TOPIC TITLE/SUBJECT: LS3   Choosing effective Mental strategies   **YEAR GROUP: 6**   **TERM: Autumn 1**
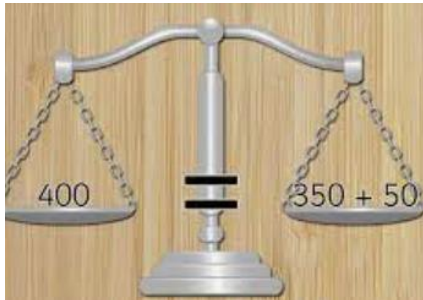
Vocabulary	Skills	What we already know
recall operation adjusting appropriate calculation reason strategy estimate manageable numbers efficient application	• Reasoning the efficiency of mental strategies • Using estimation to check mental calculations • Applying and combining mental strategies to solve problems	• Formal written strategies for addition, subtraction, multiplication and division (Column methods, long and short multiplication, bus stop method of division) • Partitioning (most) • Regrouping (some) • Numbers to 1, 000, 000 • Estimation is a tool to support achieving correct answer to a calculation

Illustration

"IF I kNow this…
wHat else do I know?"

FACT FAMILIES

If I know
7 + 9 = 16…
Then I know…
9 + 7 = 16
16 - 7 = 9
16 - 9 = 7

If I know
6 x 4 = 24
Then I know
4 x 6 = 24
24 ÷ 6 = 4
24 ÷ 4 = 6

Remember, "Now we know this, we must also know this, this and this!"

36 + 17
+4   -4
40 + 13
53

400   =   350 + 50

Calculation strategies:
Place value - digit position, place value - use known facts, equal sum/difference, regrouping, one/zero effect, doubling/halving

Match the calculation to the most effective strategy

0.135 + ☐ = 1.06	160 x 35
1.7 + 0.05	0.4 ÷ 10
475 ÷ 1	320 x 0
460 = ☐ - 35	640 ÷ ☐ = 8
532,525 - 9,997	9,999 + 397
22 x 8	46.8 - 23.566