



MATHEMATICS

Year 8 CCP




MATHEMATICS DEPARTMENT
Learning Outcomes Framework
SEPTEMBER 2022

Strand 1

Learning Area Outcome: I understand the structure of the number system and the relationship between numbers.

Subject Focus: Number – The number system

1	 I can read and write whole numbers to 1000 in figures and words.
2	I can recognise, read and position whole numbers up to 1000 on a number line.
3	I can recognise the place value of any digit in a whole number up to 1000.
4	I can compare and order whole numbers up to 1000 and include symbols such as $<$, $>$ or $=$.
5	I can read, say, order and write ordinal numbers up to 50.
6	I can identify odd and even numbers to 1000.
8	I can count forward and backwards in steps of 5s starting from any multiple of 5 working between 0 and 100.
9	I can count forward and backwards in steps of 25 and 50 starting from any multiple of 25 working between 0 and 500.
10	I can recall the first ten multiples of the numbers 2, 3, 4, 5 and 10.
25	I can associate 0.5 with one half.
26	I can associate 0.1 with one tenth.
28	I can recognise simple fractions that are part of a whole.
30	I can recognise and use simple equivalent fractions.
37	I can state one number lying between two whole numbers up to 1000.

Assistive Technology & Other Resources

41	I can use assistive technology (e.g. tablets and computers) and other learning resources (e.g. Cuisenaire rods, Unifix cubes, base 10 blocks) to learn about numbers and their properties.
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Strand 2

Learning Area Outcome: I can calculate using mental methods, pencil and paper methods, and, assistive technology methods. I can check calculations by rounding numbers and making rough approximations. I can calculate to the most appropriate level of accuracy. I can also check the reasonableness of answers.

Subject focus: Number – Numerical calculations







Whole Numbers, Decimal Numbers & Fraction Numbers - The Four Operations

2	I recognise that I can add numbers in any order and get the same result.
3	I can work out a small difference by counting up from the smaller to the larger number.
6	● I can use column addition and subtraction with up to three-digit numbers.
7	● I can work through situations involving addition and subtraction of up to two digit numbers, (total up to 1000).
8	I can derive all number pairs that total 100.
12	● I can identify multiplication as repeated addition.
13	● I recognise that I can multiply two numbers in any order and get the same result.
14	● I can describe division as equal sharing.
15	● I can describe division as equal grouping (repeated subtraction).
17	I can multiply a one-digit integer by multiples of 10.
18	I recognise unit fractions and use them to find fractions of shapes and numbers that are multiples of the denominator. e.g. $\frac{1}{3}$ of 24 = $24 \div 3 = 8$
19	I can double whole numbers between 1 and 500.
20	I can halve even numbers up to 1000.
22	I can find remainders after division, (restricted to dividends up to 100 and using 2, 3, 4, 5 and 10) as divisors.


23	<p>I can work through simple one-step situations using addition (up to a total of 100), subtraction (within 100), multiplication and/or division by 2, 3, 4, 5 and 10.</p> <p>I can also give a rough estimate of the answer of such situations and I can check the reasonableness of the answer.</p>
24	I can round any whole two digit-number to the nearest ten and any whole three-digit number to the nearest hundred.
33	I can work out multiplication of whole numbers up to 100 by 2, 3, 4, 5 and 10 by using the partitioning method and also by the standard method.
34	I can work out division of whole numbers up to 100 by 2, 3, 4, 5 and 10.
42	<p>I can find fractions of shapes and simple whole numbers.</p> <p>E.g. $\frac{3}{5}$ of 50 chairs</p> <p>$50 \div 5 = 10$; $10 \times 3 = 30$ chairs</p>
44	I can reduce a fraction to its simplest form.
46	I can read and interpret scales involving whole numbers (up to 1000).
65	I know that 1 euro is equal to 100 cent.
66	I can work out totals up to a hundred euro and give the correct change.
67	<p>I can handle small amounts of money in classroom situations (e.g. keeping track of money collected from small change for charity money collections).</p> <p>I can plan an activity within a given budget (e.g. using tickets, travel brochures, price lists, menus ...).</p> <p>I can use receipts, simple menus, entrance tickets to work out totals and change.</p> <p>I know that prices marked as €0.99 are a marketing strategy to make prices more attractive.</p>
Assistive Technology & Other Resources	
76	I can use assistive technology (e.g. tablets, and computers) and other resources (e.g. Cuisenaire rods, Unifix cubes, base 10 blocks) appropriate to this level to calculate and to learn about numerical calculations.


Strand 3	
Learning Area Outcome: I can recognise and describe patterns and relationships in various mathematical ways and can use algebraic manipulations.	
Subject Focus: Algebra – Fundamentals of Algebra	
1	I can recognise and extend simple pictorial patterns and number sequences formed by counting any positive integer in constant steps.
16	I can use an empty box symbol to stand in for an unknown number and can find the unknown number.
46	I can find the output of a simple one-step number machine.
Assistive Technology & Other Resources	
52	I can use assistive technology (e.g. tablets and computers) and other resources appropriate to this level to learn about the fundamentals of algebra.

Strand 4	
Learning Area Outcome: I understand and can use forms of measurement and can make reasonable estimations.	
Subject Focus: Shape, Space & Measures – Measures	
Angles	
1	I can show and label the main four compass points.
4	I can make and describe right-angle turns including turns between the main four compass points.
5	I can recognise and sketch angles of 90°.
6	I can identify and distinguish between right, acute and obtuse angles.
Length, Mass and Capacity	
12	I know that the length of an object is a measure of distance between the endpoints of an object.
13	I know that the mass of an object is a measure of the amount of material in the object
14	I know that the capacity of a container is a measure of the amount of fluid that can be poured into the container.

17	 I can read and write the vocabulary related to length, mass and capacity.
18	 I know the standard metric units of length (kilometres, metres, centimetres and millimetres), mass (kilograms and grams) and capacity (litres and millilitres). I also know the abbreviations of these standard units and I can work out the relationships between different units of the same measure.
19	 I can estimate, measure and compare lengths, masses and capacities.
20	I can use the decimal notation to express measures of length, mass and capacity.
22	I can suggest and use measuring equipment to measure length, mass and capacity.
23	I can draw a line to the nearest cm.
Time	
43	 I can read and write vocabulary related to time.
44	I can use standard units of time, and know the relationships between them.
47	I can read and use the 12-hour digital and analogue clock for time to the hour, half hour and quarter hour.
50	 I can read and use a calendar.
52	 I can estimate and measure time using seconds, minutes and hours.
Assistive Technology & Other Resources	
54	I can use assistive technology (e.g. tablets, computers and calculators) and other resources (e.g. plastic money, cardboard clocks, 2D and 3D plastic shapes, measuring instruments) appropriate to this level to learn about measures.

Strand 5	
Learning Area Outcome: I can recognise and describe the properties of shapes. I can use these properties to construct shapes using appropriate mathematical instruments and to prove given geometric statements.	
Subject Focus: Shape, Space & Measures – Euclidean Geometry	
2D and 3D shapes	
1	I can recognise and draw examples of horizontal and vertical lines.
7	I can recognise, name, describe and draw the triangle. I can also recognise scalene, isosceles and right-angled triangles.

12	I can recognise, name, describe and draw the square, the rectangle and the circle.
15	I can sort and classify simple 2D shapes using their various properties.
18	 I can recognize and name the cube the cuboid, the cylinder, the cone and the sphere.
22	I can recognise, name, describe and draw the circle.
Assistive Technology & Other Resources	
34	I can use assistive technology (e.g. tablets and computers) and other resources (e.g. 2D and 3D plastic shapes) appropriate to this level to learn about properties of shapes.

Strand 6	
Learning Area Outcome: I can describe position and movement of shapes in a plane	
Subject Focus: Shape, Space & Measures – Transformation Geometry	
Movement	
1	 I can distinguish between right, left, up and down and can move an object in each of these directions. I can also describe the movement of the object in each of these directions.
2	I can read and write the vocabulary related to position, direction and movement.
3	I can describe and find the position of an object on a grid of squares with rows and columns eg. (B3)
Reflections	
5	I can identify and draw lines of symmetry in simple 2D shapes and pictures.
6	I can recognise shapes with no, one and two lines of symmetry
7	I can draw the other half of a simple symmetrical shape.
Assistive Technology & Other Resources	
21	I can use assistive technology (e.g. tablets and computers) and other resources (e.g. 2D and 3D plastic shapes) appropriate to this level to learn about transformation geometry.