

Essential Skills Wales

Application of Number: progression: skills

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.

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

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
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ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
Understand numerical data	<ul style="list-style-type: none"> check with an appropriate person that you understand the problem or task and how you will tackle it read and understand information given by numbers and symbols in simple graphical, numerical and written material 	<ul style="list-style-type: none"> check with an appropriate person that you understand the problem or task and how you will tackle it read, understand and extract information given by numbers, symbols, lists, simple tables, simple diagrams, charts and block graphs in numerical and written material 	<ul style="list-style-type: none"> check with an appropriate person that you understand the problem or task and how you will tackle it 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 	<ul style="list-style-type: none"> check with an appropriate person that you understand the problem or task and agree how you will tackle it read, understand and extract information from tables, diagrams, charts, and simple graphs read and understand numbers presented in different ways, including large numbers in figures or words, 	<ul style="list-style-type: none"> work with an appropriate person to help you identify and describe the problem or task and confirm how you will tackle it read, understand and extract information from tables, diagrams, charts, and simple graphs read and understand numbers presented in different ways 	<ul style="list-style-type: none"> 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

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<p>simple fractions, decimals, percentages, ratios and negative numbers</p> <ul style="list-style-type: none"> collect and record data from accurate observations read scales on 	<ul style="list-style-type: none"> collect and record data from making accurate observations read scales on a 	<ul style="list-style-type: none"> 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

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
	<p>scales to the nearest labelled division</p> <ul style="list-style-type: none"> • 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>scales</p> <ul style="list-style-type: none"> • 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>scales</p> <ul style="list-style-type: none"> • use shape and space to record information • use numerical information from lists, tables, diagrams and simple charts to help your understanding. 	<p>familiar measuring equipment using everyday units</p> <ul style="list-style-type: none"> • use scales on diagrams to find and interpret information • use shape and space to record measurements and make observations. 	<p>range of equipment to given levels of accuracy</p> <ul style="list-style-type: none"> • use shape and space to record relevant measurements and make accurate observations • estimate amounts and proportions • understand compound measures. 	<p>over time and use suitable equipment to measure in a variety of appropriate units</p> <ul style="list-style-type: none"> • 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.

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
Carry out calculations	<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 	<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 	<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 	<ul style="list-style-type: none"> • identify and use methods and calculations that are suitable for your task • work to the levels of accuracy you have been given • add and subtract, with whole numbers and simple decimals with and without a calculator • multiply and divide a simple 	<ul style="list-style-type: none"> • identify and use methods and calculations that are appropriate for your task, including grouping data when this is appropriate • show clearly your methods of carrying out calculations and give the levels of accuracy of your results • carry out calculations 	<ul style="list-style-type: none"> • 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

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
	<ul style="list-style-type: none"> interpret +, – and = in practical situations for solving problems 	<p>whole numbers</p> <ul style="list-style-type: none"> 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 	<p>by single-digit whole numbers</p> <ul style="list-style-type: none"> 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 	<p>decimal by a whole number with and without a calculator</p> <ul style="list-style-type: none"> recall multiplication facts to 10 x 10 and make connections with division facts 	<p>involving two or more steps, with numbers of any size with and without a calculator</p> <ul style="list-style-type: none"> use mental arithmetic involving whole numbers and simple fractions 	<p>calculations with numbers of any size</p> <ul style="list-style-type: none"> 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

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
	<ul style="list-style-type: none"> recognise and select coins and notes 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> read, write and understand common fractions recognise and use equivalent forms read, write and understand decimals up to two decimal places in practical contexts 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 	<ul style="list-style-type: none"> understand and find simple fractions and percentages recognise equivalencies between common fractions, percentages and decimals, and use these to find proportions of whole numbers add, subtract, multiply, divide and record sums of money 	<ul style="list-style-type: none"> work with and convert between fractions, decimals and percentages calculate with sums of money and convert between currencies 	<ul style="list-style-type: none"> calculate with sums of money in different currencies

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
	<ul style="list-style-type: none"> 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 	<p>the change from a transaction</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 	<ul style="list-style-type: none"> 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 5-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 	<ul style="list-style-type: none"> read, measure and record time in common date and time formats choose and use appropriate units and instruments to estimate, read, measure and compare length, weight, capacity, time and temperature calculate within 	<ul style="list-style-type: none"> calculate, measure and record time in different formats estimate, measure and compare length, weight, capacity and temperature using metric and, where appropriate, imperial units calculate within 	<ul style="list-style-type: none"> 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

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
	<p>capacity, and use direct comparisons for capacity of items</p> <ul style="list-style-type: none"> recognise and name common 2-D and 3-D shapes, including rectangle, square, circle and cube sort and classify objects using a single criterion understand everyday positional vocabulary 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> sort 2-D and 3-D shapes to solve practical problems using properties 	<p>a system by</p> <ul style="list-style-type: none"> - adding and subtracting common units of measure - converting units of measure in the system <ul style="list-style-type: none"> work out different properties of a variety of shapes, including perimeters, areas and volumes draw 2-D shapes in different orientations using grids use ratios and proportion 	<p>a system and between systems using conversion tables and scales, and approximate conversion factors</p> <ul style="list-style-type: none"> recognise and use common 2-D representations of 3-D objects solve problems involving 2-D shapes and parallel lines work out actual dimensions from scale drawings use proportion and calculate using ratios where appropriate 	<p>and between systems and make accurate comparisons</p> <ul style="list-style-type: none"> 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

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
	<ul style="list-style-type: none"> construct simple representations or diagrams using knowledge of numbers, measures or space and shape 	<ul style="list-style-type: none"> represent information so that it makes sense to others 	<ul style="list-style-type: none"> organise and represent information in different ways so that it makes sense to others 	<ul style="list-style-type: none"> use probability to show (using fractions, decimals and percentages) that some events are more likely to occur than others find the average (mean) of up to 10 items find the range for up to 10 items 	<ul style="list-style-type: none"> identify the range of possible outcomes of combined events through probability and record the information using diagrams or tables compare sets of data of an appropriate size, using percentages, mean/median/mode use range to describe the spread within sets of data understand and use given formulae 	<ul style="list-style-type: none"> 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
			<ul style="list-style-type: none"> calculate efficiently using 	<ul style="list-style-type: none"> calculate efficiently using 	<ul style="list-style-type: none"> calculate efficiently using 	

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
	<ul style="list-style-type: none"> • use a calculator and methods you have been given to check your calculations • correct any errors • check that your results make sense. 	<ul style="list-style-type: none"> • use a calculator and methods you have been given to check your calculations • correct any errors • check that your results make sense. 	<p>whole numbers and decimals</p> <ul style="list-style-type: none"> • use a calculator and methods you have been given to check your calculations • correct any errors • check that your results make sense. 	<p>whole numbers, fractions, and decimals</p> <ul style="list-style-type: none"> • use different ways of checking your methods and calculations • identify and correct any errors • check that your results make sense. 	<p>whole numbers, fractions, decimals and percentages</p> <ul style="list-style-type: none"> • check your methods and calculations • identify and correct any errors • check that your results make sense. 	<p>efficiently</p> <ul style="list-style-type: none"> • use checking procedures to identify and correct errors in methods, calculations and results • check that your results make sense.

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
Interpret results and present findings	<ul style="list-style-type: none"> use whole numbers, measures, objects or simple images as appropriate to present your results 	<ul style="list-style-type: none"> use whole numbers, common fractions, measures, lists, simple tables, simple charts, simple 	<ul style="list-style-type: none"> use numbers, fractions, decimals, measures, tables, diagrams, charts or graphs, and symbols as 	<ul style="list-style-type: none"> interpret the results of your calculations show how your results relate to your problem or task identify and describe more than one appropriate way to present your findings to a familiar given audience, including using charts or diagrams using the correct units, use appropriate ways to present your findings, including a chart or graph, and a diagram 	<ul style="list-style-type: none"> understand what the results of your calculations mean in the context of your problem or task identify and describe appropriate ways to present your findings to two different audiences, including numerical, graphical and written formats construct tables, charts and graphs, and label with titles, scales, axes and keys appropriate to your purpose and audience 	<ul style="list-style-type: none"> 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

ESW AoN progression grid skills

	Entry level 1	Entry level 2	Entry level 3	Level 1	Level 2	Level 3
	<ul style="list-style-type: none"> • use appropriate vocabulary to describe quantities and common measures • show how your results meet the purpose of your task. 	<p>diagrams, and symbols as appropriate to present your results</p> <ul style="list-style-type: none"> • use common units of measure to define quantities • describe how your results meet the purpose of your task. 	<p>appropriate to present your results</p> <ul style="list-style-type: none"> • use common units of measure to define quantities • explain how your results meet the purpose of your task. 	<ul style="list-style-type: none"> • label your work correctly • describe what your results tell you and explain how they meet the purpose of your task. 	<ul style="list-style-type: none"> • use more than one way to present your findings, including numerical, graphical and written formats • describe your methods, highlight the main points of your findings, and explain how they meet your purpose. 	<ul style="list-style-type: none"> • 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.