0844 576 0025	
The Diploma	0844 576 0028	
DIDA and other qualifications	0844 576 0031	

Calls may be recorded for training purposes.

The training we provide:

- is active – ideas are developed and applied
- is designed to be supportive and thought provoking
- builds on best practice.

Further information

Edexcel produces regular policy statements on Edexcel qualifications and accompanying procedures. Please check our website for current information.

For further information please call Customer Services on 0844 576 0026 (calls may be recorded for training purposes) or visit our website at www.edexcel.com.

Application of Number: evidence requirements

Entry Level 1 Essential Skills Wales in Application of Number

Level:	Entry Level 1
Credit value:	6
Guided Learning Hours:	60

About this qualification

This is about demonstrating your skills in:

- understanding numerical data (NE1.1)
- carrying out calculations (NE1.2)
- interpreting results and presenting findings (NE1.3)

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

Amplification of evidence requirements

Notes

- 1 You must provide evidence of your Application of Number skills, as they are specified in the first column of component grid. Your evidence must be in the form described in the third column ('Evidence requirements'). In order to provide this evidence, you will need to have the skills that are listed in the second column.
- 2 The subject matter and resources will be familiar to you (ie you have met them before) and accessible.
- 3 The guidance within the qualification supports the requirements of the three columns of the component areas and is intended to advise and help you and your teacher/tutor/trainer in your work. It provides explanations of some of the requirements of the standards that may be useful when you are developing the skill of Application of Number at Entry Level 1 and producing evidence of your work. It is not a mandatory part of the standards.
- 4 Many learners when producing evidence have found that it is both more interesting and more effective to complete a task or activity that covers all three components (NE1.1, NE1.2 and NE1.3) as a continuous process. However, this is not a requirement.
- 5 The Mandatory Definitions (*Annexe A*) give the exact meaning of certain words in the document. You must always refer to them when you are developing your skills, gathering evidence, and preparing for assessment.
- 6 Witness statements must not be the only form of evidence that you provide. When you provide a witness statement, it must be supported by other evidence.

Evidence

At Entry Level, you will be assessed via a portfolio of evidence. The term ‘evidence’ is used in this document to refer to the work you produce for final assessment.

You must:

Understand and tackle a problem or task → Read and understand data →
Carry out calculations → Check results → Present findings.

All your calculations should ideally be set in a purposeful context although standalone exercises are acceptable.

There must be evidence that all your work has been assessed and authenticated, eg there must be records/notes, written by a competent assessor, confirming that your work is your own and that it has achieved the required standard.

Skill requirements

In order to achieve this qualification, the evidence that you present for assessment needs to demonstrate that you can meet all of the skills requirements of the qualification for each of the component areas. A piece of work submitted could give assessment evidence for more than one skill.

Component: NE1.1 Understand numerical data

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE1.1.1 Confirm that you understand a given practical problem or task involving numbers and measures.</p>	<ul style="list-style-type: none"> • check with an appropriate person that you understand the problem or task ... 	<p>Evidence must show that the learner has understood the given problem or task. Evidence may be in the form of: either</p> <ul style="list-style-type: none"> • notes produced by the learner (by hand or electronically) <p>or</p> <ul style="list-style-type: none"> • a witness statement.
<p>NE1.1.2 Confirm how you will tackle it.</p>	<ul style="list-style-type: none"> • ... and how you will tackle it. 	<p>Evidence must show that the learner has understood how the task will be tackled. Evidence may be in the form of: either</p> <ul style="list-style-type: none"> • notes produced by the learner (by hand or electronically) <p>or</p> <ul style="list-style-type: none"> • a witness statement.

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE1.1.3 Read and understand given data from two different sources to meet the purpose of your task.</p>	<ul style="list-style-type: none"> • read and understand information given by numbers and symbols in simple graphical, numerical and written material • relate familiar events to: <ul style="list-style-type: none"> - times of day (using o'clock times or parts of the day) - days of the week - seasons of the year • use whole numbers to measure and make observations • use shape and space to help your understanding • use information from lists and simple diagrams to help your understanding • copy a given process or routine to increase your understanding. 	<p>Evidence must show that the learner is clear about how the data meets their purpose.</p> <p>Evidence must include data from at least two different sources:</p> <ul style="list-style-type: none"> • at least one source must include a simple diagram. <p>Evidence must include:</p> <ul style="list-style-type: none"> • copies of source material • details of the site/s of observation/measurement • records of data obtained.

Component: NE1.2 Carry out calculations

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE1.2.1</p> <p>Use the data you have obtained to carry out calculations to do with amounts or sizes that are relevant to your task.</p>	<ul style="list-style-type: none"> • use methods you have been given • work to the levels of accuracy you have been given • count reliably up to 10 items • read, write, order and compare whole numbers up to 10 including zero • add single-digit numbers with totals to 10, and subtract single-digit numbers from whole numbers up to 10 • interpret +, - and = in practical situations for solving problems • recognise and select coins and notes • describe size, and use direct comparisons for the size of at least two items • describe length, width and height, and use direct comparisons for length, width and height of items • describe weight, and use direct comparisons for weight of items • describe capacity, and use direct comparisons for capacity of items • recognise and name common 2-D and 3-D shapes, including rectangle, square, circle and cube 	<p>Evidence must show that the learner can work with the methods and levels of accuracy that they have been given.</p> <p>Evidence must include notes of:</p> <ul style="list-style-type: none"> • how the learner has checked their calculations • how the results make sense in relation to their task. <p>The latter may be in the form of a witness statement.</p>

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
NE1.2.1 <i>continued</i>	<ul style="list-style-type: none"> • sort and classify objects using a single criterion • understand everyday positional vocabulary • construct simple representations or diagrams using knowledge of numbers, measures or space and shape • use a calculator and methods you have been given to check your calculations • correct any errors • check that your results make sense. 	

Component: NE1.3 Interpret results and present findings

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE1.3.1 Present your findings.</p>	<ul style="list-style-type: none"> • use whole numbers, measures, objects or simple images as appropriate to present your results • use appropriate vocabulary to describe quantities and common measures. 	<p>Evidence must show that the learner can, with guidance from a teacher, tutor or trainer, make appropriate choices of how to present their findings and results, with appropriate use of units.</p> <p>If ICT is used to produce graphics, evidence must show that the learner has checked their accuracy and can explain them fully.</p> <p>While graphics must be produced on paper, evidence of understanding may be in the form of a witness statement.</p>
<p>NE1.3.2 Show how your results meet the purpose of your task.</p>	<ul style="list-style-type: none"> • show how your results meet the purpose of your task. 	<p>Evidence must show that the learner can:</p> <ul style="list-style-type: none"> • show the results of their calculations • show how they meet the purpose of their task. <p>Evidence may be in the form of:</p> <p>either</p> <ul style="list-style-type: none"> • notes produced by the learner (by hand or electronically) <p>or</p> <ul style="list-style-type: none"> • a witness statement.

Guidance for Application of Number Entry Level 1

The guidance below supports the requirements of the three columns of the component areas and is intended to advise and help you and your teacher/tutor/trainer in your work. It provides explanations of some of the requirements of the standards that may be useful when you are developing the skill of Application of Number at Entry Level 1 and producing evidence of your work. It is not a mandatory part of the standards.

NE1.1.1

Confirm

You must show that you understand the problem or task that you have been given, eg by repeating it in your own words and/or asking for more detail.

NE1.1.2

Confirm

You must show that you understand how you will tackle the task, eg by repeating instructions in your own words and/or asking for more detail.

NE1.1.3

Simple graphical material

You must know how to obtain information from simple diagrams, graphs or charts, such as a pie chart (eg to identify the number of people who went on holiday to England), block graph (eg to identify which TV programme is the most popular).

Measure and make observations

You must know how to use simple measuring instruments eg a ruler or measuring jug, and how to make accurate observations, eg counting the number of people in a queue.

Copy a given process or routine

You must be able to carry out a process or routine after someone has shown you how to do it.

NE1.2.1

Levels of accuracy

You must know how to work to levels of accuracy given to you by your teacher, tutor or trainer, such as the nearest pound (£).

Check calculations

You must always check for accuracy as the final step in your calculations. You must use a calculator and methods you have been given.

Check that results make sense

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.

NE1.3.2

Present

You must know how to present your findings and results effectively, using methods suggested by or agreed with your teacher, tutor or trainer.

NE1.3.2

Describe

You must know how to show how your results relate to the problem or task you were given.

Entry Level 2 Essential Skills Wales in Application of Number

Level:	Entry Level 2
Credit value:	6
Guided Learning Hours:	60

About this qualification

This is about demonstrating your skills in:

- understanding numerical data (NE2.1)
- carrying out calculations (NE2.2)
- interpreting results and presenting findings (NE2.3)

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

Amplification of evidence requirements

Notes

- 1 Each level of the skill incorporates and builds on the previous level. So, for example, in NE2.2, the requirement to ‘make amounts of money up to £1 in different ways using 1p, 2p, 5p, 10p, 20p and 50p coins...’ builds on ‘recognise and select coins and notes’ at Entry Level 1.
- 2 The subject matter and resources will be familiar to you (ie you have met them before) and accessible.
- 3 You must provide evidence of your Application of Number skills, as they are specified in the first column of the component grid. Your evidence must be in the form described in the third column (‘Evidence requirements’). In order to provide this evidence, you will need to have the skills that are listed in the second column.
- 4 The guidance within the qualification supports the requirements of the three columns of the component areas and is intended to advise and help you and your teacher/tutor/trainer in your work. It provides explanations of some of the requirements of the standards that may be useful when you are developing the skill of Application of Number at Entry Level 2 and producing evidence of your work. It is not a mandatory part of the standards.
- 5 Many learners when producing evidence have found that it is both more interesting and more effective to complete a task or activity that covers all three components (NE2.1, NE2.2 and NE2.3) as a continuous process. However, this is not a requirement.

- 6 The Mandatory Definitions (*Annexe A*) give the exact meaning of certain words in the document. You must always refer to them when you are developing your skills, gathering evidence, and preparing for assessment.
- 7 Witness statements must not be the only form of evidence that you provide. When you provide a witness statement, it must be supported by other evidence.

Evidence

At Entry Level, you will be assessed via a portfolio of evidence. The term ‘evidence’ is used in this document to refer to the work you produce for final assessment.

You must:

Understand and tackle a problem or task → Read and understand data →
Carry out calculations → Check results → Present findings.

All your calculations should ideally be set in a purposeful context although standalone exercises are acceptable.

There must be evidence that all your work has been assessed and authenticated, eg there must be records/notes, written by a competent assessor, confirming that your work is your own and that it has achieved the required standard.

Skill requirements

In order to achieve this qualification, the evidence that you present for assessment needs to demonstrate that you can meet all of the skills requirements of the qualification for each of the component areas. A piece of work submitted could give assessment evidence for more than one skill.

Component: NE2.1 Understand numerical data

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE2.1.1 Confirm that you understand a given practical problem or task involving numbers, measures and simple shapes.</p>	<ul style="list-style-type: none"> • check with an appropriate person that you understand the problem or task ... 	<p>Evidence must show that the learner has understood the given problem or task. Evidence may be in the form of: either</p> <ul style="list-style-type: none"> • notes produced by the learner (by hand or electronically) <p>or</p> <ul style="list-style-type: none"> • a witness statement.
<p>NE2.1.2 Confirm how you will tackle it.</p>	<ul style="list-style-type: none"> • ... and how you will tackle it. 	<p>Evidence must show that the learner has understood how the task will be tackled. Evidence may be in the form of: either</p> <ul style="list-style-type: none"> • notes produced by the learner (by hand or electronically) <p>or</p> <ul style="list-style-type: none"> • a witness statement.

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE2.1.3 Read, understand and record data from two different sources to meet the purpose of your task. Your sources must include a simple diagram.</p>	<ul style="list-style-type: none"> • read, understand and extract information given by numbers, symbols, lists, simple tables, simple diagrams, charts and block graphs in numerical and written material • read and record time in common date formats, and understand time displayed on analogue and 12-hour digital clocks in hours, half hours and quarter hours • make numerical comparisons from block graphs • use whole numbers and simple fractions to measure and make observations • collect simple numerical information to help your understanding • read simple scales to the nearest labelled division • use shape and space to record simple information • use information from lists, tables, simple diagrams and block graphs to help your understanding • follow a given process or routine to increase your understanding. 	<p>Evidence must show that the learner is clear about how the data meets their purpose. Evidence must include data from at least two different sources:</p> <ul style="list-style-type: none"> • at least one source must include a simple diagram • at least one source must require the learner to read/collect and record data. <p>Evidence must include:</p> <ul style="list-style-type: none"> • copies of source material • details of the site/s of observation/measurement • records of data obtained.

Component: NE2.2 Carry out calculations

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE2.2.1 Use the data you have obtained to carry out calculations to do with amounts or sizes that are relevant to your task.</p>	<ul style="list-style-type: none"> • use methods you have been given • work to the levels of accuracy you have been given • count reliably up to 20 items • read, write, order and compare whole numbers up to 100 • add and subtract two-digit whole numbers • multiply using single-digit whole numbers • recall addition and subtraction facts to 10 • approximate by rounding to the nearest 10 • use and interpret +, -, x and = in practical situations for solving problems • read, write and compare halves and quarters of quantities • find halves and quarters of small numbers of items or shapes • make amounts of money up to £1 in different ways using 1p, 2p, 5p, 10p, 20p and 50p coins • calculate the cost in pence of more than one item, and the change from a transaction • calculate the cost in whole £s of more than one item, and the change from a transaction 	<p>Evidence must show that the learner can work with the methods and levels of accuracy that they have been given.</p> <p>Evidence must include notes of:</p> <ul style="list-style-type: none"> • how the learner has checked their calculations • how the results make sense in relation to their task. <p>The latter may be in the form of a witness statement</p>

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE2.2.1 <i>continued</i></p>	<ul style="list-style-type: none"> • estimate, measure and compare length, weight and capacity using common standard and non-standard units • read and compare positive temperatures in everyday situations • recognise and name 2-D and 3-D shapes, including triangles, cylinders and pyramids • describe the properties of common 2-D and 3-D shapes • sort and classify objects using two criteria • use positional vocabulary • represent information so that it makes sense to others • use a calculator and methods you have been given to check your calculations • correct any errors • check that your results make sense. 	

Component: NE2.3 Interpret results and present findings

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE2.3.1 Present your findings.</p>	<ul style="list-style-type: none"> • use whole numbers, common fractions, measures, lists, simple tables, simple charts, simple diagrams, and symbols as appropriate to present your results • use common units of measure to define quantities. 	<p>Evidence must show that the learner can, with guidance from a teacher, tutor or trainer, make appropriate choices of how to present their findings and results, with appropriate use of units.</p> <p>If ICT is used to produce graphics, evidence must show that the learner has checked their accuracy and can explain them fully.</p> <p>While graphics must be produced on paper, evidence of understanding may be in the form of a witness statement.</p>

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE2.3.2 Describe how your results meet the purpose of your task.</p>	<ul style="list-style-type: none"> describe how your results meet the purpose of your task. 	<p>Evidence must show that the learner can:</p> <ul style="list-style-type: none"> describe the results of their calculations describe how they meet the purpose of their task. <p>Evidence may be in the form of:</p> <p>either</p> <ul style="list-style-type: none"> notes produced by the learner (by hand or electronically) <p>or</p> <ul style="list-style-type: none"> a witness statement. <p>Evidence must show that the learner has received feedback and has responded constructively.</p>

Guidance for Application of Number Entry Level 2

The guidance below supports the requirements of the three columns of the component areas and is intended to advise and help you and your teacher/tutor/trainer in your work. It provides explanations of some of the requirements of the standards that may be useful when you are developing the skill of Application of Number at Entry Level 2 and producing evidence of your work. It is not a mandatory part of the standards.

NE2.1.1

Confirm

You must show that you understand the problem or task that you have been given, eg by repeating it in your own words and/or asking for more detail.

NE2.1.2

Confirm

You must show that you understand how you will tackle the task, eg by repeating instructions in your own words and/or asking for more detail.

NE2.1.3

Read, understand, extract

You must know how to obtain information from sources such as simple:

- diagrams (eg to understand the proposed location of a temporary building)
- tables (eg a 2 x 3 cell matrix)
- charts, such as a pie chart (eg to identify the number of people ordering each item on a menu)
- block graphs (eg to identify which salesperson had the most sales).

Measure and make observations

You must know how to use simple measuring instruments eg a ruler or measuring jug, and how to make accurate observations, eg counting the number of people in a queue.

Record

You must record measurements and observations accurately and in a way that is fit for the purpose of your task (eg by filling in a simple form).

NE2.2.1

Levels of accuracy

You must know how to work to levels of accuracy given to you by your teacher, tutor or trainer, such as the nearest pound (£).

Check calculations

You must always check for accuracy as the final stage in your calculations. You must use a calculator and methods you have been given.

Check that results make sense

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.

NE2.3.1

Present

You must know how to present your findings and results effectively, using methods suggested by or agreed with your teacher, tutor or trainer.

NE2.3.2

Describe

You must know how to describe how your results relate to the problem or task you were given.

Entry Level 3 Essential Skills Wales in Application of Number

Level:	Entry Level 3
Credit value:	6
Guided Learning Hours:	60

About this qualification

This is about demonstrating your skills in:

- understanding numerical data (NE3.1)
- carrying out calculations (NE3.2)
- interpreting results and presenting findings (NE3.3)

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

Amplification of evidence requirements

Notes

- 1 Each level of the skill incorporates and builds on the previous level. So, for example, while there is no mention of ‘positional vocabulary’ in the standards at Entry Level 3, you must know how to understand positional vocabulary because this is required at Entry Levels 1 and 2.
- 2 The subject matter and resources will be familiar to you (ie you have met them before) and accessible.
- 3 You must provide evidence of your Application of Number skills, as they are specified in the first column of the component grid. Your evidence must be in the form described in the third column (‘Evidence requirements’). In order to provide this evidence, you will need to have the skills that are listed in the second column.
- 4 The guidance within the qualification supports the requirements of the three columns of the component areas and is intended to advise and help you and your teacher/tutor/trainer in your work. It provides explanations of some of the requirements of the standards that may be useful when you are developing the skill of Application of Number at Entry Level 3 and producing evidence of your work. It is not a mandatory part of the standards.
- 5 Many learners when producing evidence have found that it is both more interesting and more effective to complete a task or activity that covers all three components (NE3.1, NE3.2 and NE3.3) as a continuous process. However, this is not a requirement.

- 6 The Mandatory Definitions (*Annexe A*) give the exact meaning of certain words in the document. You must always refer to them when you are developing your skills, gathering evidence, and preparing for assessment.
- 7 Witness statements must not be the only form of evidence that you provide. When you provide a witness statement, it must be supported by other evidence.

Evidence

At Entry Level, you will be assessed via a portfolio of evidence. The term ‘evidence’ is used in this document to refer to the work you produce for final assessment.

You must:

Understand and tackle a problem or task → Read and understand data →
Carry out calculations → Check results → Present findings.

All your calculations should ideally be set in a purposeful context although standalone exercises are acceptable.

There must be evidence that all your work has been assessed and authenticated, eg there must be records/notes, written by a competent assessor, confirming that your work is your own and that it has achieved the required standard.

Skill requirements

In order to achieve this qualification, the evidence that you present for assessment needs to demonstrate that you can meet all of the skills requirements of the qualification for each of the component areas. A piece of work submitted could give assessment evidence for more than one skill.

Component: NE3.1 Understand numerical data

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE3.1.1 Confirm that you understand a given practical problem or task involving numbers, measures, simple shapes, and diagrams.</p>	<ul style="list-style-type: none"> • check with an appropriate person that you understand the problem or task ... 	<p>Evidence must show that the learner has understood the given problem or task. Evidence may be in the form of: either</p> <ul style="list-style-type: none"> • notes produced by the learner (by hand or electronically) <p>or</p> <ul style="list-style-type: none"> • a witness statement.
<p>NE3.1.2 Confirm how you will tackle it.</p>	<ul style="list-style-type: none"> • ... and how you will tackle it. 	<p>Evidence must show that the learner has understood how the task will be tackled. Evidence may be in the form of: either</p> <ul style="list-style-type: none"> • notes produced by the learner (by hand or electronically) <p>or</p> <ul style="list-style-type: none"> • a witness statement.

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE3.1.3 Obtain, read, understand and record data from at least two sources to meet the purpose of your task.</p> <p>Your sources must include a simple diagram.</p>	<ul style="list-style-type: none"> • read, understand and extract information given by numbers, symbols, lists, tables, simple diagrams, charts and block graphs used for different purposes and in different ways in numerical and written material • make numerical comparisons from bar charts and pictograms • use whole numbers, fractions and decimals to measure and make observations • make observations and record numerical information using a tally • read simple scales • use shape and space to record information • use numerical information from lists, tables, diagrams and simple charts to help your understanding. 	<p>Evidence must include data that the learner has obtained, read, understood and recorded from at least two sources:</p> <ul style="list-style-type: none"> • at least one source must require the learner to read/collect and record data • at least one source must include a simple diagram. <p>Evidence must include:</p> <ul style="list-style-type: none"> • copies of source material • details of the site/s of observation/measurement • records of data obtained.

Component: NE3.2 Carry out calculations

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE3.2.1 Use the data you have obtained to carry out calculations relevant to your task to do with:</p> <p>a) amounts or sizes b) proportion.</p>	<ul style="list-style-type: none"> • use methods and materials you have been given to get the results you need • work to the levels of accuracy you have been given • count, read, write, order and compare whole numbers up to 1000 • add and subtract using three-digit numbers • multiply two-digit whole numbers by single-digit whole numbers • divide two-digit whole numbers by single-digit whole numbers and interpret remainders • recall addition and subtraction facts to 20 • recall simple multiplication facts • approximate by rounding numbers less than 1000 to the nearest 10 or 100 • estimate answers to calculations • use and interpret +, -, x, ÷ and = in practical situations for solving problems • read, write and understand common fractions • recognise and use equivalent forms • read, write and understand decimals up to two decimal places in practical contexts 	<p>Evidence must show that the learner can work with the methods, materials and levels of accuracy that they have been given.</p> <p>Evidence must include notes of:</p> <ul style="list-style-type: none"> • how the learner has checked their calculations • how the results make sense in relation to their task. <p>The latter may be in the form of a witness statement.</p>

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE3.2.1 <i>continued</i></p>	<ul style="list-style-type: none"> • estimate, calculate and compare money by: <ul style="list-style-type: none"> - adding and subtracting sums using decimal notation - rounding sums to the nearest £1, 10p - making approximate calculations • read, measure and record time using: <ul style="list-style-type: none"> - am and pm - common date formats - digital clocks and analogue clocks to the nearest five-minute intervals • estimate, read, measure and compare length, capacity, weight and temperature using non-standard and standard units • choose and use appropriate units and measuring instruments • sort 2-D and 3-D shapes to solve practical problems using properties • organise and represent information in different ways so that it makes sense to others • calculate efficiently using whole numbers and decimals • use a calculator and methods you have been given to check your calculations • correct any errors • check that your results make sense. 	

Component: NE3.3 Interpret results and present findings

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>NE3.3.1 Present your findings.</p>	<ul style="list-style-type: none"> • use numbers, fractions, decimals, measures, tables, diagrams, charts or graphs, and symbols as appropriate to present your results • use common units of measure to define quantities. 	<p>Evidence must show that the learner can, with guidance from a teacher, tutor or trainer, make appropriate choices of how to present their findings and results, with appropriate use of units.</p> <p>If ICT is used to produce graphics, evidence must show that the learner has checked their accuracy and can explain them fully.</p> <p>While graphics must be produced on paper, evidence of understanding may be in the form of a witness statement.</p>
<p>NE3.3.2 Explain how your results meet the purpose of your task.</p>	<ul style="list-style-type: none"> • explain how your results meet the purpose of your task. 	<p>Evidence must show that the learner can:</p> <ul style="list-style-type: none"> • describe the results of their calculations • describe how they meet the purpose of their task. <p>Evidence may be in the form of:</p> <p>either</p> <ul style="list-style-type: none"> • notes produced by the learner (by hand or electronically) <p>or</p> <ul style="list-style-type: none"> • a witness statement.

Guidance for Application of Number Entry Level 3

The guidance below supports the requirements of the three columns of the component areas and is intended to advise and help you and your teacher/tutor/trainer in your work. It provides explanations of some of the requirements of the standards that may be useful when you are developing the skill of Application of Number at Entry Level 3 and producing evidence of your work. It is not a mandatory part of the standards.

NE3.1.1

Confirm

You must show that you understand the problem or task that you have been given, eg by repeating it in your own words and/or asking for more detail.

NE3.1.2

Confirm

You must show that you understand how you will tackle the task, eg by repeating instructions in your own words and/or asking for more detail.

NE3.1.3

Obtain, read, understand, extract

You must know how to obtain information from sources such as:

- tables (eg a table showing how many guests ordered each dish on a menu)
- charts (eg a pie chart showing the proportion of businesses with each of a given range of employees)
- block graph (eg that shows how many learners achieved each grade in an examination)
- simple diagram (eg an outline floor plan of a room).

Measure and make observations

You must know how to use simple measuring instruments (eg a thermometer or weighing machine) and how to make accurate observations (eg counting the number of cars in a car park at different times of the day).

Record

You must record measurements and observations accurately and in a way that is fit for the purpose of your task, using a tally where appropriate (eg when observing the number of passers-by a given point).

NE3.2.1

Carry out calculations

Application of Number requires you to show that you can carry out a number of different types of calculations to do with 'amounts or sizes' and 'proportion'.

'Amounts or sizes' is a single category. From each of these categories, you must present at least one example as evidence.

(a) amounts or sizes

You must know how to carry out calculations using:

- whole numbers
- decimals up to two decimal places in practical contexts (eg to work with money)

(b) proportion

You must know how to read, write and understand common fractions and decimals when expressing or comparing proportions.

Levels of accuracy

You must know how to work to levels of accuracy given to you by your teacher, tutor or trainer, such as the nearest pound (£).

Check calculations

You must always check for accuracy as the final stage in your calculations. You must use a calculator and methods you have been given.

Check that results make sense

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.

NE3.3.1

Present

You must know how to present your findings and results effectively, using methods suggested by or agreed with your teacher, tutor or trainer.

NE3.3.2

Describe

You must know how to explain how your results relate to the problem or task you were given.

Annexe A – Application of Number Mandatory Definitions

Note:

The focus of this Mandatory Definitions document is on the terms and concepts that are particularly relevant to the Entry Level Application of Number standards. It includes some but not all of the specialist mathematical terms that appear in the standards.

accuracy

- In relation to observation and measurement, means ‘exact and correct’.
- In relation to description, means ‘without mistakes’.
- In calculations, the requirements for level of accuracy vary between the levels and must be appropriate to context.

Evidence of checking for accuracy is required at all levels. Where there is a series of calculations of the same type, evidence of checking at least the first few of each type should be recorded for assessment purposes. For the remainder, accurate results should confirm that effective checking has taken place.

activity

An activity includes a number of related tasks where the results of one task affect the carrying out of another. See also ‘task’.

agree

Discuss and agree with an appropriate person how to tackle a problem or task, ie the decision is made jointly with a teacher, tutor or supervisor.

appropriate

Suitable for intended task, context, audience etc. The use of ‘appropriate’ in the standards recognises that different contexts require different treatments.

approximate/ly/ion

Refers to an estimate, result or check that is not exact but is close enough to be useful in a practical context.

assessor

The person who is competent/trained and responsible for judging a learner’s performance against the standards at the appropriate level.

audience

The audience is the people addressed by a text, document or speaker. The term includes readers, listeners, film/TV audiences and users of information technology.

authentic (evidence)

Evidence that has been produced by the learner with no more help, support or guidance than is permitted at the relevant level.

authenticate

To confirm that a learner's evidence is authentic.

bar chart/bar graph

A form of representation of discrete data. Frequencies are represented by bars of equal width where the lengths are proportional to the frequencies. The bars may be presented vertically or horizontally.

capacity

Volume (ie a measure in three-dimensional space) applied to liquids, materials that can be poured, or containers. Units include cubic centimetres (cm³), cubic metres (m³).

chart

For the purpose of the Application of Number skill, it is not necessary to distinguish between 'chart' and 'graph'. Both can be regarded as a representation of the relationship between variables such as categories and frequency data, or x and y coordinates. Examples include: pie chart, bar chart, histogram, pictogram, frequency polygon, frequency diagram, single or multiple line graph, scatter graph with or without line of best fit.

Where used as evidence, charts/graphs may be produced using ICT but must always be correctly drawn and labelled.

check

- With appropriate person: run through the problem or task for understanding, accuracy and sense, perhaps repeating in own words and/or asking questions to clarify.
- Calculations/results: use checking methods (eg inverse calculation, checking for sense, using alternative method) to identify and correct mistakes.

common

Used to describe units, instruments, measures, date formats, etc that are widely used in everyday life in non-specialist contexts.

confirm

The task or problem is given by the tutor, teacher or trainer. It is the learner's responsibility to ensure and demonstrate that they fully understand it.

continuous

See 'data'.

correct (verb)

Put right a mistake.

data

Quantitative information consisting of counts or measurements.

- **discrete data**

data resulting from a count of separate items or events, eg number of people, where the variable can take only one of a finite set of values.

- **continuous data**

data that can take any of an infinite number of values between whole numbers (eg, length, capacity or temperature) and so cannot be measured completely accurately. Continuous data may be represented by a line graph or histogram.

Singular: datum.

describe

Unless otherwise specified, learners may describe their task, methods, data, results etc in written or spoken form, or a combination of these.

diagram

Any graphical method of representation other than a chart or graph. A diagram should include a scale where this is appropriate for purpose. Examples include: scale drawing, plan or workshop drawing, circuit drawing, 3D representation, flow chart, critical path or network diagram, and organisation chart. See also 'chart'.

discrete

See 'data'.

effective/ly

Carry out a task in a way that produces the desired result. It is possible to be effective but inefficient.

efficiently

Carry out a calculation using an appropriate number of steps or operations. For example, at Entry 3, this might mean multiplying rather than repeated addition. When using electronic aids, it is efficient to use available operations and functions, eg memory and constant functions on a calculator, or to use the 'sum' formula in a spreadsheet for a range of cells, rather than adding up individual cells.

electronic aid

A tool for calculating, eg a calculator, spreadsheet.

event

Used in probability to describe the outcome of an action or happening.

everyday

Describes numbers, measures, units, instruments, etc that fall within the daily experience of most people in non-specialist contexts.

evidence

At Entry Levels, learners have to produce a portfolio of evidence to demonstrate that they have the skills required to satisfy the requirements of the standards. Evidence can include written material, computer printouts, artefacts, audio and/or video recordings, and witness statements/testimony. See also 'portfolio' and 'witness statement'.

explain

Give a clear and detailed account or description, including of cause and effect where appropriate. Tends to involve words such as 'so', 'therefore', 'as a result', 'because'. Unless otherwise specified, learners may explain their problem/task, methods, data, results etc in written or spoken form, or a combination of these.

familiar

Describes contexts, situations, numbers, measures, instruments, audiences etc of which the learner has some prior knowledge or experience.

given

Refers to a task, activity, problem or information that is provided to the learner by the tutor, teacher or trainer, rather than the learner having to find, identify or choose it for themselves.

graph

See 'chart'.

graphics/al

Graphical material and graphical formats include graphs, charts, diagrams and other ways of visually representing quantitative information.

image

Includes models, plans, sketches, diagrams, pictures, graphs and charts. Whatever form the image takes, it must be fit for purpose and must aid understanding of the material being presented.

A 'simple image' might be a picture, sketch or diagram that shows simple information and requires very little if any mathematical interpretation.

information

In the standards, used together with 'data' to indicate that relevant information may not be in the form of numbers, counts or measurements. See 'data'.

interpret

Explain the meaning of, for example, symbols, information, results.

level of accuracy

See 'accuracy'.

line graph

A diagram showing a relationship between two variables.

notes

Notes that are submitted as evidence need not be in continuous prose, and grammar, spelling and punctuation do not have to be perfect, but they must be legible and meaning must be clear. They include completion of a pro forma, where this is appropriate. Where appropriate, notes may be supplemented by a witness statement.

obtain

Indicates that only limited independence is required when the learner is finding sources of data and information.

pictogram

A form of representation of data. Suitable pictures/symbols/icons are used to represent objects. For large numbers, one symbol may represent a number of objects and a part symbol then represents a rough proportion of the number.

pie chart

A form of representation of data. A circle is divided into sectors. The frequency or amount of each quantity is proportional to the angle at the centre of the circle.

portfolio

A portfolio is a file, folder or other means of storing and presenting the evidence that the learner is submitting for final/summative assessment. It may include a variety of types of evidence, eg written, video, audio, artefact, and may be in hard copy, e-based (often referred to as an e-portfolio), or a combination of these.

present (verb)

Unless otherwise specified in the standards, learners may present the results of their work in written or spoken form, or a combination of these.

problem

A problem exists when there is a need to bridge a gap between a current situation and a desired situation. The problem may be a 'do-it' problem, which involves planning to achieve a desired result in the future, or a 'fix-it' problem, where the present situation is undesirable and needs to be put right.

proportion

Includes percentage, fraction, decimal, ratio.

purpose

Evidence must be generated in the context of a task or activity that satisfies some purpose in the learner's work or leisure. Evidence that is collected simply to satisfy the requirements of the learner's portfolio is not purposeful and does not meet the assessment requirement.

read

In the context of Application of Number, the term 'read' refers to obtaining meaning from symbols, numbers, diagrams, graphs etc. It may not require the ability to read continuous text.

recording document

Any document, log, diary etc that is used to keep a record of the actions, steps or stages completed in carrying out a task or activity. The document may be a pro forma provided by a tutor, teacher or trainer or may be created by the learner but it must be fit for purpose.

round (verb)

To express a number or measurement to a required degree of accuracy, eg 537 rounded to the nearest 10 is 540.

select

Choose, using criteria appropriate to task.

simple

Describes data, information, diagrams, charts, graphs, images etc that make limited demands on the learner, eg small whole numbers, numbers that are easy to work with (eg multiples of 2, 5, 10, 100), uncomplicated representations of limited amounts of data.

sources

May be primary (ie created/collected by the learner) or secondary, eg sourced from other people, printed material, electronic material, the internet, broadcasts etc. The range and complexity of sources will increase as the level of demand of a problem or task increases through the levels.

standard unit

Units that are agreed throughout a community, eg the metre is a standard unit of length. Non-standard units are, therefore, those that are not widely agreed, eg pace, cupful.

straightforward

Describes information, subjects and materials that learners often meet in their work, studies or other activities. See also 'simple'.

symbol

- Letter, numeral, figure or other mark that represents a number, an operation or another mathematical idea, eg V (Roman symbol for five), > (is greater than).
- A design or motif, for example on a notice or piece of equipment, that informs the 'reader' of content or meaning, eg the symbol for radio-activity, the symbol for high-voltage electricity.

table

An orderly arrangement of information, numbers or letters, usually in rows and columns.

tackle

Emphasises that, at this first stage, the learner is confirming or planning their approach to the problem or task, and that this approach will not necessarily solve it.

tally

(make) Marks to represent objects counted.

task

A task is purposeful and complete in itself. It may involve more than one step. See also 'activity'.

weight

The force with which a body is attracted towards the earth's centre. In non-scientific contexts, often used synonymously with mass (though technically different). Metric units of weight include kilograms (kg) and grams (g).

witness statement

A statement (sometimes called 'witness testimony') that confirms that the learner has demonstrated the skills in question (eg describing the methods they have used) at the required standard. The statement must be signed by a competent person, ie a person who was present when the learner demonstrated their competence and who is, in the opinion of the assessor, capable of making a reliable, fair and unbiased judgement in relation to the required standard.

Where used, a witness statement should include the date, the name, signature and contact details of the witness, and details of the context in which the observation took place. There must also be a very short note of the witness's role, eg workplace supervisor, geography teacher, youth group leader.

The assessor must confirm the authenticity and the validity of a witness statement; they may need to confirm with the witness that the statement is genuine and to check that the witness understands the requirements of the standard.

A witness statement must not be the sole form of evidence that a learner has achieved the standard.

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