Essential Skills Wales

APPLICATION OF NUMBER

Important notes:

1. Each level of the skill incorporates and builds on the previous levels.
2. This document must be read in association with the documents 'Amplification of evidence requirements' and 'Application of Number Mandatory Definitions' which provide mandatory detail about each component and are a constituent part of the standards.

Level 3

This is about demonstrating 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.

You must carry out at least one activity that shows your skills in all three of these areas.

If you need to carry out additional activities to meet all the requirements of N3.2 (a,b,c,d), each activity must include tasks for either N3.1 and N3.2 **or** N3.2 and N3.3 but you need to meet only the missing requirement/s.

N3.1 Understand numerical data

You must provide evidence that you can:

N3.1.1
Identify, analyse and accurately describe at least one practical problem or task that involves a range of numerical data and information.

N3.1.2
Plan how you will tackle it.

N3.1.3
Collect relevant numerical data and information from a range of sources to meet the purpose of your task.

Your sources must include at least **two** of a table, a chart, a graph or a diagram, of which at least one must be complex, and a large data set.

In order to show that you are competent, you need to know how to:

- identify, analyse and accurately describe the problem or task and its sub-problems
- plan how you will tackle the problem by breaking it down into a series of tasks
- plan how you will obtain the data and information you need
- read, understand and extract information from tables, diagrams, charts and graphs

- 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
- make accurate and reliable observations over time and use suitable equipment to measure in a variety of appropriate units
- group data into classes of width appropriate to the data
- use estimation to help you plan, multiplying and dividing numbers of any size
- read and understand ways of writing very large and very small numbers
- understand compound measures.

N3.2 Carry out calculations

You must provide evidence that you can:

N3.2.1
Choose and use appropriate methods to get the results you need and justify the methods you have used.

N3.2.2
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.

In order to show that you are competent, you need to know how to:

- identify and design methods that are appropriate for your task and justify your choice
- carry out calculations clearly showing your methods
- justify the levels of accuracy you have worked to
- carry out multi-stage calculations with numbers of any size
- use powers and roots
- use compound measures
- use mental arithmetic involving numbers, simple fractions, and percentages
- work out missing angles and sides in right-angled triangles from known sides and angles
- calculate with sums of money in different currencies
- calculate, measure, record and compare time in different formats
- estimate, measure and compare dimensions and quantities using metric and, where appropriate, imperial units, and check the accuracy of estimates
- calculate within and between systems and make accurate comparisons
- draw 2-D representations of simple 3-D objects
- solve problems involving irregular 2-D shapes
- work out actual dimensions from scale drawings and scale quantities up and down
- work out proportional change
- compare distributions, using measures of average and range, and estimate mean, median and range of grouped data
- rearrange and use formulae, equations and expressions
- make multi-step calculations efficiently

- use checking procedures to identify and correct errors in methods, calculations and results
- check that your results make sense.

N3.3 Interpret results and present findings

You must provide evidence that you can:

N3.3.1
Select and justify two different ways to present your results, using charts or graphs, and tables or diagrams appropriate to your audience.

N3.3.2
Present and explain your methods and findings and justify how they meet the purpose of your task and are appropriate to your audience.

In order to show that you are competent, you need to know how to:

- understand what the results of your calculations mean in the context of your problem or task
- select and use appropriate methods to present and illustrate your findings, showing trends and making comparisons, including numerical, graphical and written formats
- justify your choice of methods of presentation
- construct and label tables, charts, graphs and diagrams using accepted conventions
- describe and justify your choice of methods
- describe what your results tell you
- 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
- respond constructively to feedback.

Access statement

Candidates with particular disabilities may be unable to show that they are competent by providing all their evidence in the form specified in these standards.

For such candidates, reasonable adjustments to the evidence requirements may be allowed in appropriate circumstances. In some cases, exemptions may be permissible. Further detail on reasonable adjustments and exemptions for candidates with particular disabilities can be found in a separate amplification document.