# CanDoMaths

# KPI Overview

# CanDoMaths Key Performance Indicators

The CanDoMaths Key Performance Indicators are the essential learning that all children need to have a secure understanding of, in order to successfully progress to the next stage of learning and meet at least expected standards by the end of Key Stages 1 and 2.

There are 24 KPIs identified for Years 1 to 6 (see pages 4 to 9) representing all strands of mathematics but with an emphasis on Place Value, Number Facts, Calculation, Fractions, Decimals and Percentages. Not all terms have the same number of KPIs due to the design of the CanDoMaths Curriculum and end of Key Stage accountability for Years 2 and 6.

While we realise, mathematics provision is different in the Early Years, we have also included 24 'KPIs' for use in the Reception Class (see page 3)

## Links with the DfE Mathematics Guidance
All the DfE Ready to Progress criteria can be linked to the CanDoMaths KPIs (see CanDoMaths Ready To Progress guidance) plus we have identified other important topics such as time, negative numbers, operating with fractions with different denominators and operating with decimals and percentages. These are critical for children to meet at least expected standards by the end of a Key Stage 2.

Please note: These DfE Ready to Progress are directly not linked to a KPI due to their broad nature. It is expected they will be taught during units

| 6 AS/MD1 | Multiplicative and additive reasoning, including the use of 'If I know then I also know ...' thinking, are pedagogical drivers throughout Can-DoMaths Lessons and Meetings. |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6AS/MD2 | |
| 3/4/5/6 NPV-1 | Links can be made to the Plave Value Units in Years 3, 4, 5 and 6 |

## Supporting Resources
The CanDoMaths resources, KeeP-uppls Workouts and ArithmeQuizzes, have been deliberately designed to help children practise and consolidate the KPIs during Maths Meetings.

The CanDoMaths Ready To Progress Tests have been designed to assess children's understanding of the KPIs.

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|---|---|---|---|---|---|---|
| **Term 1** | 1. Count up to 30<br>2. Order numbers up to 30<br>3. Write and interpret mathematical statements +, − and =<br>4. Recognise rectangle, square, triangle and circle | 1. Read and write 2-digit numbers<br>2. Compare and order numbers up to 100<br>3. Recall and use addition facts to 10<br>4. Find 10 more or less than a 2-digit number<br>5. Add two 2-digit numbers<br>6. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces | 1. Read and write 3-digit numbers<br>2. Compare and order numbers up to 1000<br>3. Finding 10 or 100 more or less than a given number<br>4. Recognise and count in tenths<br>5. Recognise horizontal, vertical, perpendicular and parallel lines | 1. Read and write 4-digit numbers<br>2. Compare and order numbers up to 10,000<br>3. Round any number up to 4-digits to the nearest 10, 100 or 1000<br>4. Classify quadrilaterals | 1. Read and write numbers up to 1,000,000<br>2. Compare and order numbers up to 1,000,000<br>3. Compare and order decimals with up to 3 decimal places<br>4. Round numbers to 1 decimal place, nearest whole number and 10, 100, 1000, 10000<br>5. Count forwards and backwards with positive and negative numbers | 1. Read, write and order numbers up to 10,000,000<br>2. Multiply and divide numbers by 10, 100 and 1000<br>3. Multiply numbers up to 4 digits by a 2-digit number choosing efficient methods<br>4. Divide numbers up to 4 digits by a two-digit number choosing efficient methods and interpreting the remainders<br>5. Calculate intervals across zero<br>6. Describe and plot positions on a 2-D grid as coordinates in the four quadrants<br>7. Reflect and translate shapes |
| **Term 2** | 5. Write numbers to 100 in numerals<br>6. Compare and order numbers to 100<br>7. Identify one more and one less than a given number<br>8. Represent and use number bonds within 10 (addition facts)<br>9. Represent and use number bonds within 10 (subtraction facts)<br>10. Recognise cuboids, pyramids and spheres | '7. Know that addition is commutative and subtraction is not<br>8. Subtract two 2-digit numbers<br>9. Recall and use subtraction facts to 10<br>10. Understand how multiplication can be represented<br>11. Know that multiplication is commutative and division is not<br>12. Understand how division can be represented<br>13. Describe turns using right angles | '6. Add numbers with up to 3-digits mentally<br>7. Subtract numbers with up to 3-digits mentally<br>8. Know and use multiplication facts for 3, 4 and 8 multiplication tables<br>9. Know and use division facts for 3, 4 and 8 multiplication tables | '5. Add and subtract numbers with up to 4-digits mentally<br>6. Know and use multiplication facts for 6, 7 and 9 multiplication tables<br>7. Know and use division facts for 6, 7 and 9 multiplication tables | '6. Add and subtract whole numbers with more than 4 digits choosing efficient methods<br>7. Add and subtract decimals with up to 3 decimal places choosing efficient methods<br>8. Multiply and divide whole numbers and decimals by 10, 100 and 1000<br>9. Identify and use multiples, factors and prime numbers. | 8. Simplify fractions<br>9. Compare and order fractions, including fractions > 1<br>10. Know and use simple fraction, decimal and percentage equivalents<br>11. Compare and classify 2-D and 3-D shapes<br>12. Know and use angle properties of straight lines, at a point and shapes<br>13. Draw simple shapes using given lengths and angles |
| **Term 3** | 11. Represent and use number bonds for 11 to 16 (addition facts)<br>12. Represent and use number bonds for 11 to 16 (subtraction facts)<br>13. Measure length and height | 14. Know and use multiplication facts for 2, 5 and 10 multiplication tables<br>15. Know and use division facts for 2, 5 and 10 multiplication tables<br>16. Read scales in divisions of 1, 2, 5 and 10<br>17. Use standard units to measure length, mass and height | 10. Compare and order fractions with same numerator or same denominator<br>11. Add numbers with up to 3-digits using a formal written method<br>12. Subtract numbers with up to 3-digits using a formal written method<br>13. Choose efficient methods to add and subtract numbers up to 3-digits | 8. Add and subtract numbers with up to 4-digits using a formal written method<br>9. Know and use multiplication facts for 11 and 12 multiplication tables<br>10. Know and use division facts for 11 and 12 multiplication tables<br>11. Choose efficient methods to add and subtract numbers up to 4-digits | 10. Multiply numbers up to 4-digits by 1 or 2-digits using a formal written method<br>11. Divide numbers up to 4-digits by 1-digits using a formal written method of division<br>12. Use known facts and place value to multiply a whole number by a decimal<br>13. Multiply decimal numbers (1 or 2 decimal places) by 1-digit using a formal written method | 14. Add and subtract fractions with denominators that are not multiples of each other<br>15. Add and subtract mixed numbers<br>16. Multiply simple pairs of proper fractions<br>17. Divide proper fractions by a whole number |
| **Term 4** | '14. Represent and use number bonds within 20 (addition facts)<br>15. Represent and use number bonds within 20 (subtraction facts)<br>16. Recognise and find one half<br>17. Recognise and find one quarter<br>18. Use the language position, direction and movement | '18. Recognise and find one third<br>19. Recognise and find three quarters<br>20. Tell the time to quarter to/past and 5 minute intervals<br>21. Calculate change<br>22. Combine coins to make amounts | '14. Multiply 2-digit by 1-digit numbers mentally<br>15. Divide 2-digit by 1-digit numbers mentally<br>16. Multiply 2-digit by 1-digit numbers using a formal written method | '12. Multiply 2-digit by a 1-digit using the distributive law<br>13. Multiply 3-digit by a 1-digit using a formal written method<br>14. Divide a 3-digit by a 1-digit number<br>15. Use place value, known and derived facts to multiply and divide mentally<br>16. Identify acute and obtuse angles | '14. Compare and order fractions whose denominators are all multiples of the same number<br>15. Read and write decimal numbers (up to 3 decimal places) as fractions<br>16. Understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100<br>17. Convert between adjacent units of metric measure | '18. Find percentages of an amount<br>19. Use simple ratio to compare quantities<br>20. Convert between different units of metric measure<br>21. Calculate the area of triangles/parallelograms<br>22. Calculate volumes of cuboids<br>23. Use simple formulae expressed in words<br>24. Find possible values in missing number problems involving one or two unknowns |
| **Term 5** | 19. Add and subtract 1 and 2-digit numbers up to 20<br>20. Know the days of the week and months of the year<br>21. Tell the time to the hour and half past | 23. Construct and interpret pictograms using 2s, 5s and 10s<br>24. Recall factor-factor-product relationships for 2, 5 and 10 multiplication tables | 17. Calculate fractions of amounts<br>18. Add and subtract fractions with the same denominator<br>19. Tell the time to the nearest minute<br>20. Calculate durations of events | 17. Divide 1 and 2-digit numbers by 10 and 100<br>18. Add and subtract fractions with the same denominator beyond the whole<br>19. Find families of equivalent fractions<br>20. Recall factor-factor-product relationships for 6,7,9,11 and 12 multiplication tables | 18. Convert mixed numbers to improper fractions and vice versa<br>19. Add mixed numbers and proper fractions with denominators that are the same and multiples of each other<br>20. Subtract proper fractions from mixed numbers with denominators that are the same and multiples of each other<br>21. Multiply fractions and mixed numbers by a whole number | |
| **Term 6** | 22. Represent multiplication using concrete objects and pictorial representations<br>23. Represent division using concrete objects and pictorial representations<br>24. Recognise and know the value of different denominations of coins and notes | | 21. Measure the perimeter of shapes<br>22. Identify angles in shapes<br>23. Interpret bar charts<br>24. Recall factor-factor-product relationships for 3, 4 and 8 multiplication tables | 21. Add and subtract decimal numbers (up to 2 decimal places) including measures and money<br>22. Find the area of rectilinear shapes by counting squares<br>23. Describe and plot positions on a 2-D grid as coordinates in the first quadrant<br>24. Convert between analogue and digital 12 and 24-hour clocks and other units of time | 22. Calculate the area of rectangles<br>23. Draw given angles, and measure them, in degrees (°)<br>24. Interpret line graphs | |

# CanDoMaths Key Performance Indicators

| | Year R KPIs | | |
|---|---|---|---|
| 1 | Recite the number sequence, | | |
| 2 | Count to and from different numbers, forwards | | |
| 3 | Count to and from different numbers, backwards | | |
| 4 | Count objects accurately | | |
| 5 | Subitise | | |
| 6 | Select a numeral to represent a quantity in a group | | |
| 7 | Find the group that has more or less | | |
| 8 | Compare two numbers saying which is larger or smaller | | |
| 9 | Order numbers | | |
| 10 | Identify something longer or shorter than something else | | |
| 11 | Continue or create a repeating pattern | | |
| 12 | Identify similarities and differences between 3D shapes | | |
| 13 | Combine two quantities to add | | |
| 14 | Count on to add | | |
| 15 | Find one more | | |
| 16 | Take away and say what is left | | |
| 17 | Find one less | | |
| 18 | Partition numbers into two parts | | |
| 19 | Partition numbers into more than two parts | | |
| 20 | Say how many are hidden in a known number of items | | |
| 21 | Find something heavier or lighter than something else | | |
| 22 | Use positional language | | |
| 23 | Identify similarities and differences between 2D shapes | | |
| 24 | Order events | | |

# CanDoMaths Key Performance Indicators

| | Year 1 KPIs | | |
|---|---|---|---|
| 1 | Count up to 30 | | |
| 2 | Order numbers up to 30 | | |
| 3 | Write and interpret mathematical statements +, − and = | | |
| 4 | Recognise rectangle, square, triangle and circle | | |
| 5 | Write numbers to 100 in numerals | | |
| 6 | Compare and order numbers to 100 | | |
| 7 | Identify one more and one less than a given number | | |
| 8 | Represent and use number bonds within 10 (addition facts) | | |
| 9 | Represent and use number bonds within 10 (subtraction facts) | | |
| 10 | Recognise cuboids, pyramids and spheres | | |
| 11 | Represent and use number bonds for 11 to 16 (addition facts) | | |
| 12 | Represent and use number bonds for 11 to 16 (subtraction facts) | | |
| 13 | Measure length and height | | |
| 14 | Represent and use number bonds within 20 (addition facts) | | |
| 15 | Represent and use number bonds within 20 (subtraction facts) | | |
| 16 | Recognise and find one half | | |
| 17 | Recognise and find one quarter | | |
| 18 | Use the language of position, direction and movement | | |
| 19 | Add and subtract 1 and 2-digit numbers up to 20 | | |
| 20 | Know the days of the week and months of the year | | |
| 21 | Tell the time to the hour and half past | | |
| 22 | Represent multiplication using concrete objects and pictorial representations | | |
| 23 | Represent division using concrete objects and pictorial representations | | |
| 24 | Recognise and know the value of different denominations of coins and notes | | |

# CanDoMaths Key Performance Indicators

| | Year 2 KPIs | | |
|---|---|---|---|
| 1 | Read and write 2-digit numbers | | |
| 2 | Compare and order numbers up to 100 | | |
| 3 | Recall and use addition facts to 10 | | |
| 4 | Find 10 more or less than a 2-digit number | | |
| 5 | Add two 2-digit numbers | | |
| 6 | Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces | | |
| 7 | Know that addition is commutative and subtraction is not | | |
| 8 | Subtract two 2-digit numbers | | |
| 9 | Recall and use subtraction facts to 10 | | |
| 10 | Understand how multiplication can be represented | | |
| 11 | Know that multiplication is commutative and division is not | | |
| 12 | Understand how division can be represented | | |
| 13 | Describe turns using right angles | | |
| 14 | Know and use multiplication facts for 2, 5 and 10 multiplication tables | | |
| 15 | Know and use division facts for 2, 5 and 10 multiplication tables | | |
| 16 | Read scales in divisions of 1, 2, 5 and 10 | | |
| 17 | Use standard units to measure length, mass and height | | |
| 18 | Recognise and find one third | | |
| 19 | Recognise and find three quarters | | |
| 20 | Tell the time to quarter to/past and 5 minute intervals | | |
| 21 | Calculate change | | |
| 22 | Combine coins to make amounts | | |
| 23 | Construct and interpret pictograms using 2s, 5s and 10s | | |
| 24 | Recall factor-factor-product relationships for 2, 5 and 10 multiplication tables | | |

# CanDoMaths Key Performance Indicators

| | Year 3 KPIs | | |
|---|---|---|---|
| 1 | Read and write 3-digit numbers | | |
| 2 | Compare and order numbers up to 1000 | | |
| 3 | Finding 10 or 100 more or less than a given number | | |
| 4 | Recognise and count in tenths | | |
| 5 | Recognise horizontal, vertical, perpendicular and parallel lines | | |
| 6 | Add numbers with up to 3-digits mentally | | |
| 7 | Subtract numbers with up to 3-digits mentally | | |
| 8 | Know and use multiplication facts for 3, 4 and 8 multiplication tables | | |
| 9 | Know and use division facts for 3, 4 and 8 multiplication tables | | |
| 10 | Compare and order fractions with same numerator or same denominator | | |
| 11 | Add numbers with up to 3-digits using a formal written method | | |
| 12 | Subtract numbers with up to 3-digits using a formal written method | | |
| 13 | Choose efficient methods to add and subtract numbers up to 3-digits | | |
| 14 | Multiply 2-digit by 1-digit numbers mentally | | |
| 15 | Divide 2-digit by 1-digit numbers mentally | | |
| 16 | Multiply 2-digit by 1-digit numbers using a formal written method | | |
| 17 | Calculate fractions of amounts | | |
| 18 | Add and subtract fractions with the same denominator | | |
| 19 | Tell the time to the nearest minute | | |
| 20 | Calculate durations of events | | |
| 21 | Measure the perimeter of shapes | | |
| 22 | Identify angles in shapes | | |
| 23 | Interpret bar charts | | |
| 24 | Recall factor-factor-product relationships for 3, 4 and 8 multiplication tables | | |

# CanDoMaths Key Performance Indicators

| | Year 4 KPIs | | |
|---|---|---|---|
| 1 | Read and write 4-digit numbers | | |
| 2 | Compare and order numbers up to 10,000 | | |
| 3 | Round any number up to 4-digits to the nearest 10, 100 or 1000 | | |
| 4 | Classify quadrilaterals | | |
| 5 | Add and subtract numbers with up to 4-digits mentally | | |
| 6 | Know and use multiplication facts for 6, 7 and 9 multiplication tables | | |
| 7 | Know and use division facts for 6, 7 and 9 multiplication tables | | |
| 8 | Add and subtract numbers with up to 4-digits using a formal written method | | |
| 9 | Know and use multiplication facts for 11 and 12 multiplication tables | | |
| 10 | Know and use division facts for 11 and 12 multiplication tables | | |
| 11 | Choose efficient methods to add and subtract numbers up to 4-digits | | |
| 12 | Multiply 2-digit by a 1-digit using the distributive law | | |
| 13 | Multiply 3-digit by a 1-digit using a formal written method | | |
| 14 | Divide a 3-digit by a 1-digit number | | |
| 15 | Use place value, known and derived facts to multiply and divide mentally | | |
| 16 | Identify acute and obtuse angles | | |
| 17 | Divide 1 and 2-digit numbers by 10 and 100 | | |
| 18 | Add and subtract fractions with the same denominator beyond the whole | | |
| 19 | Find families of equivalent fractions | | |
| 20 | Recall factor-factor-product relationships for 6,7,9,11 and 12 multiplication tables | | |
| 21 | Add and subtract decimal numbers (up to 2 decimal places) including measures and money) | | |
| 22 | Find the area of rectilinear shapes by counting squares | | |
| 23 | Describe and plot positions on a 2-D grid as coordinates in the first quadrant | | |
| 24 | Convert between analogue and digital 12 and 24-hour clocks and other units of time | | |

# CanDoMaths Key Performance Indicators

| | Year 5 KPIs | | |
|---|---|---|---|
| 1 | Read and write numbers up to 1,000,000 | | |
| 2 | Compare and order numbers up to 1,000,000 | | |
| 3 | Compare and order decimals with up to 3 decimal places | | |
| 4 | Round numbers to 1 decimal place, nearest whole number and 10, 100, 1000, 10000 | | |
| 5 | Count forwards and backwards with positive and negative numbers | | |
| 6 | Add and subtract whole numbers with more than 4 digits choosing efficient methods | | |
| 7 | Add and subtract decimals with up to 3 decimal places choosing efficient method | | |
| 8 | Multiply and divide whole numbers and decimals by 10, 100 and 1000 | | |
| 9 | Identify and use multiples, factors and prime numbers | | |
| 10 | Multiply numbers up to 4-digits by 1 or 2-digits using a formal written method | | |
| 11 | Divide numbers up to 4-digits by 1-digits using a formal written method of division | | |
| 12 | Use known facts and place value to multiply a whole number by a decimal | | |
| 13 | Multiply decimal numbers (1 or 2 decimal places) by 1-digit using a formal written method | | |
| 14 | Compare and order fractions whose denominators are all multiples of the same number | | |
| 15 | Read and write decimal numbers (up to 3 decimal places) as fractions | | |
| 16 | Understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100 | | |
| 17 | Convert between adjacent units of metric measure | | |
| 18 | Convert mixed numbers to improper fractions and vice versa | | |
| 19 | Add mixed numbers and proper fractions with denominators that are the same and multiples of each other | | |
| 20 | Subtract proper fractions from mixed numbers with denominators that are the same and multiples of each other | | |
| 21 | Multiply fractions and mixed numbers by a whole number | | |
| 22 | Calculate the area of rectangles | | |
| 23 | Draw given angles, and measure them, in degrees (°) | | |
| 24 | Interpret line graphs | | |

# CanDoMaths Key Performance Indicators

| | Year 6 KPIs | | |
|---|---|---|---|
| 1 | Read, write and order numbers up to 10,000,000 | | |
| 2 | Multiply and divide numbers by 10, 100 and 1000 | | |
| 3 | Multiply numbers up to 4 digits by a 2-digit number choosing efficient methods | | |
| 4 | Divide numbers up to 4 digits by a two-digit number choosing efficient methods and interpreting the remainders | | |
| 5 | Calculate intervals across zero | | |
| 6 | Describe and plot positions on a 2-D grid as coordinates in the four quadrants | | |
| 7 | Reflect and translate shapes | | |
| 8 | Simplify fractions | | |
| 9 | Compare and order fractions, including fractions > 1 | | |
| 10 | Know and use simple fraction, decimal and percentage equivalents | | |
| 11 | Compare and classify 2-D and 3-D shapes | | |
| 12 | Know and use angle properties of straight lines, at a point and shapes | | |
| 13 | Draw simple shapes using given lengths and angles | | |
| 14 | Add and subtract fractions with denominators that are not multiples of each other | | |
| 15 | Add and subtract mixed numbers | | |
| 16 | Multiply simple pairs of proper fractions | | |
| 17 | Divide proper fractions by a whole number | | |
| 18 | Find percentages of an amount | | |
| 19 | Use simple ratio to compare quantities | | |
| 20 | Convert between different units of metric measure | | |
| 21 | Calculate the area of triangles and parallelograms | | |
| 22 | Calculate volumes of cuboids | | |
| 23 | Use simple formulae expressed in words | | |
| 24 | Find possible values in missing number problems involving one or two unknowns | | |