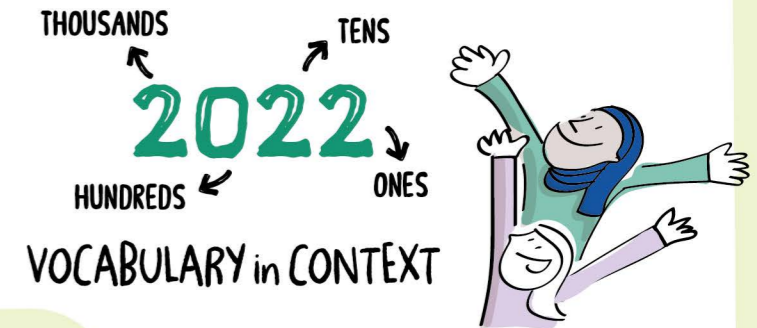


Number and Number Processes

BUILDING ON STRONG NUMBER SENSE



FIRST LEVEL

DEVELOPING STRONG NUMBER SENSE

VARIETY OF CONCRETE MATERIALS and visual representations



COUNTING
in 2s, 5s, 10s and 100s

FORWARDS

£120

...30, 40, 50, 60, 70...

& BACKWARDS

800
900
1000

68 READ
WRITE SIXTY EIGHT
ORDER

AND RECITE

263

ROUNDING NUMBERS TO 260

257
256
255

261
259

EXPLORE

$19+37$
 $10+9+30+7$

$37+19$
 $30+7+10+9$

ADDITION & Subtraction

Learners should be encouraged to see links between addition and subtraction

$37+9=46$ | $9+37=46$
 $46-37=9$ | $46-9=37$

TAKE AWAY

Mohammed has £10 and gives £3 to Sue. How much does Mohammed have left?

TWO MODELS OF SUBTRACTION

Mohammed has £10 and Sue has £3. How much more money does Mohammed have?

M: £1 £1 £1 £1 £1 £1 £1 £1 £1 £1
S: £1 £1 £1

FINDING THE DIFFERENCE

GRANDAD 68 years old

KATIE 9 years old

SELECT the MOST EFFICIENT METHOD depending on the numbers presented

Bridging

$37+9(3+6)$

Compensating

$58+12=?$

70

NUMBER LINES

Estimating

How MANY MARBLES ARE in the JAR?

Reordering

$20+26+30$

$20+30+26$

50

Partitioning

37

30, 7, 20, 17

MULTIPLICATION & Division

Investigate and model equal groups. Multiplication and division taught in conjunction with each other

ARRAYS

4	4	4
4	4	4

$4 \times 6 = 24$
 $6 \times 4 = 24$
 $24 \div 6 = 4$
 $24 \div 4 = 6$

(To visualise MULTIPLICATION and DIVISION calculations)

TO SECOND LEVEL

DISCUSSION
SHARING OF IDEAS

TWO MODELS OF DIVISION

GROUPING
We can make 2 groups of 4

SHARING
4 equal shares of 2

COMMUTATIVE LAW

3×2
 2×3

TIMES tables

BUILD on facts using previous knowledge

$9 \times 7 = 9 \times 6 + 9$ or $9 \times 8 - 9$

$9 \times 2 = 18$

SKIP COUNTING IN 5's

DOUBLE THAT 9×4

DOUBLE AGAIN 9×8

EXPLORING ONE CALCULATION IN MANY WAYS