Addition Prior Learning Assessment Question 4:

Objective: I use my knowledge of number bonds to add mentally.

NPV1: add and subtract numbers with up to 4 digits

Assessment Question 4:

Prior Learning:

Addition + Subtraction	**Question 4:** I use my knowledge of number bonds to help me to add mentally.	I feel

a) 75 + 25 =

b) 46 + 54 =

c) 21 + 32 + 19 =

d) 67 + 58 + 33 =

e) 125 + 61 + 5 =

f) 60 + 500 + 240 =

Teacher Input Ideas:

- Place lots of numbers around the room and children to add these up mentally as going around. Ask the children for their strategies that they used and how they did this. Allow a lot of time for children to share ideas.

- Place a sum on the board such as 14 + 15 + 16 =. Ask the children to work it out mentally. When they have one way place one finger up, then ask the children to find a different way to work it out and place another finger up. See how many different ways the children can find the answer in one minute. Share all of the strategies children used and talk about how efficient these are. Place another few sums on the board and repeat to encourage the children to explore different strategies and try using a new one suggested from other children.

- Place cards around that make number bonds to 10, 100 and 1000 and see if the children can find the different number bonds.

- Model using number bonds when you have 2 and 3 amounts to add together. Model using number bonds using the tens, hundreds and ones. Such as 73 and 39, 70 and 30 makes one hundred and then the 3 and 9 can be add. Also explore how we can change amounts around to make adding easier such as 14 + 45 + 26 . I would add the 14 and 26 together first as I know that addition is commutative which means I can add the numbers in any order. So 14 and 26 = 40 then I can add the 45. Also you may want children to apply knowledge of doubling here for 40 + 45.

Practice Activities

Purple Practice: Most suited for children who demonstrate difficulty in Question 4 and need to develop their understanding of using number bonds with different amounts.

The children are provided with a variety of blocks with 2 different amounts on. The children are to add these using their knowledge of number bonds to ten, hundred and thousand. All of the combinations make either make a ten, hundred or thousand. Encourage the children to state the new ten, hundred or thousand made without counting on in ones, such as 123 +17 . The children should either say 123 + 10 = 133 and then 7 more is 140 without having to count on seven more. Also encourage children to explore adding the seven first and then ten more : 123 and 7 = 130 and 10 more is 140.

Green Practice: Most suited for children who made errors in the latter part of Question 4 and will benefit from exploring the commutative law to help use their knowledge of number bonds to add mentally.

The children have been given 3 blocks to add at a time. The children should be encouraged to explore which blocks to add together first using their knowledge of number bonds to help them, and show understanding that the blocks can be added in any order. Encourage the children to share strategies and methods for each question with a partner.

Yellow Practice: Most suited for children who showed understanding in Question 4 of the prior learning assessment and are ready to explore different number bonds to 10, 100 and 1000.

The children are provided with a variety of blocks with different amounts on. The children are to try to make zeroes in either the ones place, tens, hundreds, thousands place or all three. This activity provides the children with the opportunity to find different number bonds and add these together mentally. There are many different combinations and the children should explore different options. See the answers section for examples.

Mastery Problem solving and fluency

The children are provided with a grid made of blocks. The children are to explore where the different numbers provided can be placed onto the grid. All horizontal, diagonal and vertical blocks must total to 150. This activity encourages the children to apply their knowledge of number bonds and to explore different positions the numbers can be placed. There is a suggestion in the answer section. If some children are finding this difficult, they may need more blocks completing for them to reduce the options of where blocks can be placed.

Key questions:

What amount are you trying to make? What does this tell you? What digits are used in the ones place? Explain what you notice about this. Which combinations of numbers must be placed in the same set? How do you know?

Answers

Purple:

1) 100   2) 1000   3) 70   4) 90

5) 100   6) 140   7)100   8) 1000

Green:

1) 39   2) 85   3) 145   4) 189

5) 123   6) 152   7)1500   8) 192

Yellow : Suggestions :

63 and 17 = 80   63 and 37 = 100   63 and 1037 = 1100

24 and 16 = 40   24 and 206 = 230   976 + 24 = 1000

25 and 45 = 70   1945 and 25 = 1970   1945 and 55 = 2000

55 and 45 = 100

Mastery:

73	37	40
17	50	83
60	63	27

Purple Practice

Lo: I can use my knowledge of number bonds to help me to add mentally.
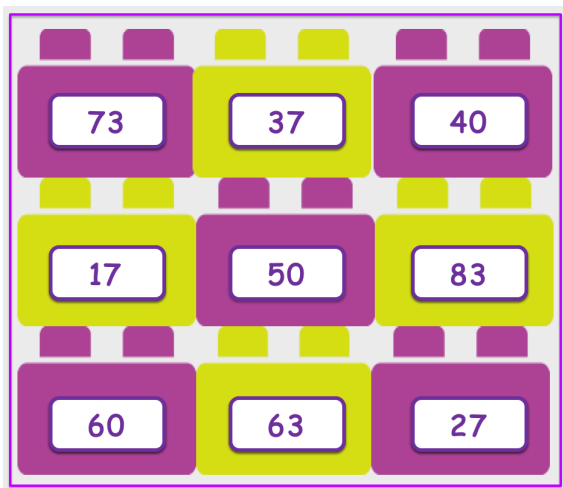
Look at each set of calculations and use your knowledge of number bonds to ten, hundred and thousand to help you.

1) $36 + 64 =$

2) $450 + 550 =$

3) $19 + 51 =$

4) $83 + 7 =$

5) $18 + 82 =$

6) $123 + 17 =$

7) $75 + 25 =$

8) $250 + 750 =$

BRICKWORK
Mathematics
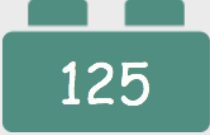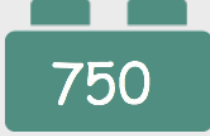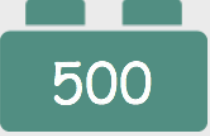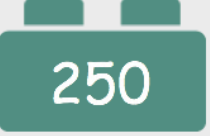
Find the total in each set of number blocks.

1) 7 19 13 ☐

2) 26 55 4 ☐

3) 45 35 65 ☐

4) 25 89 75 ☐

5) 67 43 13 ☐

6) 125 12 15 ☐

7) 750 500 250 ☐

8) 78 72 42 ☐

Challenge: Explain your working out and strategies to a friend. Compare your working out for each question.

Yellow Activity

LO: I use my knowledge of number bonds when adding.

Explore adding different blocks together to make the value of the digit in the ones place zero. Explore other combinations where the digit in the tens, hundreds or thousands place can also be a zero.

63

1500

16

148

1037

76

24

55

37

25

17

206

1945

976

45

BRICKWORK Mathematics
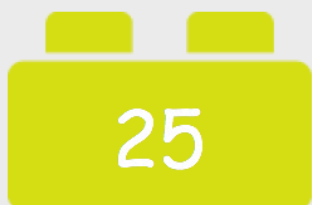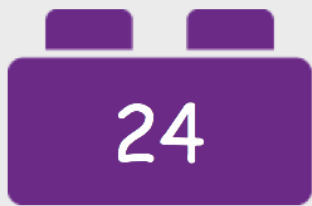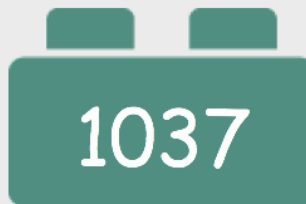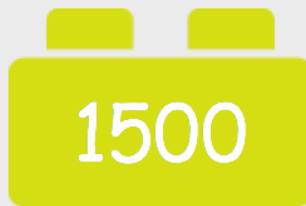
Place the numbers onto the correct blocks so that each vertical, horizontal and diagonal group of blocks **total 150.**

| 83 | 60 | 73 | 17 |

| 40 | 63 | 27 | 37 |

	50	