

Year 5

Progression of Objectives through I Can Statements

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| Using and Applying Maths | Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies, including calculator use | D1 | <i>I can identify the steps I need to take to solve problems I can decide whether to do a calculation using mental methods, written methods or a calculator</i> |
| | | E1 | <i>I can decide whether to solve problems using mental, written or calculator methods and explain my choice</i> |
| | | A2 | <i>I can explain why I chose to work mentally, or use a written method or a calculator</i> |
| | | D2 | <i>I can decide what calculations to do to solve a problem and how to do them (mental methods, jottings, written methods, calculator)</i> |
| | | A3 | <i>I can choose what calculation to do when I solve problems with decimals I can make sensible decisions about when to use a calculator</i> |
| | | D3 | <i>I can use the most efficient method of solving a problem, including using a calculator</i> |
| | | E3 | <i>I can decide and justify what calculations to do to solve a problem and whether I will do these mentally, using a written method or with a calculator</i> |
| | Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem | E1 | <i>I can break a problem into steps and say the calculation I need to do to work out each step. I can check that my answer is sensible</i> |
| | | B2 | <i>I can split a word problem into steps and work out what calculation to do for each step. I can explain what the answer to each step tells me</i> |
| | | E2 | <i>I can break a problem into steps and say the calculation I need to do to work out each step. I can check that my answer is sensible</i> |
| | | B3 | <i>I can split a word problem into steps and work out what calculation to do for each step. I can explain what the answer to each step tells me I recognise when there may be more than one solution to a problem and try to find them all</i> |
| | | E3 | <i>I can break a problem into steps and say the calculation I need to do to work out each step I can check that my answers are sensible</i> |
| | Plan and pursue an enquiry; present evidence by collecting, organising and interpreting information; suggest extensions to the enquiry | C1 | <i>I can collect and organise data to find out about a subject or to answer a question</i> |
| | | C2 | <i>I can collect and organise data to find out about a subject or to answer a question</i> |
| | | C3 | <i>I can collect and organise data to find out about a subject or to answer a question</i> |
| | Explore patterns, properties and relationships and propose a general statement involving numbers or shapes; identify examples for which the statement is true or false | B1 | <i>I can sort numbers or shapes according to their properties and explain how I sorted them</i> |
| | | B2 | <i>I can split a word problem into steps and work out what calculation to do for each step. I can explain what the answer to each step tells me</i> |
| | | B3 | <i>I can suggest a general statement and test whether it is true by investigating examples</i> |

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| Using and Applying Maths (cont.) | Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols | A1 | <i>I can write down how I solved a problem, showing every step</i> |
| | | C1 | <i>I can use graphs to show findings about a subject or to help explain my answer to a question</i> |
| | | E1 | <i>I can use diagrams to check that two fractions are equivalent</i> |
| | | A2 | <i>I can explain my method for solving a problem clearly to others. I listen to other children's methods. I talk about which is the most efficient method</i> |
| | | C2 | <i>I can use graphs to show findings about a subject or to help explain my answer to a question</i> |
| | | E2 | <i>I can explain how to turn a mixed number such as $2\frac{3}{4}$ into an improper fraction. I can draw a diagram to support my explanation</i> |
| | | A3 | <i>I can record my method for solving a problem so that I show each step. I record only what I need to, using symbols where I can</i> |
| | | C3 | <i>I can use graphs to show findings about a subject or to help explain my answer to a question</i> |

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| Counting and Understanding Number | Count from any given number in whole-number and decimal steps, extending beyond zero when counting backwards; relate the numbers to their position on a number line | A1 | <i>I can find missing numbers in a sequence that includes negative numbers</i> |
| | | A2 | <i>I can count in decimal steps to create a sequence</i> |
| | | A3 | <i>I can find missing numbers in a sequence that contains decimals</i> |
| | Explain what each digit represents in whole numbers and decimals with up to two places, and partition, round and order these numbers | A1 | <i>I can say what any digit represents in a number with up to seven digits</i> |
| | | A2 | <i>I can say what any digit in a decimal is worth</i> |
| | | A3 | <i>I can say the value of each digit in a number, including decimals. I can partition a decimal in different ways.</i> |
| | Express a smaller whole number as a fraction of a larger one (e.g. recognise that 5 out of 8 is $\frac{5}{8}$); find equivalent fractions (e.g. $\frac{7}{10} = \frac{14}{20}$, or $\frac{19}{10} = \frac{19}{10}$); relate fractions to their decimal representations | E1 | <i>I can explain how I know that two fractions, such as $\frac{7}{10}$ and $\frac{14}{20}$, are equivalent</i> |
| | | E2 | <i>I can give the decimal equivalent of a simple fraction such as $\frac{3}{10}$ and explain how I know</i> |
| | | E3 | <i>I can say what fraction a smaller number is of a larger one I can find fractions that are equivalent to each other</i> |
| | Understand percentage as the number of parts in every 100 and express tenths and hundredths as percentages | E2 | <i>I know that 'per cent' means 'parts in every 100', so $1\% = \frac{1}{100}$ I can give a simple fraction such as $\frac{1}{10}$ as a percentage</i> |
| | | E3 | <i>I can give a simple fraction such as $\frac{3}{100}$ as a percentage</i> |
| | Use sequences to scale numbers up or down; solve problems involving proportions of quantities (e.g. decrease quantities in a recipe designed to feed six people) | E2 | <i>I can continue a sequence such as: 'There are 3 red sweets in every 10, there are 6 red sweets in every 20'</i> |
| | | E3 | <i>I can use the relationships between numbers to solve ratio and proportion questions</i> |

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| 9. | Use knowledge of place value and addition and subtraction of | A1 | <i>I can work out sums and differences of decimals with two digits</i> |
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| | two-digit numbers to derive sums and differences and doubles and halves of decimals (e.g. 6.5 ± 2.7 , half of 5.6, double 0.34) | A2 | <i>I can work out sums and differences of decimals</i> |
| | | B2 | <i>I can add/subtract decimals in my head by using a related two-digit addition or subtraction I can find the double or half of a decimal by doubling or halving the related whole number</i> |
| | | E2 | <i>I can double and halve two-digit numbers and explain how to use this to double and halve related decimals</i> |
| | | A3 | <i>I can work out sums, differences, halves and doubles of decimals with two digits</i> |
| | | B3 | <i>I can add/subtract decimals in my head by using a related two-digit addition or subtraction I can find the double or half of a decimal by doubling or halving the related whole number</i> |
| | Recall quickly multiplication facts up to 10×10 and use them to multiply pairs of multiples of 10 and 100; derive quickly corresponding division facts | A1 | <i>I know my tables to 10. I can use them to work out division facts and to multiply multiples of 10 and 100</i> |
| | | B1 | <i>I can use tables facts to multiply multiples of 10 and 100 and to find linked division facts</i> |
| | | E1 | <i>I can use multiplication and division facts to multiply and divide multiples of 10 and 100</i> |
| | | A2 | <i>I know my tables to 10 for multiplication facts and division facts I can use these facts to multiply multiples of 10 and 100</i> |
| | | B2 | <i>I can use tables facts to multiply multiples of 10 and 100 and to find linked division facts</i> |
| | | A3 | <i>I know my tables to 10 for multiplication facts and division facts. I can use these facts to multiply multiples of 10 and 100</i> |
| | | B3 | <i>I can use tables facts to multiply multiples of 10 and 100 and to find linked division facts</i> |
| | Identify pairs of factors of two-digit whole numbers and find common multiples (e.g. for 6 and 9) | A1 | <i>I can find a pair of factors for a two-digit number</i> |
| | | B1 | <i>I can find pairs of factors that multiply to make a given number I can find a number that is a multiple of two different numbers</i> |
| | | E1 | <i>I can find pairs of factors that multiply to make a given number I can find a common multiple of two numbers</i> |
| | | A2 | <i>I can find all the factor pairs for a two-digit number</i> |
| | Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations | A1 | <i>I can estimate and check the result of a calculation</i> |
| | | B1 | <i>I can check whether a calculation is correct and explain how I did this</i> |
| | | A2 | <i>I can estimate and check the result of a calculation</i> |
| | | B2 | <i>I can check whether a calculation is correct and explain how I did this</i> |
| D2 | | <i>I can use rounding to estimate and check calculations</i> | |
| A3 | | <i>I can estimate and check the result of a calculation</i> | |
| B3 | | <i>Before I solve a word problem, I work out an estimate for the answer</i> | |
| D3 | | <i>I can use rounding of whole numbers and decimals to estimate and check calculations I can round numbers to the nearest whole unit</i> | |
| cu lat | Extend mental methods for whole-number calculations, for | A1 | <i>I can work out some calculations in my head or with jottings. I can explain how I found the answer</i> |

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| example to multiply a two-digit by a one-digit number (e.g. 12×9), to multiply by 25 (e.g. 16×25), to subtract one near multiple of 1000 from another (e.g. $6070 - 4097$) | E1 | <i>I can use different mental strategies for multiplication and division depending on the numbers involved. I can explain why I chose a particular method</i> |
| | A2 | <i>I can identify calculations that I can do in my head or with jottings</i> |
| Use efficient written methods to add and subtract whole numbers and decimals with up to two places | A1 | <i>I can explain each step when I write addition and subtraction calculations in columns</i> |
| | B1 | <i>I can explain each step when I write addition and subtraction calculations in columns</i> |
| | A2 | <i>I can explain each step when I add or subtract decimals using a written method I can decide when it is sensible to use a written method for addition or subtraction</i> |
| | D2 | <i>I can add and subtract whole numbers and decimals with two places in columns</i> |
| | B3 | <i>I can explain each step when I write addition and subtraction calculations in columns</i> |
| | D3 | <i>I can add and subtract whole numbers and decimals with up to two places in columns</i> |
| Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000 | A1 | <i>I can multiply or divide a whole number by 10, 100 or 1000</i> |
| | D1 | <i>I can multiply and divide whole numbers by 10, 100 and 1000</i> |
| | A2 | <i>I can multiply or divide numbers by 10, 100 or 1000</i> |
| | D2 | <i>I can multiply and divide whole numbers and decimals by 10, 100 and 1000</i> |
| Refine and use efficient written methods to multiply and divide HTU \times U, TU \times TU, U.t \times U and HTU \div U | E1 | <i>I can solve multiplication calculations using written methods. I can explain each step</i> |
| | D2 | <i>I can use an efficient method to multiply HTU by U and TU by TU</i> |
| | A3 | <i>I can divide a three-digit number by a one-digit number using a written method. I can explain each step of my calculation I can multiply a decimal with one place by a one-digit number using a written method. I can explain each step of my calculation</i> |
| | D3 | <i>I can use efficient methods to multiply U.t by U and divide HTU by U I can recognise when to round up or down, depending on the problem</i> |
| | E3 | <i>I can use a written method to divide a three-digit number by a one-digit number and explain each step</i> |

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| Calculating (cont.) | Find fractions using division (e.g. $\frac{1}{100}$ of 5 kg), and percentages of numbers and quantities (e.g. 10%, 5% and 15% of £80) | E1 | <i>I can find fractions of numbers using division. For example, to find $\frac{1}{3}$ of a number, I divide it by 3</i> |
| | | E2 | <i>I can use division to find a unit fraction ($\frac{1}{2}$, $\frac{1}{3}$, etc.) of a number I can find a simple percentage (50%, 25%, 75%, 10%) of a quantity</i> |
| | | E3 | <i>I can tell you what calculations I will do to find a fraction of a quantity I can tell you what calculations I will do to find a percentage of a quantity</i> |
| | Use a calculator to solve problems, including those involving decimals or fractions (e.g. find $\frac{3}{4}$ of 150 g); interpret the display correctly in the context of measurement | D1 | <i>I can use a calculator to solve problems that involve decimal measurements</i> |
| | | E1 | <i>I know what to enter into a calculator to find a fraction of an amount, for example to find $\frac{3}{4}$ of 150 g</i> |
| | | A2 | <i>I can use a calculator to solve a problem. I can explain what calculations I keyed into the calculator and why</i> |
| | | D2 | <i>I can use a calculator to solve weight problems involving decimals</i> |
| | | E2 | <i>I can use a calculator to find the decimal equivalent of a fraction</i> |
| | | A3 | <i>I can clear the display of the calculator before I enter a calculation I make sure that amounts are in the same unit when I use a calculator to solve money and measures problems</i> |
| | | B3 | <i>I can use a calculator to find missing numbers in calculations. I use inverse operations and number facts to help me</i> |
| D3 | <i>I can use a calculator to solve a measurement problem and interpret the display correctly</i> | | |

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| Understanding Shape | Identify, visualise and describe properties of rectangles, triangles, regular polygons and 3-D solids; use knowledge of properties to draw 2-D shapes, and to identify and draw nets of 3-D shapes | B1 | <i>I can describe the important features of shapes such as rectangles I know the important features of a cube. I can use these to draw its net</i> |
| | | B2 | <i>I can explain whether a shape has line symmetry and whether it has any parallel or perpendicular sides I can say whether a triangle is equilateral, isosceles or scalene and explain how I know</i> |
| | | B3 | <i>I use mathematical vocabulary to describe the features of a 2D shape. I always say whether any angles in the shape are equal I use the properties of 3D shapes to draw their nets accurately</i> |
| | Read and plot coordinates in the first quadrant; recognise parallel and perpendicular lines in grids and shapes; use a set-square and ruler to draw shapes with perpendicular or parallel sides | D1 | <i>I can read and plot coordinates to make shapes</i> |
| | | D2 | <i>I can recognise parallel and perpendicular lines in shapes and in the environment</i> |
| | | D3 | <i>I can use a set-square and ruler to draw shapes with parallel and perpendicular sides</i> |
| | Complete patterns with up to two lines of symmetry; draw the position of a shape after a reflection or translation | B2 | <i>I can create a pattern that has two lines of symmetry or complete one that someone else has started</i> |
| | | D3 | <i>I can complete a pattern with one or two lines of symmetry I can draw where a shape will be after it has been reflected or translated</i> |
| | Estimate, draw and measure acute and obtuse angles using an angle measurer or protractor to a suitable degree of accuracy; calculate angles in a straight line | D2 | <i>I can estimate and measure angles less than 180° I can recognise acute, obtuse and right angles</i> |
| | | D3 | <i>I can draw angles less than 180° to within 5° I can calculate angles on a straight line</i> |

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| Measuring | Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6 kg to 2600 g) | C1 | <i>I can measure weight using appropriate measuring instruments. I can state measurements in kg and g</i> |
| | | D1 | <i>I can choose appropriate units to measure length and distance I can read metre sticks, tape measures and rulers marked in cm and mm accurately I can make sensible estimates of length in everyday contexts I know how many millimetres there are in a centimetre or metre, and how many metres there are in a kilometre</i> |
| | | C2 | <i>I can measure capacity in litres and millilitres using appropriate measuring instruments. I can use decimals to record measurements</i> |
| | | D2 | <i>I can choose and use a suitable metric unit to estimate and measure weight I can use benchmarks to help me to estimate weight I know how many grams there are in a kilogram</i> |
| | | C3 | <i>I can estimate and measure length in kilometres, metres, centimetres and millimetres using appropriate measuring instruments. I can use decimals to record measurements</i> |
| | | D3 | <i>I can choose and use the correct metric unit to estimate and measure capacity I can use benchmark objects to help me to estimate capacity I know how many millilitres there are in a litre</i> |
| | Interpret a reading that lies between two unnumbered divisions on a scale | C1 | <i>I find the value of each interval on a scale so that I can read measurements accurately.</i> |
| | | D1 | <i>I can interpret a reading between two unnumbered divisions on a ruler, tape measure or metre stick</i> |
| | | C2 | <i>I can find the value of each interval on a scale and use this to give approximate values of readings between divisions</i> |
| | | D2 | <i>I can work out the reading between two unnumbered divisions on kitchen and bathroom scales</i> |
| | | C3 | <i>I can find the value of each interval on a scale and use this to give approximate values of readings between divisions</i> |
| | | D3 | <i>I can interpret a reading between two unnumbered divisions on a scale on measuring cylinders and jugs I can read accurately the number of millilitres in a litre jug</i> |
| | Draw and measure lines to the nearest millimetre; measure and calculate the perimeter of regular and irregular polygons; use the formula for the area of a rectangle to calculate the rectangle's area | D1 | <i>I can draw and measure lines to the nearest millimetre I can measure the sides of polygons and add them to find the perimeter</i> |
| | | D2 | <i>I can explain the difference between perimeter and area I can solve problems involving calculating a perimeter or area</i> |
| | | D3 | <i>I can find the area of a rectangle using the formula length \times width I know that area is measured in cm^2</i> |
| | Read timetables and time using 24-hour clock notation; use a calendar to calculate time intervals | D1 | <i>I can use a calendar to work out how many days and weeks it is to my birthday I can change am or pm times to 24hour clock times, and vice versa</i> |
| | | D3 | <i>I can solve problems using a timetable written in 24hour clock notation</i> |

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| Handling Data | Describe the occurrence of familiar events using the language of chance or likelihood | C2 | <i>I can describe how likely an event is to happen and justify my statement</i> |
| | | C3 | <i>I can describe how likely an event is to happen and justify my statement</i> |
| | Answer a set of related questions by collecting, selecting and organising relevant data; draw conclusions, using ICT to present features, and identify further questions to ask | C1 | <i>I can decide what information needs to be collected to answer a question and how best to collect it I can explain what a table or graph or chart tells us and consider questions that it raises</i> |
| | | C2 | <i>I can decide what information needs to be collected to answer a question and how best to collect it I can explain what a table, graph or chart tells us and consider questions that it raises</i> |
| | | C3 | <i>I can decide what information needs to be collected to answer a question and how best to collect it I can explain what a table, graph or chart tells us and consider questions that it raises</i> |
| | Construct frequency tables, pictograms and bar and line graphs to represent the frequencies of events and changes over time | C1 | <i>I can explain why I chose to represent data using a particular table, graph or chart</i> |
| | | C2 | <i>I can explain why I chose to represent data using a particular table, graph or chart</i> |
| | | C3 | <i>I can explain why I chose to represent the data using a particular table, graph or chart</i> |
| | Find and interpret the mode of a set of data | C1 | <i>I know that the 'mode' is the most common piece of information I can find the mode of a set of data that I have collected</i> |
| | | C3 | <i>I know that the 'mode' is the most common piece of information I can find the mode of a set of data that I have collected</i> |