**Year 1**

| Number and Place value | Jobs you can do by becoming an expert in this learning objective |
|---|---|
| Count to and read across, forwards and backwards, beginning with 0 or one, from any given number. | Teacher |
| Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens. | Shop owner |
| Given a number, identify one more or one less. | Head Chef |
| **Addition and Subtraction** | |
| Represent and use number bonds and related number facts to 20. | Bee Keeper |
| Add and subtract digit and 2-dgit numbers to 20, including 0. | Zoo Keeper |
| **Multiplication and division** | |
| Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the class teacher. | Lawyer |
| **Fractions** | |
| Recognise, find and name a half as one of two equal parts of an object, shape or quantity. | Own your own Bakery |
| Recognise, find and name a quarter as one of two equal parts of an object, shape or quantity | Head Chef |
| **Measurement** | |
| Compare, describe and solve practical problems for measurement and begin to record lengths and heights. | Architect |
| Compare, describe and solve practical problems for measurement and begin to record mass/weight | Aerospace engineer |
| Compare, describe and solve practical problems for measurement and begin to record capacity and volume. | Boat builder |
| Compare, describe and solve practical problems for measurement and begin to record time. | Sports Coach |
| Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. | Teacher |
| **Geometry** | |
| Recognise and name common 2-D shapes | Bricklayer |
| Recognise and name common 3-D shapes | Civil engineer |
| Describe position, direction, movement, including whole, half, quarter and three- quarter turns. | CAD technician |

**Year 2**

| Number and Place value | Jobs you can do by becoming an expert in this learning objective |
|---|---|
| Compare and order numbers from 0 to 100 | **Headteacher** |
| Use place value and number facts to solve problems | **Events manager** |
| Use <> and = signs correctly | **Fishmonger** |
| Count in steps of two, three, and five from 0, and in tens from any number forward and backwards. | **Nurse** |
| **Addition and Subtraction** | |
| Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures. | **Pharmacist** |
| Solve problems with addition and subtraction applying an increasing knowledge of mental and written methods. | **Pharmacist** |
| Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100 | **Sales manager** |
| Add and subtract numbers using concrete objects, pictorial representations, and mentally, including **a 2-digit number and ones** | **Shopkeeper** |
| Add and subtract numbers using concrete objects, pictorial representations, and mentally, including **a 2-digit number and tens.** | **Travel agent** |
| Add and subtract numbers using concrete objects, pictorial representations, and mentally, **including two 2-digit numbers** | **Retail buyer** |
| Add and subtract numbers using concrete objects, pictorial representations, and mentally, **including adding 3 1-digit numbers.** | **Bookseller** |
| **Multiplication and division** | |
| Recall and use multiplication and division facts for the 2, 5 and 10 x tables, including recognising odd and even numbers. | **Auditor** |
| Calculate mathematical statements for multiplication and division with the x tables and write them using the x , ÷ and = signs. | **Bank manager** |
| Show that multiplication of two numbers can be done in any order and division of one number by another cannot. | **Finance officer** |
| Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context. | **School business manager** |
| **Fractions** | |
| Recognise, find, name and write fractions 1/3, ¼, 2/4 and ¾ of a length, shape, and set of objects or quantity. | **Head Chef** |
| Write simple fractions, for example ½ of 6 = 3 and recognise the equivalence of 2/4 and 1/2 | **Teacher** |
| **Measurement** | |
| Choose and use appropriate standard units to estimate and measure length, height in any direction (cm/m); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels. | **Fire Fighter** |
| Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. | **Architect** |
| **Geometry** | |
| Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. | **3D printing technician** |
| Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. | **Dressmaker** |
| Identify 2-D shapes on the surface of a 3-D shape | **Planning officer** |
| Compare and sort common 2-D and 3-D shapes and everyday objects. | **3D printing technician** |
| Order and arrange combinations of mathematical objects in patterns and sequences. | **Software developer** |
| **Statistics** | |
| Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. | **Data scientist** |
| Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. | **Shop Keeper** |

**Year 3**

| Number and Place value | Jobs you can do by becoming an expert in this learning objective |
|---|---|
| Count from 0 in multiples of 4, 8, 50 and 100. | **Auditor** |
| Work out if a given number is greater or less than 10 or 100. | **Charity fundraiser** |
| Recognise the place value of each digit in a 3-digit numbers (hundreds, tens and ones) | **Finance officer** |
| Solve number problems and practical problems involving these ideas. | **Auditor** |
| **Addition and Subtraction** | |
| Add and subtract numbers mentally including a **3-digit number and ones.** | **Bank manager** |
| Add and subtract numbers mentally including a **3-digit number and tens.** | **Business project manager** |
| Add and subtract numbers mentally including a **3-digit number and hundreds.** | **Finance officer** |
| Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. | **School business manager** |
| **Multiplication and division** | |
| Recall and use multiplication and division facts for the 3, 4 and 8 x tables. | **Stockbroker** |
| Write and calculate mathematical statements for multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. | **Public finance accountant** |
| **Fractions** | |
| Count up and down in tenths; recognise that tenths arise from dividing an object into to ten equal parts and in dividing 1- digit numbers or quantities by 10. | **Paramedic** |
| Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. | **Fitness instructor** |
| Recognise and show, using diagrams, equivalent fractions with small denominators. | **Jockey** |
| Add and subtract fractions with the same denominator within one whole. | **Motorsport engineer** |
| Compare and order unit fractions, and fractions with the same denominators. | **Performance sports scientist** |
| Solve problems that involve all of the above. | **Performance sports scientist** |
| **Measurement** | |
| Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) | **Police officer** |
| Add and subtract amounts of money to give change, using both £ and p in practical contexts. | **Hairdresser** |
| Tell and write the time from an analogue clock and 12 and 24-hour clock. | **Medical herbalist** |
| **Geometry** | |
| Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. | **Archaeologist** |
| Recognise angles as a property of a shape or a description of a turn | **Agricultural engineer** |
| Identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn and four complete a turn; identify whether angles are greater or less than a right angle. | **Building technician** |
| Identify horizontal and vertical lines, and pairs of perpendicular and parallel lines. | **Architect** |
| **Statistics** | |
| Interpret and present data using bar charts, pictograms and tables. | **Geoscientist** |
| Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables. | **Meteorologist** |

**Year 4**

| Number and Place value | Jobs you can do by becoming an expert in this learning objective |
|---|---|
| Count in multiples of 6,7,9,25 and 1000 | **Actuary** |
| Order and compare numbers beyond 1000 | **Business adviser** |
| Count backwards through 0 to include negative numbers. | **Financial adviser** |
| Round any numbers to the nearest 10, 100 or 1000. | **Investment analyst** |
| **Addition and Subtraction** | |
| Add numbers with up to 4 digits using the formal written method of columnar addition. | **Private practice accountant** |
| Subtract numbers with up to 4 digits using the formal written methods of columnar subtraction. | **Economist** |
| Solve addition and subtraction problems in context, deciding which operations and methods to use and why. | **Financial adviser** |
| **Multiplication and division** | |
| Recall multiplication and division facts for multiplication tables up to 12 x 12. | **Anaesthetist** |
| Use place value, known and derived facts to multiply and divide mentally, including x by 0 and 1 and dividing by 1; multiplying together 3 numbers. | **Dietitian** |
| Recognise and use factor pairs and commutativity in mental calculations. | **Microbiologist** |
| Multiply 2 digit and 3 digit numbers by a 1 digit number using formal written layout. | **Pharmacist** |
| Solve problems involving multiplication and adding, including using the distributive law to multiply 2 digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. | **Physiotherapist** |
| **Fractions** | |
| Recognise and show, using diagrams, families of common equivalent fractions. | **Surgeon** |
| Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. | **Helicopter pilot** |
| Add and subtract fractions with the same denominator. | **Head Chef** |
| Recognise and write decimal equivalents of any number of tenths or hundredths. | **Fitness instructor** |
| Recognise and write decimal equivalents to ¼, ½ and ¾ | **Jockey** |
| Round decimals with one decimal place to the nearest whole number. | **Motorsport engineer** |
| Compare numbers with the same number of decimal places up to two decimal. | **Performance sports scientist** |
| Solve simple money and measure problems involving fractions and decimals to two decimal places. | **Butcher** |
| **Measurement** | |
| Convert between different units of measure. | **Chemical engineer** |
| Measure and calculate the perimeter of a rectilinear figure in cm and m. | **Architect** |
| Estimate, compare and calculate different measures, including money in pounds and pence. | **Accountant** |
| **Geometry** | |
| Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. | **Architect** |
| Identify acute and obtuse angles and compare and order angles up to two right angles by size. | **Technical architect** |
| Identify lines of symmetry in 2-D shapes presented in different orientations. | **Glassmaker** |
| Complete a simple symmetric figure with respect to a specific line of symmetry. | **Pattern cutter** |
| **Statistics** | |
| Interpret and present discrete and continuous data using appropriate geographical methods, including bar charts and time graphs. | **Zoologist** |
| Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. | **Headteacher** |

**Year 5**

| Number and Place value | Jobs you can do by becoming an expert in this learning objective |
|---|---|
| Read and write numbers up to 1,000,000 | **Bank manager** |
| Order and compare numbers up 1, 000,000 | **Business analyst** |
| Interpret negative numbers in context. | **Bank manager** |
| Count forwards and backwards with positive and negative whole numbers including through zero. | **Refrigeration designer** |
| **Addition and Subtraction** | |
| Add whole numbers with more than four digits, including using formal written methods. | **Auditor** |
| Subtract whole numbers with more than four digits, including using formal written methods. | **Economist** |
| Add and subtract numbers mentally with increasingly large numbers. | **Shop Keeper** |
| Solve problems involving numbers up to 3 decimal places. | **Finance officer** |
| **Multiplication and division** | |
| Identify multiples and factors, including finding all factor pairs of a number and common factors of 2 numbers. | **School business manager** |
| Multiply numbers up to 4 digits by a 1 or 2 digit number using formal written methods. | **Tax inspector** |
| Multiply and divide mentally drawing upon known facts. | **Accounting technician** |
| Divide numbers up to 4 digits by a 1 digit whole number. | **Auditor** |
| Interpret remainders appropriate to context. | **Bank manager** |
| Multiply and divide whole numbers and those involving decimals by 10,100 and 1000. | **Teacher** |
| Recognise and use square numbers and cubed numbers and the notation for each. | **Flooring fitter** |
| Solve problems involving multiplication and division, including using knowledge of factors and multiples, squares and cubes. | **Flooring fitter** |
| Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. | **Finance officer** |
| **Fractions and Decimals** | |
| Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. | **Insurance broker** |
| Recognise mixed numbers and improper fractions and convert from one for to the other. | **Baker** |
| Add and subtract fractions with the same denominator and that are multiples of the same number. | **Butcher** |
| Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. | **Antique dealer** |
| Recognise % and write percentages as a fraction with denominator 100 and as a decimal. | **Beauty consultant** |
| Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator with a multiple of 10 or 25. | **Fishmonger** |
| **Measurement** | |
| Convert between different units of metric measure. | **Horticultural manager** |
| Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. | **Architect** |
| Calculate and compare the area of a rectangle (including squares), and including using standard units, square centimetres, square metres and estimate the area of irregular shapes. | **Government planning Officer** |
| **Geometry** | |
| Identify 3-D shapes, including cubes and cuboids, from 2-D representations. | **Animator** |
| Know angles e measured in degrees: estimate and compare acute, obtuse and reflex angles. | **Fashion designer** |
| Draw given angles and measure them in degrees. | **Fine artist** |
| Identify angles at a point and a whole turn. | **Pilot** |
| Identify angles at a point on a straight line and half a turn. | **Pilot** |
| Identify other multiples of 90 degrees. | **Carpenter** |
| Use the properties of rectangles to deduce related facts and find missing lengths and angles. | **Furniture designer** |
| Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. | **Graphic designer** |
| **Statistics** | |
| Solve comparison, sum and difference problems using information presented in a line graph. | **Market research data analyst** |
| Complete, read and interpret information in tables, including time tables. | **Market research data analyst** |

**Year 6**

| Number and Place value | Jobs you can do by becoming an expert in this learning objective |
|---|---|
| Read and write numbers up to 10,000,000 | **Musician** |
| Order and compare numbers up 10, 000,000 | **Textile designer** |
| Determine the value of each digit in numbers up 10 000 000 | **Teaching Assistant** |
| Round any whole number | **Video editor** |
| Use negative numbers in context and calculate intervals across 0 | **Auditor** |
| Solve number and practical problems with place value. | **Finance officer** |
| **Addition and Subtraction** | |
| Solve addition and multi-step problems in contexts, deciding which method and operation to use and why. | **Financial adviser** |
| Use estimation to check answers and appropriate degree of accuracy | **Management accountant** |
| **Multiplication and division** | |
| Multiply multi – digit numbers up to 4 digits by a 2 digit number using formal written methods. | **Public finance accountant** |
| Divide numbers up to 4 digits by a 2 digit whole number. | **Chemist** |
| Interpret remainders as whole number remainders, fractions or by rounding. | **Climate scientist** |
| Use knowledge of the order of operations to carry out operations using the four operations. | **Data analyst-statistician** |
| Solve problems involving addition, subtraction, multiplication and division. | **Data scientist** |
| Multiply 1-digit numbers with up to 2 decimal places by whole numbers. | **Environmental consultant** |
| **Fractions and Decimals** | |
| Use factors to simplify fractions. | **Food scientist** |
| Use common multiples to express fractions with the same denominator. | **Geoscientist** |
| Compare and order fractions, including fractions less than 1. | **Health and safety adviser** |
| Add and subtract fractions with different denominators and mixed numbers. | **Data scientist** |
| Multiply simple pairs of proper fractions, writing the answer in its simplest form. | **Forensic collision investigator** |
| Divide proper fractions by whole numbers. | **Intelligence analyst** |
| Use the equivalence between fractions, decimals and percentages. | **MP** |
| **Ratio and Proportion** | |
| Solve problems involving the relative size of two quantities where missing values can be found integer multiplication and division facts. | **Biologist** |
| Solve problems involving the calculation of percentages. 15% of 360 | **Agronomist** |
| Solve problems involving similar shapes where the scale factor is known or can be found. | **Biotechnologist** |
| Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. | **Cartographer** |
| **Algebra** | |
| Generate and describe linear number sequences | **Astronomer** |
| Express missing number problems algebraically | **Chemical engineer** |
| Find pairs of numbers that satisfy an equation with two unknowns. | **Energy engineer** |
| **Measurement** | |
| Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places. | **Forensic psychologist** |
| Use, read, write and convert between standard units, converting measurement of length, mass, volume and time. | **Hydrologist** |
| Recognise that shapes with the same area can have different perimeters and vice versa | **CAD technician** |
| Calculate the area of parallelograms and triangles. | **CAD technician** |
| **Geometry** | |
| Draw 2-d shapes using given dimensions and angles. | **Aerospace engineer** |
| Recognise, describe and build simple 3-d shapes, including making nets. | **Agricultural engineer** |
| Compare and classify geometric shapes based on their properties and sizes. | **CNC machinist** |
| Find unknown angles in any triangles, quadrilaterals and regular triangles. | **Toolmaker** |
| Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. | **Toolmaker** |
| Recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles. | **Naval architect** |
| Describe positions on the full coordinate grid. | **Cartographer** |
| Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. | **Materials engineer** |
| **Statistics** | |
| Interpret and construct pie charts and line graphs and use these to solve problems. | **Geotechnician** |
| Calculate and interpret the mean as an average. | **Economist** |