

## Year 5 Maths

### Areas of Focused Learning and Associated Vocabulary

#### Counting, partitioning and calculating

- Addition and subtraction
- Mental methods: special cases
- Written methods: whole numbers and decimals
- Ordering, partitioning and rounding numbers and decimals to 2 places
- Solving one- and two-step word problems involving numbers, money or measures
- Explaining methods and reasoning, orally and on paper, using words, diagrams, graphs, symbols
- Multiplication and division
- Tables to  $10 \times 10$ ; multiplying multiples of 10 or 100; factors
- Mental methods:  $TU \times U$  and special cases
- Written methods:  $HTU \times U$ ,  $TU \times U$ ,  $U.t \times U$ ,  $HTU \div U$
- Using a calculator

*problem, solution, calculate, calculation, equation, operation, answer, method, explain, reasoning, reason, predict, relationship, rule, formula, pattern, sequence, term, consecutive*

*place value, digit, numeral, partition, decimal point, decimal place, thousands, ten thousands, hundred thousands, millions, tenths, hundredths, positive, negative, above/below zero, compare, order, ascending, descending, greater than ( $>$ ), less than ( $<$ ), round, estimate, approximately*

*add, subtract, multiply, divide, sum, total, difference, plus, minus, product, quotient, remainder, factor, multiple*

*calculator, display, key, enter, clear, constant*

pound (£), penny/pence (p), units of measurement and their abbreviations, degree Celsius ( $^{\circ}\text{C}$ )

## Securing number facts, understanding shape

- Written methods: addition and subtraction of decimals
- Mental methods and recall: sums, differences, doubles and halves of decimals
- Tables to  $10 \times 10$ ; multiplying/ dividing multiples of 10 or 100
- Factors, common multiples
- Patterns, relationships and properties of numbers and shapes
- Representing a problem using calculations or diagrams
- Visualising 3-D and 2-D shapes
- Properties of 3-D and 2-D shapes
- Nets of solids
- Using a calculator

*problem, solution, calculate, calculation, equation, method, explain, reasoning, reason, predict, pattern, relationship, formula, rule, classify, property, criterion/criteria, generalise, general statement*

*integer, square number, multiple, factor, divisor, divisible by, decimal, decimal point, decimal place*

*operation, inverse, add, subtract, multiply, divide, sum, total, difference, plus, minus, product, quotient, remainder, double, halve, factor, multiple, divisor, round, estimate, approximate*

*3-D, three-dimensional, vertex, vertices, face, edge, 2-D, two-dimensional, regular, irregular, polygon, side, parallel, perpendicular, angle, degree ( $^{\circ}$ ), acute, obtuse, protractor, angle measurer, names of shapes, including equilateral triangle, isosceles triangle, scalene triangle, quadrilateral, octahedron*

*reflection, reflective symmetry, line of symmetry, mirror line, rotation, translation, origin, coordinates, x-coordinate, y-coordinate, x-axis, y-axis*

## Handling data and measures

- Language of probability
- Construct frequency tables, pictograms and bar and line graphs
- Finding the mode
- Collecting, organising, presenting and interpret data to answer related questions
- Identifying further questions
- Explaining reasoning using diagrams, graphs and text
- Estimating and measuring
- Metric units, conversions
- Readings from scales
- Using ICT

*problem, solution, calculate, calculation, method, explain, reasoning, reason, predict, pattern, relationship, classify, represent, analyse, interpret*

*fair, unfair, risk, doubt, likely, unlikely, likelihood, certain, uncertain, probable, possible, impossible, chance, good chance, poor chance, no chance, outcome*

*units of measurement and their abbreviations*

*data, information, survey, questionnaire, graph, chart, table, horizontal axis, vertical axis, axes, label, title, scale, pictogram, bar chart, bar-line chart, line graph, mode, maximum/minimum value*

## Calculating, measuring and understanding shape

- Multiplication and division by 10, 100, 1000
- Addition/subtraction of whole numbers and decimals
- $HTU \times U$ ,  $TU \times U$ ,  $U.t \times U$  and  $HTU \div U$
- Estimating and measuring weight, length, capacity
- Readings from scale
- Time: 24-hour clock, timetables, calendar
- Solving multi-step problems, using a calculator where appropriate
- Estimating and checking results
- Estimating, measuring and drawing angles
- Angles in a straight line
- Drawing shapes with parallel and perpendicular lines
- Coordinates
- Two lines of symmetry
- Reflection, translation
- Area and perimeter of regular/irregular polygons
- Formula for area of rectangle

*problem, solution, answer, method, strategy, compare, order, explain, predict, reason, reasoning, pattern, relationship, operation, calculation, calculate, calculator, equation, add, subtract, multiply, divide, sum, total, difference, plus, minus, product, quotient, remainder, calculator, memory, display, key, enter, clear, place, place value, decimal, decimal point, decimal place, estimate, approximate, approximately, measure, measurement, measuring scale, scales, balance, metre stick, tape measure, ruler, measuring cylinder, metric unit, standard unit, length, distance, perimeter, area, surface area, mass, weight, capacity, units of measurement and their abbreviations, days of the week, months of the year, second (s), minute (min), hour (h), day, month, calendar, timetable, 12-hour clock, 24-hour clock, am and pm, angle, degree ( $^{\circ}$ ), angle measurer, protractor, set-square, acute, obtuse, right angle position, direction, parallel, perpendicular, reflection, reflective symmetry, line of symmetry, mirror line, translation, coordinates, x-coordinate, y-coordinate, origin, x-axis, y-axis*

## Securing number facts, relationships and calculating

- Mental methods:  $TU \times U$ ,  $TU \div U$
- Written methods:  $HTU \times U$ ,  $TU \times TU$ ,  $U.t \times U$  and  $HTU \div U$
- Tables to  $10 \times 10$ : multiplying multiples of 10 and 100
- Sums, differences, doubles and halves of decimals
- Representing and solving one-step and two-step problems with whole numbers and decimals, all four operations
- Interpreting solutions
- Explaining reasoning
- Equivalence of fractions
- Percentages
- Fractions and percentages of quantities
- Scaling numbers up and down
- Finding proportions of quantities
- Using a calculator

*problem, solution, calculator, calculate, calculation, equation, operation, symbol, inverse, answer, method, explain, predict, reason, reasoning, pattern, relationship*

*add, subtract, multiply, divide, sum, total, difference, plus, minus, product, quotient, remainder, multiple, common multiple, factor, divisor, divisible by*

*decimal fraction, decimal place, decimal point, percentage, per cent (%)*

*fraction, proper fraction, improper fraction, mixed number, numerator, denominator, unit fraction, equivalent, cancel*

*proportion, in every, for every, to every*

## Fun Activities to do at home

### Target 1000

- Roll a dice 6 times.
- Use the six digits to make two three-digit numbers.
- Add the two numbers together. How close to 1000 can you get?
- Play with a partner - the person who gets closest to the target wins.
- Extend by having the target 10 000 and roll the dice 8 times.

### How much?

- While shopping, point out items costing less than £1.
- Ask your child to work out in their head the cost of three items.
- Estimate first - how close do they come?
  - How did they get the answer?
  - Extend to using items costing £s.
- If you see items labelled like '2 for £3.50', ask them to work out the cost of 1 item.

### Telephone challenges

- Challenge your child to find numbers in the telephone directory where the digits add up to 42.
  - Find as many possible in 10 minutes.
- On another day, see if they can beat their previous total.

### Decimal number plates

- Choose a car number plate with 2 numbers. Turn the numbers into decimals e.g. 56 becomes 5.6
  - Add the two decimals together.
  - Subtract the two numbers.
- Use one number and work out the other decimal number to make 10.

## Everyday Games and Ideas

- Skipping - count the skips, count in 7s, 8s
- Ludo
- Beetle
- Card games
- Times Table Bingo
- Heads and tails - keep a tally
- Connect 4
- I spy a number + 10. e.g. I spy the number 7 + 10
- Number jigsaws
- Dot to dot with numbers
- Yahtzee
- Happy Families
- Sharing out toys, sweets
- Using telephone numbers for addition, place value, number bonds etc
- Using pizza for simple fractions - whole, half and so on
- Cars on a journey e.g. how many red cars?
- Cooking and baking
- Shopping e.g. looking at prices, reading labels to discuss Capacity, weight and shape, value of coins - using money.

### Progression in Calculation Methods

**This document explains the different methods and strategies we use for written methods of calculation.  
Please use the links on our website.**

### Useful Websites:

- [www.counton.org](http://www.counton.org) has lots of ideas and games to play.
- [www.learn.co.uk](http://www.learn.co.uk) help for children with maths.
- [www.bbc.co.uk/schools](http://www.bbc.co.uk/schools) games to play.
- Google 'Coxhoe Primary School Maths' and this leads to lots of games children can play and links to other web sites.

### **Last but not least...**

- It is important that you talk and listen to your child about their work in maths. It will help your child if they have to explain and show to you.
- Share a maths activity with your child and discuss ideas with them.
- Be positive about maths, even if you do not feel confident about it yourself.
- If your child is having any problems with maths do let us know by either writing a note or popping in to see us.
- Maths is all around us - use everyday situations to help develop your child's vocabulary.
- If you need further information just ask.
- Play games and have fun!