Ditcheat Primary School
Addition Progression

Language to be used:

Foundation

Add, more, plus, altogether, total, makes.

Key Stage One

greater, addition, plus, more

Lower Key Stage Two

Sum, and

Upper Key Stage Two

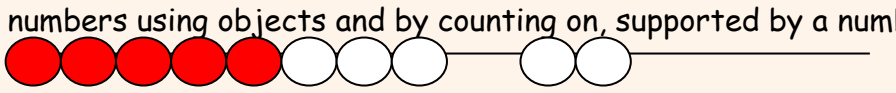
Positive, increase

Resources

Toys
Counters
Numicon
Number lines
100 squares
Blank number lines
Deines
Number cards
Dice
STERN

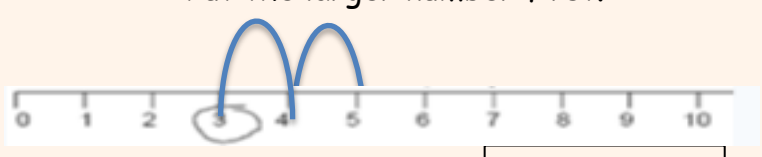
Foundation Stage

Children use and make their own number lines, teachers demonstrate the use of the number line with appropriate mathematical vocabulary. Children are encouraged to use practical resources to support calculation. Children use these methods in both the inside and outside environment. They develop ways of recording calculations using pictures and objects. They will add two single digit numbers using objects and by counting on, supported by a number line.



Year One

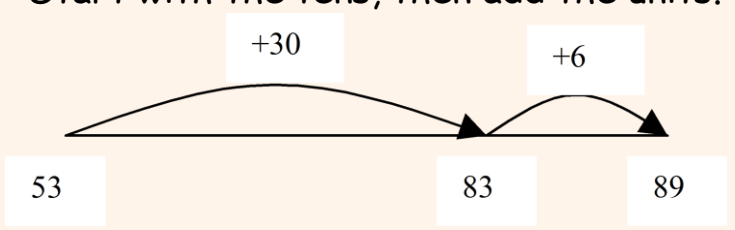
- Children to use the number line.
- Count on, first in ones (units), then using number bonds. Add one and two digit numbers to 20.
- Put the larger number first.



3 + 2 = 5

Year Two

- Addition of pairs of two digit numbers.
- Start with the tens, then add the units.



Year Three

- Children to use expanded addition up to three digits add three-digit, then move to compact.

360 + 157
300 60 0
+ 100 50 7
400 110 7
= 517

Must begin with units.

Year Four

- Use compact method to add pairs of 4 digit numbers.
- Model with expanded method if place value weak.

3467 + 2349
3000 400 60 7
+ 2000 300 40 9
5000 700 100 16
= 5816

3467
+ 2349
5816
1 1

Year Five and Year Six

- Children to add whole numbers with more than 4 digits and two decimal places, including using formal written methods (columnar addition) in Y5 and then be able to add decimals up to three decimal places by the end of Y6.

124.90 ***make estimate*** 125 + 120 =250
+ 117.25
242.15 +
1 1

26.480 *add in a zero to keep the place value*
+ 5.375
31.855
1 1

Ditcheat Primary School
Subtraction Progression Poster

Key Vocabulary Related to Subtraction

Foundation Stage Minus, subtract, less than, take away, left.

Key Stage On Smaller, least, count back, difference between, count on.

Lower Key Stage Two Subtraction, take away

Upper Key Stage Two Negative, decrease.

Resources

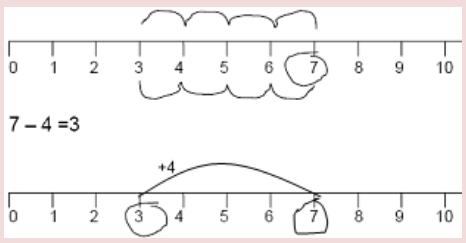
Toys
Counters
Numicon
Number lines
100 squares
Blank number lines
Deines
Number cards
Dice
STERN

Foundation Stage

Children use number lines and practical resources to support calculation. Teachers demonstrate the use of the number lines, 100 squares and Numicon. They develop ways of recording calculations using pictures and objects. Children use subtraction methods in the indoor and outdoor environments.

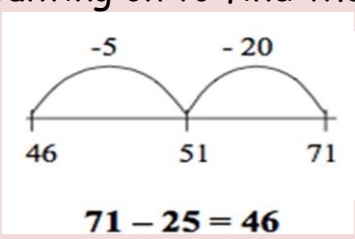
Year One

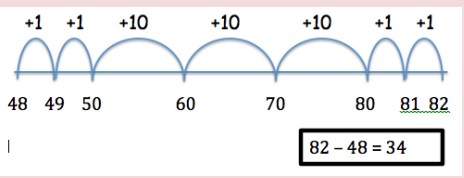
- Count back, first in ones (units), then using number facts. Two-digit take one-digit.
- Comparing quantities to find the difference.



Year Two

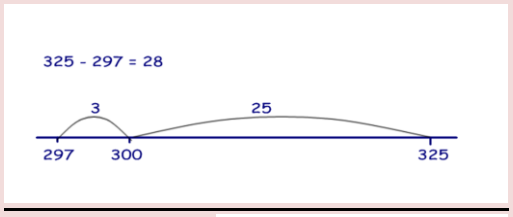
- Counting back – tens then ones (units): two-digit subtract two-digit.
- Counting on to find the difference.

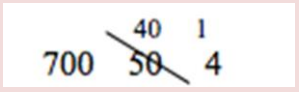




Year Three

- Subtract numbers with up to three digits, using the formal written methods of columnar subtraction
- Model with expanded version first and keep number line to find the difference





Year Four

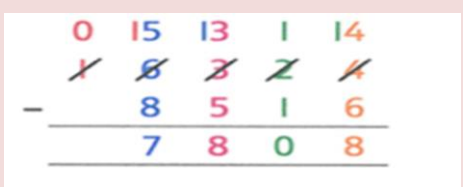
- Subtract numbers with up to 4 digits using the formal written methods of columnar subtraction.

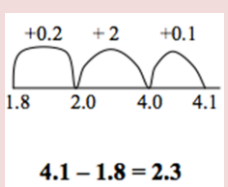
7 18
1885
- 1195
0 690

Year Five

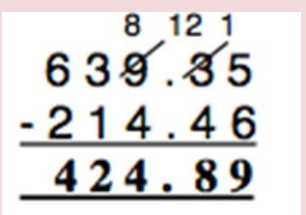
Decomposition of numbers with more than four digits and up to two decimal places.

- Children still to have knowledge of using complimentary addition using the numberline.





Year Six



- Children to use compact method of subtraction.
- Subtraction of decimals up three decimal places.

Multiplication Progression Poster
2014

Language to be used:

Foundation

Lots of, groups, times, altogether

Key Stage One

Double, count on, repeat, multiply.

Lower Key Stage Two

multiplication, product, multiple.

Upper Key Stage Two

Square, product, factor.

Resources

Toys
Counters
Numicon
Number lines
100 squares
Blank number lines
Deines
Number cards
Dice
STERN
Arrays
Multiplication Grid

Foundation Stage

They will count in 2s and 10s and begin the count in 5s.
They will work on practical problem solving activities involving equal sets or groups.
Double objects and numbers.

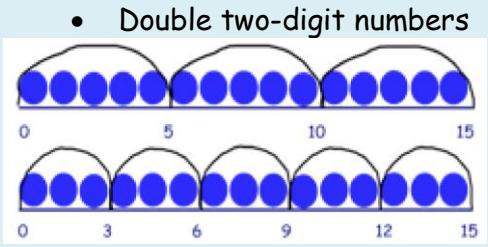
Year One

- Double single-digit numbers to 20
- Count on in steps (2s, 5s, 10s)
- Record as repeated addition and as an array

3 + 3 + 3 + 3 + 3 = 15

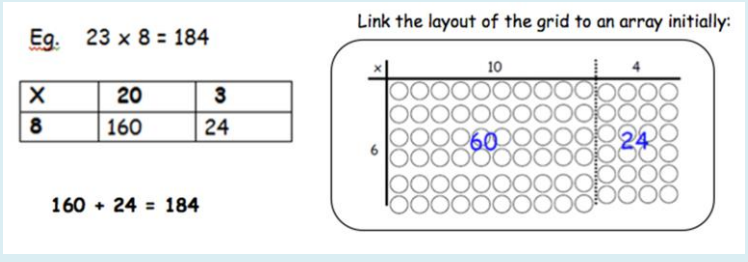
Year Two

- Recall and use multiplication and division facts for the 2, 5 and 10
- Use commutativity – 5x3 same as 3x5
- Double two-digit numbers



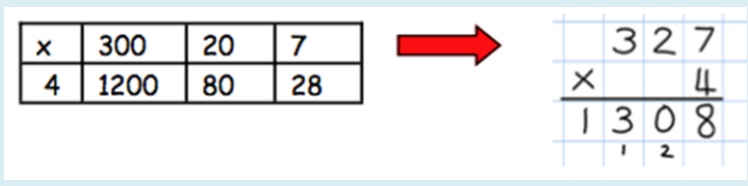
Year Three

- Recall 3, 4 and 8 times tables facts
- Multiply 2 digit by 1 digit progressing from mental to formal written methods



Year Four

- Recall 12 x 12 times tables facts
- Multiply 2 digit by 1 digit and 3 digit by 1 digit using formal written methods



Year Five

- Multiply up to 4 digit number by 1 digit or 2 digits using formal written methods, including long multiplication for 2 digit numbers
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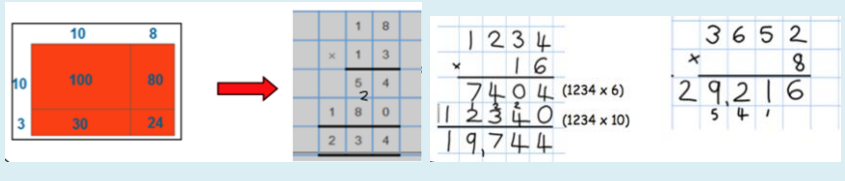
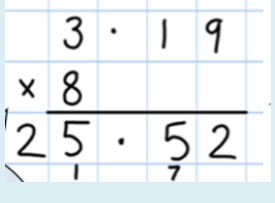


Year Six

- Multiply numbers up to 4 digits by 2 digit number using long multiplication.
- Multiply one digit numbers with up to 2.d.p by whole numbers.



Ditcheat Primary School
Division Progression

Language to be used:

Foundation Share, dividing, groups

Key Stage One Halve, quarter, equal groups, sharing, remainders, divide.

Lower Key Stage Two Fraction, how many.

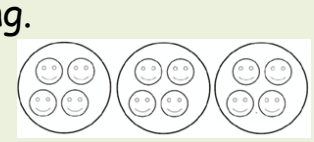
Upper Key Stage Two Quotient.

Resources

Toys
Counters
Numicon
Number lines
100 squares
Grid
Blank number lines
Deines
Number cards
Dice
STERN
Arrays
Multiplication

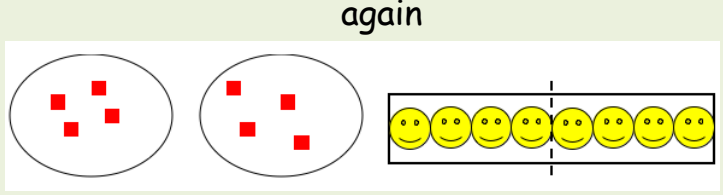
Foundation Stage

Children will understand equal groups and share items out in play and problem solving. They will count in 2s and 10s and later in 5s. Divide objects and numbers by sharing.



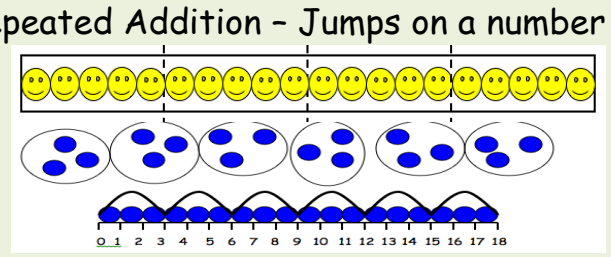
Year One

- Halving by Sharing and simple division by grouping objects
- Begin to find a quarter by halving and halving again



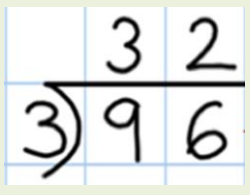
Year Two

- Halving and quartering
- Need to understand division as grouping
- Introduction to remainders.
- Repeated Addition – Jumps on a number line.



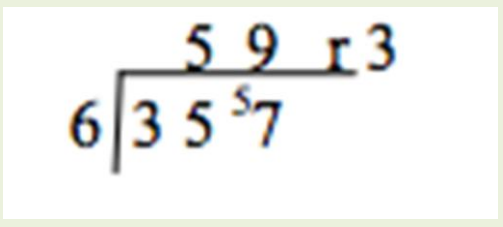
Year Three

- Divide 2 digit by 1 digit progressing from mental to formal written methods



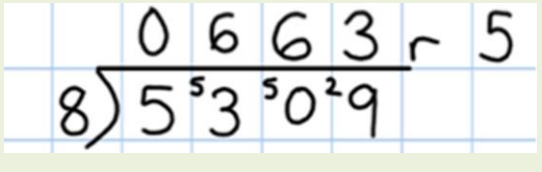
Year Four

- Divide 2 digit by 1 digit and 3 digit by 1 digit using formal written methods



Year Five

- Divide numbers up to 4 digits by one digit using the formal written method of short division and interpret remainders as appropriate to the context.



Year Six

- Divide numbers up to four digits by 2 digit numbers using the formal method of long division and interpret remainders as decimals up to 2.d.p, fractions and whole numbers. Then short division 4 digit divided by 2 digits.