Addition and subtraction Y4

ESSENTIAL VOCABULARY

Add/plus/sum/all together	The method of combining the total of two or more numbers.
Subtract/difference/less	The method of taking a value away from a number.
Total	The answer/finished sum.
Column addition	Formal method to solve addition questions.
Column subtraction	Formal method to solve subtraction questions.
Exchange	Regrouping means to exchange 10 of a particular place value column for 1 of the next place value column along.
Estimate	Round numbers to nearest 10, 100 or 1000 to suggest a reasonable answer.
Inverse operation	Addition and subtraction can be used as inverse operations to solve missing number questions.

Useful Diagrams

Add 4-digit numbers

No exchange

$$5162 + 3427 = 8589$$

Starting with the ones, add each column in turn.

One exchange

$$5162 + 3497 = 8659$$

Starting with the ones, add each column in turn. When adding 6 tens + 9 tens = 15 tens = 1 hundred + 5 tens. Place 1 hundred under the hundreds answer and 5 tens in the answer.

Multiple exchanges

$$5864 + 3497 = 9361$$

Starting with the ones, add each column in turn. Exchange tens, hundreds and/ or thousands as required.

Subtract 4-digit numbers

No exchange

$$5789 - 3421 = 2368$$

Starting with the ones, subtract each column in turn.

One exchange

$$5749 - 3471 = 2278$$

Starting with the ones, subtract each column in turn. When subtracting 4 tens -7 tens, exchange 1 hundred to make: 14 tens – 7 tens = 7 tens

Multiple exchanges

$$5742 - 3476 = 2266$$

Starting with the ones, subtract each column in turn. Exchange tens, hundreds and/ or thousands as required.

LINKS TO PREVIOUS LEARNING

Year 3:
- add and subtract numbers mentally, including:
  - a three-digit number and ones
  - a three-digit number and tens
  - a three-digit number and hundreds
- add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- estimate the answer to a calculation and use inverse operations to check answers
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Stem Sentences

I have _____. I have _____. Altogether I have_____
I have_____. I have subtracted _____. Altogether I have_____.

Key Themes

- Whole part model
- Rounding to estimate
- Column subtraction/addition
- Mental addition/subtraction
- Number bonds/complements
- Doubles/near doubles

Any Visual Representations

Using Inverse
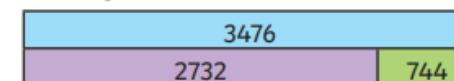
3476	
2732	744

3476 – 744 = 2732 can be checked using 2732 + 744 = 3476

This part whole shows the inverse calculations using these three numbers.

4237
1549   2688