Subtraction Prior Learning Assessment Question 5 :
LO: I can use the expanded column method to subtract 2 amounts.
I can use the column method to subtract 2 amounts.
NC: NAS2 add and subtract numbers with up to 3 digits using the formal written methods of columnar addition and subtraction where appropriate

Assessment Question:

Prior Learning:

	Question 5:	I feel
Addition + Subtraction	I can use a written method to subtract 2 amounts.	

Show me how to work out:

a)   895 – 604 =   b) 786 - 54 =

_____   _____

_____   _____

Teacher Input Ideas:
Most children will have been introduced to the column method in year 3 and should have understanding of partitioning amounts to help with subtraction.

Some children may be able to do this with support of a place value chart as modelled in the two examples below.

hundreds	tens	ones
500	50	7
100	20	4
400	3 0	3

= 433

-

hundreds	tens	ones
5	5	7
1	2	4
4	3	3

- =433

Most children should be ready to use the expanded column method or the formal column method for subtraction and begin to secure these more formal methods. Model the use of these as below, focusing on the value of the digits and how these can be laid out using their knowledge of partitioning:

h t o   **expanded method**

4 6 8   400 60   8

-   -

2 1 5   200 10   5

2 5 3   200 +50 + 3 = 253

When children show understanding here, ask the children to calculate the answer to the following sums, encouraging the children to think about place value and layout when subtracting amounts with different numbers of digits.

134- 63   295- 87   563-78

The following tasks do not involve any exchanging; this can be found in the lesson notes for question 6 of the prior learning assessment.

Practice Activities

Purple Practice: Most suited for children who are relying on partitioning to subtract and will benefit from laying out their sums in the expanded column method to introduce a more formal structure.

For this activity, the place value charts have been removed and the children are encouraged to partition the amounts and use the expanded column method to introduce a more formal written method. There are examples in the first 3 questions, however as the task progresses the children are required to layout the method independently.

Green Practice: Most suited for children who demonstrate some understanding in Question 5 for using the formal method and will benefit from securing this before moving on to exchanging.

For this activity the children are provided with 2 and 3 digit amounts to subtract. In the first section of the task sheet, the sums are laid out ready for the children to work out the answer to secure the use of the column method for subtraction.

In the second part of the task sheet, the children are presented with sums that contain 3 digits and 2 digits. The children are encouraged to layout the sum accurately themselves. The use of squared paper may help the children here so that they understand how the positon and value of the digits are important.

Yellow Practice: Most suited for children who demonstrate a good understanding in Question 5 of the prior learning assessment and are ready to lay out subtraction sums when faced with sums with different numbers of digits.

The children are presented with the same format as above for the green activity, however the children are presented with amounts that contain, 2, 3 and 4 digits.

The first part of the task provides structure to support children with subtracting 2 and 3 digit amounts from 3 and 4 digit numbers. In the second part of the activity the children are provided with sums and less structure. The children are required to layout the sums by themselves applying understanding of the method and the importance of place value.

Mastery: For this activity the children are presented with subtraction sums written in sentences using a variety of different vocabulary for subtraction. This provides the children with the opportunity to apply mental and written methods to calculate the answers . The children need to read the sums carefully as they are required to understand which amounts are to be taken from the other amounts, dependent on the vocabulary used. Often children will always place the amount they hear first in a sentence

first. Encourage the children to discuss the vocabulary used and what this means. Ask the children how they know which amount goes first. What are they looking for in the amounts? Which part of the sentence tells them this?

Answers

Purple:

1) 122   2) 43   3) 44

4) 113   5) 143   6) 113

7) 224   8) 333   9) 320

Green:

1   a) 524   b) 250   c) 472

      d) 314   e) 432   f) 205

2   a) 412   b)802   c) 243

      d) 873   e) 35   f) 731

Yellow:

1) a) 521   b)201   c)671

   d)143   e)1510   f)1221

2a) 671a   b)607   c)511

d)842   e)1091   f)1331

Mastery:

Take 345 away from 677.   = 332

267 subtract 153   = 114

517 take away 305   = 212

What is 167 less than 998?   = 831

Subtract 965 from 987.   = 22

BRICKWORK Mathematics

Purple Activity

LO: I can subtract 2 and 3 digit amounts using the expanded column method.

Partition the amounts for each sum and then work out the answer using the expanded column method.

234 - 112 = 122

$$
\begin{array}{cccc}
 & H & T & O \\
- & 200 + & 30 + & 4 \\
 & 100 + & 10 + & 2 \\
\hline
 & 100 + & 20 + & 2 = 122 \\
\hline
\end{array}
$$

86 - 43 =

$$
\begin{array}{ccc}
 & T & O \\
- & 80 + & 6 \\
 & 40 + & 3 \\
\hline
\end{array}
$$

99 - 55 =

$$
\begin{array}{ccc}
 & T & O \\
- & 90 + & 9 \\
 & 50 + & 5 \\
\hline
\end{array}
$$

234 - 121 =

H T O

-

287 - 144 =

H T O

-

164 - 51 =

H T O

-

564 - 340 =

H T O

-

745 - 412 =

H T O

-

990 - 670 =

H T O

-

Can you explain how you worked out each answer?

BRICKWORK
Mathematics

1) Look at each sum. Use the formal subtraction method to work out the answers.

a)
```
  h t o
  6 2 9
- 1 0 5
_____

_____
```

b)
```
  h t o
  8 9 0
- 6 4 0
_____

```

c)
```
  h t o
  9 9 5
- 5 2 3
_____

```

d)
```
  h t o
  3 5 8
-   4 4
_____

_____
```

e)
```
  h t o
  4 7 3
-   4 1
_____

```

f)
```
  h t o
  7 8 8
- 5 8 3
_____

```

2) Challenge: Now try laying out these sums by yourself.

a) 617 - 205

b) 908 – 106

c) 483 – 240

d) 873- 51

e) 198 - 73

f) 776 - 45

LO: I can use the column method to subtract 2 amounts.

BRICKWORK Mathematics

1) Look at each subtraction sum. Use the formal subtraction method to work out the answer.

a)
```
  h t o
  9 5 4
- 4 3 3
_____

_____
```

b)
```
  h t o
  5 0 8
- 3 0 7
_____

_____
```

c)
```
  h t o
  6 9 5
-   2 4
_____

_____
```

d)
```
  Th H T O
   1 3 5 8
-  1 2 1 5
_____

_____
```

e)
```
  Th H T O
   2 7 1 4
-  1 2 0 4
_____

_____
```

f)
```
  Th H T O
   1 8 9 3
-    6 7 2
_____

_____
```

2) Challenge: Now try laying out these sums by yourself.

a) 873 - 202

b) 988 – 381

c) 561 – 50

d) 876 - 34

e) 1291 - 200

f) 1452- 121

Look back at each sum. Which sums can you work out mentally?

BRICKWORK Mathematics

Work out the answer to the following:

Take 345 away from 677.

267 subtract 153

517 take away 305

What is 167 less than 998?

Subtract 965 from 987.

Challenge: Can you write your own subtraction instruction?