Year 6 Maths
Areas of Focused Learning and Associated Vocabulary

Counting, partitioning and calculating

- Addition and subtraction
- Mental calculations
- Efficient written methods: whole numbers and decimals
- Ordering, partitioning and rounding decimals to 3 places: +ve and -ve integers
- Solving multi-step word problems involving numbers, money or measures
- Explaining reasoning and conclusions, orally and on paper, using words, diagrams, symbols
- Multiplication and division
- Mental methods: TU × U, TU ÷ U and special cases
- Written methods: TU × TU, HTU × TU, HTU ÷ U, multiplying and dividing decimals by one-digit integer
- Using a calculator

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

place value, digit, numeral, partition, integer, decimal point, decimal place, thousandths, positive, negative, compare, order, ascending, descending, greater than (>), less than (<), round, estimate, approximate, approximately

add, subtract, multiply, divide, convert, sum, total, difference, plus, minus, product, quotient, dividend, divisor, remainder calculator, display, key, enter, clear, constant

pound (£), penny/pence (p), note, coin, units of measurement and their abbreviations

Securing number facts, understanding shape

- Multiples, factors, primes and prime factors
- Tables to 10 × 10; squares, squares of multiples of 10
- Tests of divisibility
- Mental methods: multiplication and division facts applied to decimals
- Patterns, relationships and properties of numbers and shapes; suggesting hypotheses
- Representing a problem using calculations, symbols, formulae, diagrams
- Visualising and classifying 3-D and 2_D shapes, including quadrilaterals
- Making and drawing shapes
- Using a calculator including to find inverses

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

integer, decimal, fraction, square number, multiple, factor, factorise, divisor, divisible, divisibility, prime, prime factor, consecutive, operation, inverse, product, quotient, round, estimate, approximate

parallel, perpendicular, regular, irregular, face, edge, vertex/vertices, polyhedron, dodecahedron, octahedron, tetrahedron, polygon, quadrilateral, rhombus, kite, parallelogram, trapezium, triangle, isosceles, equilateral, scalene, radius, diameter, circumference, intersecting, intersection, plane

Handling data and measures

- Language of probability
- Finding outcomes from data
- Constructing frequency tables, bar charts for grouped discrete data and line graphs
- Interpreting pie charts
- Finding the mode, range, median and mean
- Collecting, processing presenting and interpreting data to solve problems
- Describing and interpreting results and solutions
- Identifying further questions
- Estimating and measuring to required degree of accuracy
- Metric units, conversions
- Comparing 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, equally likely, likelihood, certain, uncertain, probable, possible, impossible, chance, good chance, poor chance, no chance, equal chance, even chance, outcome, biased, random

estimate, measure, standard metric units of measurement and their abbreviations

data, information, survey, questionnaire, graph, chart, table, scale, interval, division, horizontal axis, vertical axis, axes, label, title, pictogram, bar chart, bar-line chart, line graph, pie chart

frequency, mode, maximum/minimum value, range, mean, average, median, statistics

Calculating, measuring and understanding shape

- Calculation
- Mental and written methods: integers and decimals, including HTU × TU
- Metric units, conversions, imperial units
- Reading from scales
- Solving multi-step problems, using a calculator where appropriate
- Estimating and checking results
- Estimating, measuring and drawing angles
- Angle sum of triangle; angles around a point
- Coordinates
- Reflection, translation, rotation
- Area and perimeter of rectilinear shapes

problem, solution, answer, method, strategy, compare, order, explain, predict, reason, reasoning, pattern, relationship

operation, calculation, calculate, equation, decimal, decimal point, decimal place, add, subtract, multiply, divide, sum, total, difference, plus, minus, product, quotient, remainder, calculator, memory, display, key, enter, clear

numerator, denominator, divisible by, multiple, factor

measure, estimate, approximately, metric unit, standard unit, length, distance, perimeter, area, surface area, mass, weight, capacity, angle, degree (°), angle measurer, protractor, set-square, balance, scales, units of measurement and their abbreviations, pound (£), penny/pence (p)

position, direction, reflection, reflective symmetry, line of symmetry, mirror line, rotation, centre of rotation, clockwise, anticlockwise, translation, origin, coordinates, x-coordinate, y-coordinate, x-axis, y-axis, axes, quadrant

Securing number facts, relationships and calculating

- Mental methods with decimals
- Written methods: HTU × TU, U.t × U, HTU ÷ U, U.t + U
- Explaining reasoning
- Recording solutions, using symbols where appropriate
- Checking solutions in context
- Solving multi-step problems with integers and decimals
- Solving problems with fractions and percentages
- Solving puzzles by tabulating systematically
- Simplifying fractions
- Ordering fractions
- Equivalent fractions, decimals, percentages
- Fractions and percentages of quantities
- Solving direct proportion problems by scaling numbers up and down.
- Using a calculator

problem, solution, calculator, calculate, calculation, jotting, equation, operation, symbol, inverse, answer, method, strategy, 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, ratio, in every, for every, to every

Fun Activities to do at home

Target

- 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.

Four in a line

- Draw a 6 x 7 grid.
- Fill it with any number under 100.
- Roll a dice three times.
- Use all three numbers to make a number on the grid.
- You can add, subtract, multiply or divide the numbers.
- Cover the number you make with a counter.
- The first to get four of their counters in a straight line wins.

Favourite food

- Ask your child the cost of their favourite food items.
- Work out what 7 of them would cost, or 8 and 9.
- Repeat with his least favourite food.
- What is the difference in cost between the two?

Sale of the century

When you go shopping, or see a shop with a sale on, ask your child to work out what some of the items would cost with: 50%, 25%, 10%, 5% off.

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 has lots of ideas and games to play.
- www.learn.co.uk help for children with maths.
- 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!