Addition Prior Learning Assessment Question 4:

LO: I can partition numbers to help me to add.

I am beginning to use written methods for addition sums.

NC: NAS2 add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction

Assessment Question:

Prior Learning:

Addition + Subtraction

Question 4:
I can use a written method to add amounts.

I feel

Show me how to work out:

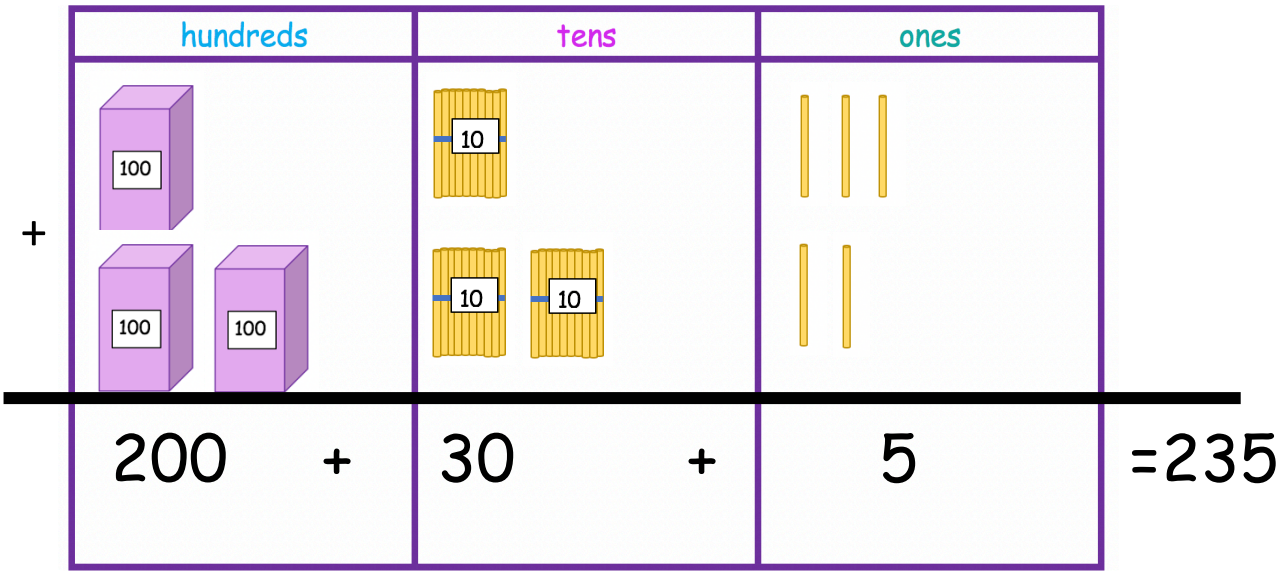
a) 161 + 112 =

2) 213 + 154 =

Teacher Input Ideas: below are different stages the children may go through when they are introduced to adding larger amounts and to using a written method. After assessing the children's knowledge of partitioning and written methods, you may want to split these activities and modelling suggestions across lessons, the term or year, dependent on the children's needs and knowledge.

Introduction to written methods . For example: 113 + 122 = 235

Images to help the children to partition



Next step: partitioning in a grid

	hundreds	tens	ones	
+	100	10	3	
	100	20	2	
	200 +	3 0	+ 5	= 235

Partitioning sentences

H T O

100 + 10 + 3

\+ 100 + 20 + 2

200 + 30 + 5 = 235

The children should begin to explore how the layout of the partitioning sentences above can help them to add quickly, preparing them for a more formal written method.

Practice Activities

Purple Practice 1 : Most suited for children who are ready to partition 2 and three digit numbers to help them to add amounts.

The children are presented with a task sheet and additional resources. On the purple activity sheet the children are presented with blocks that contain addition sums. The children are also provided with images of items grouped in hundreds, tens and ones and a place value chart. The children should be encouraged to make the amounts using the images and place these on to the grid. Once the children have made one amount they should make the other amount. The children should then show understanding that the hundreds, tens and ones can be added to make the total amount. Photos can be taken of their working out and the children can record the sums and answers into their books.

Green Practice: **Most suited for children who demonstrate some understanding in Question 4 , however will benefit from being introduced to a structured way of partitioning.**

The children are presented with place value charts to help partition the sum they are presented with. The first question contains an example to help the children understand how the amounts can be partitioned and then combined back together once added to find the total. Encourage the children to discuss what they are doing at each step and to discuss why the sums are laid out in this way.

Yellow Practice **Most suited for children who are ready to complete addition sums by partitioning into number sentences.**

For this activity the children are to partition each amount in to hundreds, tens and ones with some order in lay out to prepare them for the formal written method. The children are provided with a template as to how they can lay out the partitioned amounts and then combine these back together to add. The labels for HTO should help the children to think about the value of each digit.

Mastery : **Fluency (addition and place value)** The children are to apply their knowledge of place value to create different 3 digit amounts and explore adding these together. Some children may apply mental addition methods as well as written addition methods. Encourage the children to explore adding as many different combinations as possible. Once the children show a good understanding here, the children should be encouraged to problem solve as suggested in the challenge question. Can the children find a combination of numbers that when added together will give them the total closest to 500?

Answers

Purple:

244	247
328	269
377	319
376	669

Green:

269	340	
266	544	597

Yellow

256	97	809
275	598	69
872	757	769

Mastery:

Challenge: An example with these digits :

352 +140 = **492**

BRICKWORK Mathematics

Purple Activity :

LO: I can add 2 and 3 digit amounts together using partitioning.

Pick a block and work out the answer to the sum.

112 + 132

102 + 145

121 + 207

202 + 67

245 + 132

109 + 210

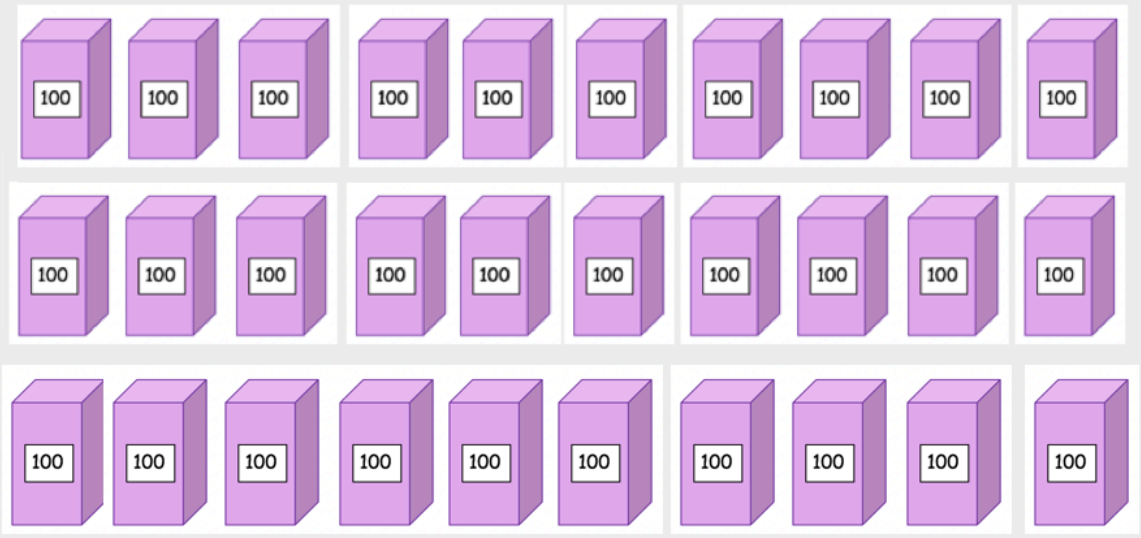
242 + 134

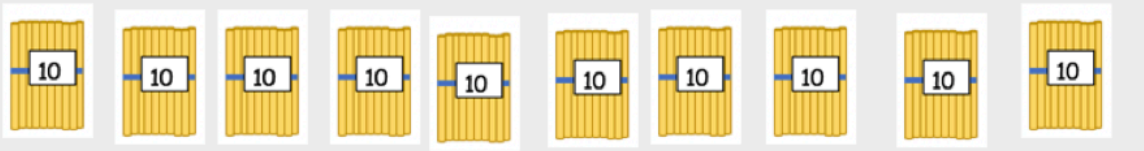
317 + 352

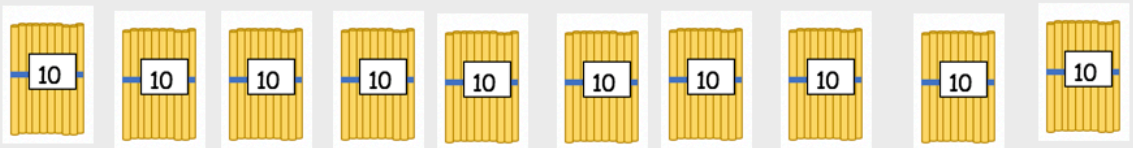
BRICKWORK Mathematics

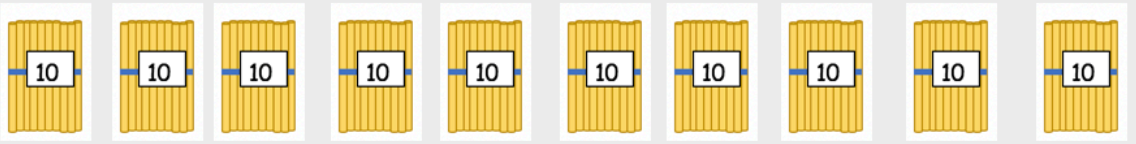
Purple Practice

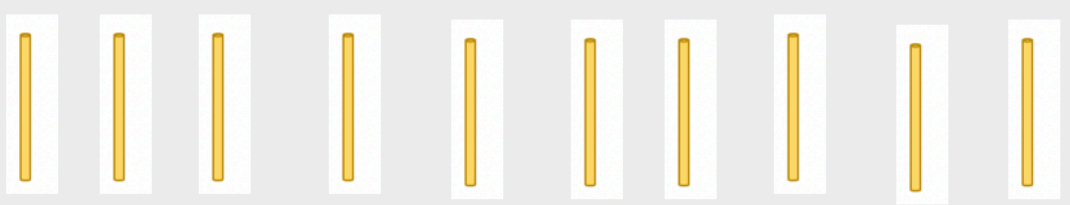
Resource Sheet







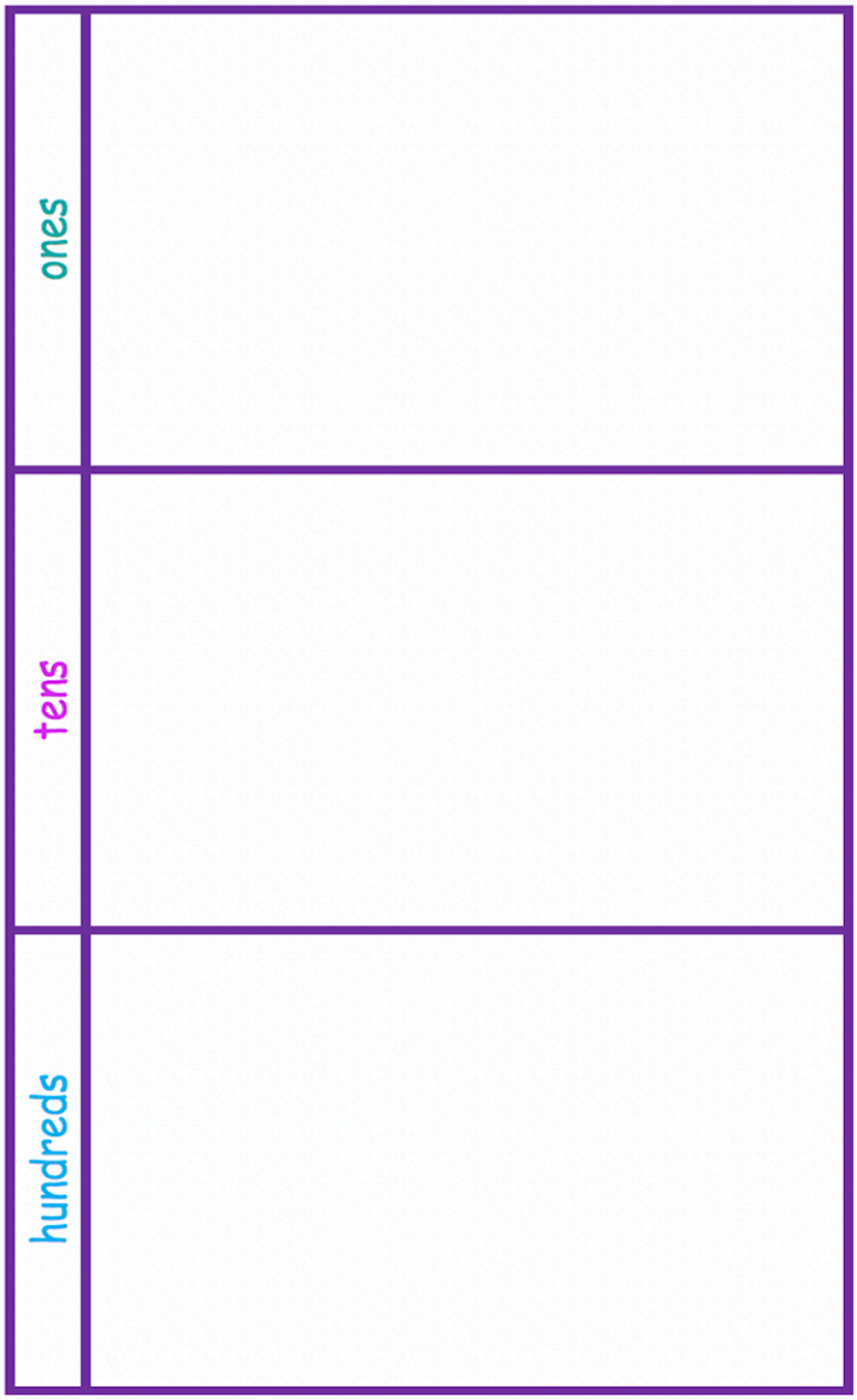




BRICKWORK Mathematics

Purple Practice

Practical resource



BRICKWORK Mathematics

Green Activity 1

Resource sheet

Add these amounts together. Can you use the place value chart and partitioning to help you?

153 + 215

hundreds	tens	ones
100	+ 50	+ 3
200	+ 10	+ 5
300	+ 60	+ 8

= 368

127 + 142

hundreds	tens	ones

=

204 + 136

hundreds	tens	ones

=

BRICKWORK Mathematics

Green Activity 2

LO: I can add 3-digit and 2-digit amounts together

Add these amounts together. Can you use the place value chart and partitioning to help you?

210 + 56

hundreds	tens	ones

=

231 + 313

hundreds	tens	ones

=

312+ 285

hundreds	tens	ones

=

BRICKWORK Mathematics

Yellow Activity

LO: I can add 2 and 3 digit amounts using partitioning and a written method.

Add each set of amounts together using a written method.

124 + 132 =

H T O
100 + 20 + 4
100 + 30 + 2

200 + 50 + 6 = 256

54 + 43 =

T O
50 + 4
40 + 3

66 + 23 =

T O
60 + 6
20 + 3

154 + 121 =

H T O

257 + 341 =

H T O

47 + 22 =

H T O

562 + 310 =

H T O

345 + 412 =

H T O

564 + 205 =

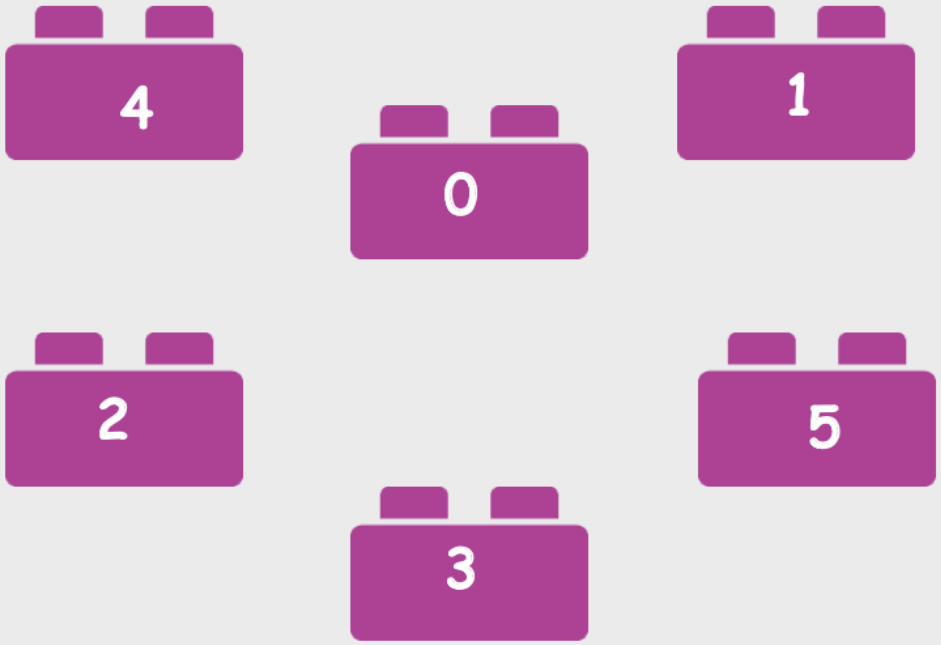
H T O

Can you explain how you worked out each answer?

BRICKWORK Mathematics

Mastery

Create two 3 digit numbers from the number blocks below. Then add the numbers together that you have created. Explore how many different combinations you can make.



Example:

Challenge: Which combination of numbers will give you the closest answer to 500?