Maths RTPs

The RTPs (ready to progress criteria) are the essential elements of Maths that are crucial for children's mathematical learning and progression.

Reception

- Count forwards to 20, pausing at each multiple of 10.
- Play games that involve moving along a numbered track, and understand that larger numbers are further along the track.
- Begin to experience partitioning and combining numbers within 10.
- Distribute items fairly, for example, put 3 marbles in each bag.
- Recognise when items are distributed unfairly.
- Understand the value of number words, for example understanding that 'four' relates to 4 objects.
- Subitise up to 5 items.
- Automatically show a given number using fingers.
- Devise and record number stories, using pictures, numbers and symbols (such as arrows).
- Explore models of 2D and 3D shapes presented in different orientations (for example, triangles not always presented on their base).
- Select, rotate and manipulate shapes for a particular purpose, for example: rotating a cylinder so it can be used to build a tower, rotating a puzzle piece to fit in its place.

Year 1 RTPs

- Count to 100 (forwards and backwards).
- Locate numbers to 20 on a number line.
- Compare numbers to 20 using < > and =
- Recall addition and subtraction facts within 10.
- Count forwards and backwards in multiples of 2, 5 and 10.
- Count forwards and backwards through the odd numbers.
- Compose numbers to 10 from 2 parts.
- Partition numbers to 10 into parts.

- Understand and use the mathematical symbols + - and =.
- Recognise rectangles (including squares), circles and triangles.
- Recognise cuboids (including cubes), cylinders, spheres and pyramids.
- Compose 2D and 3D shapes from smaller shapes.

Year 2 RTPs:

- Count in tens and ones.
- Partition two-digit numbers into tens and ones.
- Locate two-digit numbers on a number line.
- Identify which 2 multiples of 10 a two-digit number lies between (e.g. 47 is between 40 and 50).
- Add and subtract across 10 (e.g. 8 + 5 = 13, 13 – 5 = 8).
- Recognise subtraction as 'difference'.
- Add and subtract within 100 (add and subtract 2-digit numbers).
- Understand multiplication as repeated addition (5 + 5 + 5 = 3 × 5).
- Solve problems such as 'There are 15 biscuits. If I put them into bags of 5, how many bags will I need?' (____ × 5 = 15, 15 ÷ 5 = ____).
- Describe the properties of 2D and 3D shapes.
- Compare shapes by reasoning about similarities and differences in properties.

Year 3 RTPs:

- Know that 10 tens are equivalent to 1 hundred.
- Identify how many 10s there are in three-digit multiples of 10.
- Partition three-digit numbers into hundreds, tens and ones.
- Locate three-digit numbers on a number line.
- Identify the previous and next multiple of 100 and 10.
- Divide 100 into 2, 4, 5 and 10 equal parts.
- Recall multiplication and division facts, in the 10, 5, 2, 4 and 8 multiplication tables.
- Apply place-value knowledge to scale facts by 10.

E.g. 80 + 60 = 140, 140 – 60 = 80, 30 × 4 = 120, 120 ÷ 4 = 30.

- Calculate complements to 100 (46 + ? = 100).
- Add and subtract up to three-digit numbers using columnar methods.
- Find unit fractions of quantities.

- Locate fractions on the number line.
- Add and subtract fractions with the same denominator (within 1).
- Identify right angles in 2D shapes.
- Identify parallel and perpendicular sides.

Year 4 RTPs:

- Know that 10 hundreds are equivalent to 1 thousand
- Identify how many 100s there are in four-digit multiples of 100.
- Partition four-digit numbers into thousands, hundreds, tens and ones.
- Locate four-digit numbers on a number line.
- Round to the nearest 100 and 1000 (8, 681 rounded to the nearest 1000 is 9000).
- Divide 1,000 into 2, 4, 5 and 10 equal parts.
- Recall multiplication and division facts up to 12×12.
- Solve division problems that involve remainders, for example: $74 \div 9 = 8 \, r \, 2$.
- Apply place-value knowledge to scale facts by 100.

E.g. $800 + 600 = 1400$, $1400 - 600 = 800$ $300 \times 4 = 1200$, $1200 \div 4 = 300$

- Multiply and divide whole numbers by 10 and 100.
- Locate mixed numbers on the number line.
- Convert mixed numbers to improper fractions and vice versa.
- Add and subtract improper and mixed fractions with the same denominator.
- Translate a polygon on a square grid (e.g. 4 squares right, 3 squares down).
- Identify regular polygons, including equilateral triangles and squares, as those where the side-lengths are equal and the angles are equal.
- Find the perimeter of regular and irregular polygons.
- Identify line symmetry in 2D shapes.
- Reflect shapes in a line of symmetry.

Year 5 RTPs:

- Know that 10 tenths are equivalent to 1 one.

- Know that 100 hundredths are equivalent to 1 one.
- Know that 10 hundredths are equivalent to 1 tenth.
- Partition numbers with 2 decimal places.
- Locate numbers with 2 decimal places on the number line.
- Round to the nearest 1 and 0.1.
- Divide 1 into 2, 4, 5 and 10 equal parts.
- Convert between units of measure.
- Secure fluency in multiplication and division facts up to 12 x 12.
- Apply place-value knowledge to scale facts by 1 tenth or 1 hundredth.

E.g. 0.8 + 0.6 = 1.4   0.08 + 0.06 =0.14   0.3 x 4 = 1.2   0.03 x 4 = 0.12

- Multiply and divide numbers (including decimals) by 10 and 100.
- Find factors and multiples of whole numbers.
- Multiply a number with up to 4 digits by a one-digit number using a formal written method.
- Divide a number with up to 4 digits by a one-digit number using a formal written method.
- Find non-unit fractions of quantities.
- Find equivalent fractions.
- Recall decimal fraction equivalents for $\frac{1}{2}$, $\frac{1}{4}$, 1/5 and 1/10.
- Estimate and measure angles in degrees (°) and draw angles of a given size.
- Compare areas and calculate the area of rectangles using standard units.

Year 6 RTPs:

- Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).
- Partition numbers up to 10 million.
- Locate numbers up to 10 million on the number line.
- Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts.
- Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships.
- Solve problems involving ratio relationships.
- Solve problems with 2 unknowns.
- Recognise when fractions can be simplified and use common factors to simplify fractions.
- Express fractions in a common denomination.

- *Compare fractions with different denominators, including fractions greater than 1.*
- *Draw shapes according to given properties, including dimensions, angles and area, and solve related problems.*