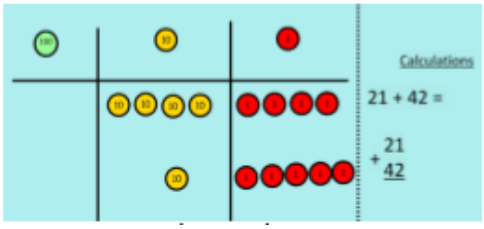
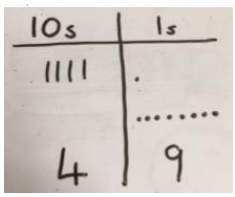
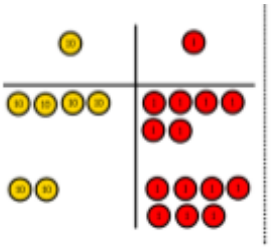
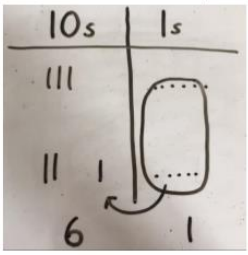
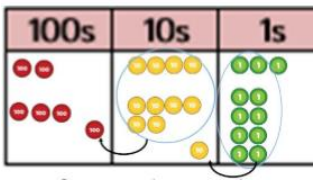
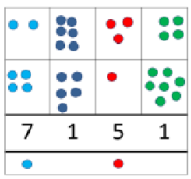
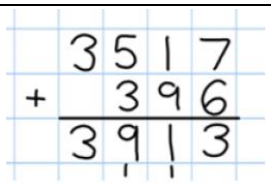
RAF Benson Community Primary School

ADDITION

Children in Year 4 need to be able to:

- add numbers with up to 4 digits using the formal written method of column addition
- solve two-step addition problems in contexts, deciding which operations and methods to use and why

STRATEGIES	EXAMPLES
Column Addition— no regrouping (friendly numbers)	  Represent numbers using pv counters or draw lines for the tens and dots for the ones.
Column Addition with regrouping	 146 + 527  Draw a representation of the grid to support their understanding, carrying the ten underneath the line
add numbers with up to 4 digits	   Draw representations using place value grid. (Can circle when they make an exchange.)

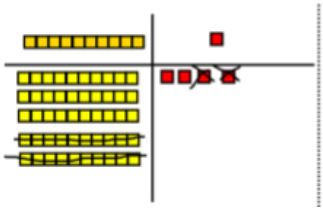
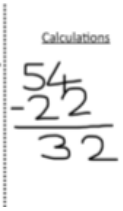
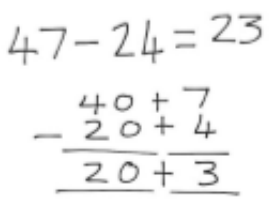
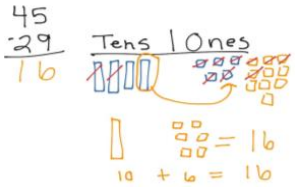
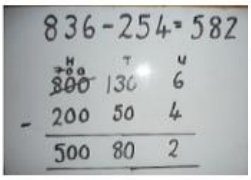
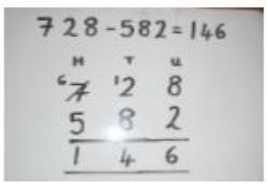
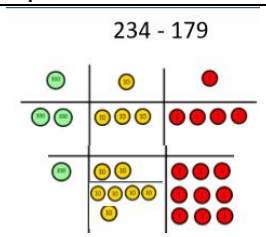
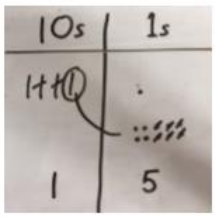
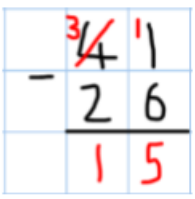
KEY LANGUAGE

Add, equals, greater/more than, parts, whole, partition, bonds, thousands, hundreds, tens, ones, column addition, place value, regroup, exchange.

SUBTRACTION

Children in Year 4 need to be able to:

- subtract numbers with up to 4 digits using the formal written method of column addition
- solve two-step subtraction problems in contexts, deciding which operations and methods to use and why
- estimate and use inverse operations to check answers to a calculation

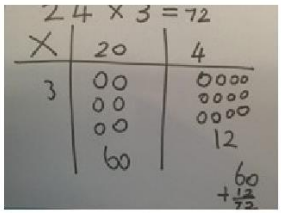
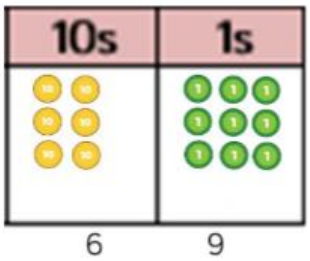
STRATEGIES	EXAMPLES
Column subtraction without regrouping (friendly numbers)	   Set out in columns using drawings of ones and tens with formal and partitioned method to support understanding.
Column subtraction with regrouping	   Start using drawings of ones and tens and crossing off and partitioned method to support understanding of exchanging.
Subtracting tens and ones with up to 4 digits	   Represent the numbers pictorially to show exchange. When using the column method reinforce that when they exchange the 10 they still have 41 because 30 + 11 = 41.

KEY LANGUAGE
Subtract, take-away, minus, equals, less than, parts, whole, thousands, hundreds, tens, ones, column subtraction, place value, regroup, exchange.

MULTIPLICATION

Children in Year 4 need to be able to:

- recall multiplication facts for times tables up to 12 × 12
- use place value and known facts to multiply mentally, including: by 0, 1 and 3 numbers
- recognise and use factor pairs and relationships in mental calculations
- multiply two-digit and three-digit numbers by a one-digit number using written layout
- solve problems involving multiplying and adding

STRATEGIES	EXAMPLES
Grid method multiplying 3-digit numbers by 1-digit	 | × | 30 | 5 | | --- | --- | --- | | 7 | 210 | 35 | 210 + 35 = 245 10 8 10 100 80 3 30 24 Start using counters/shapes to create arrays. Multiply by one digit and show the clear addition alongside the grid. Move onto multiplying by 2 digits with different rows.
Column multiplication	 3 × 23 20 3 3 × 20 = 60 3 × 3 = 9 60 + 9 = 69 23 × 3 69 Children can continue to represent the counters pictorially to support. Move to column multiplcation, partition the numbers to show where the digits come from.

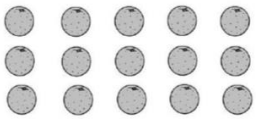
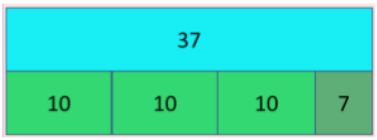
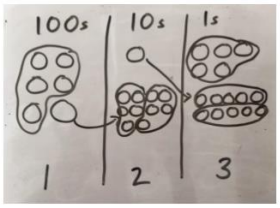
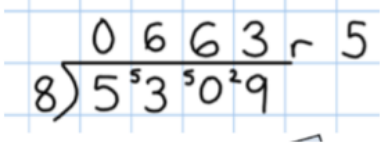
KEY LANGUAGE

Multiply, times, repeated addition, groups of, multiple, equal, double, array, partition, inverse, grid, ones, tens, digits, column multiplication.

DIVISION

Children in Year 4 need to be able to:

- recall division facts for times tables up to 12 × 12
- use place value, known and derived facts to divide mentally, including dividing by 1

STRATEGIES	EXAMPLES
Division with arrays	  Link division to multiplication by creating an array and thinking about the number sentences that can be created. Eg 15 ÷ 3 = 5 5 x 3 = 15 15 ÷ 5 = 3 3 x 5 = 15
Division with remainders	   Divide objects between groups and see how many are left over. Jump forwards in groups on a number line and see how many more you need to jump to find a remainder.
Short division	  Children can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups. Encourage them to move towards counting in multiples to divide more efficiently.

KEY LANGUAGE

Divide, halving, sharing, groups of, equal, repeated subtraction, remainder, array, inverse, short division.

USEFUL WEBSITES

Times Tables:

www.multiplication.com/games/all-games

www.bbc.co.uk/teach/skillswise/maths

http://gamequarium.com/multiplication

All Maths:

https://www.mathplayground.com

https://login.mathletics.com

https://www.oxfordowl.co.uk/for-home/kids-activities/fun-maths-games-and-activities

https://www.topmarks.co.uk/maths-games