Assessment Question:

Question 16:
I can round numbers to the nearest hundred.

I feel

Round each number to the nearest hundred:

167

652

1830

5650

Question 17:
I can round numbers to the nearest thousand

I feel

Round each number to the nearest thousand:

1092

3572

9456

789

Input: Recap the word rounding. What does it mean? Often people round numbers to help them to approximate, calculate and to save time. For example, plates come in packs of ten. I have 27 children in my class, so I'll round that to 30. It's around 30, so I know that if I buy 30 plates I will definitely have enough. People sometimes round amounts too. Often we see many items in shops priced at £1.99. People round this to £2 to make it easier. For example, if I bought 4 x £1.99 toys, I know it will be around £8. So, if I give the cashier 8 pounds I will have enough.

As a class make a large number line to show the numbers between 100 and 200, using metre sticks. This time inform the children that we are going to round to the nearest hundred. So this time we need large labels at 100 and 200. This time introduce hospitals at every 100 interval. Place the car or character on different numbers between 100 and 200. Encourage the children to state which is closer: 100 or 200. Explore different numbers such as: 123, 167, 198 etc. Discuss what is different this time. Which digit I am looking at to help me? If I am on 167, am I closer to 200 or 100? Look out for any children who say 170 and have rounded to the nearest ten.

Once children show understanding, place the car at 250. Ask the children to decide which is closer, 200 or 300. Discuss with the children that both 200 and 300 are the same distance. Look at the number line to prove this. So we can either round up or down. However, a general rule in maths has been created and if it is exactly half way we round up. So if it was 249 we should round down to 200 and if it was 250 we would round up to 300. Also spot any children who make errors when rounding down. The use of visual number lines can often help the children to see the nearest hundred. Often when these are taken away, some children may think they are to round down 249 to 100 as they feel the hundred digit should change as it does when we round up.

Rounding to 1000:

Once the children show understanding of rounding to one hundred, model rounding to a thousand. The children should begin to suggest that now we need to use the value of the hundreds digit to help us. Model a few examples, visually with a number line if needed.

Practice Activities

Purple Practice: Most suited for children who show difficulty in Question 16 and will benefit from rounding 3 digit amounts to the nearest hundred

Using the blocks on the Green Activity sheet from lesson Q15, encourage the children to round the amounts to the nearest hundred. Provide the children with a number line of 0 to 1000 (you may want to use 10 bead strings and every bead string can be labelled with a hundred mark).The children can create these themselves. Then the children can place a peg at each mark on the blocks to see whether they are closer to the next hundred or to roll down. Alternatively, the children can create these with metre sticks and each 100 interval to be marked with a sign.

The purple sheet provided contains extra blocks that can be used in any of the 3 activities to encourage children to round up for when they are provided with a 5 digit.

Green Practice: Most suited for children who demonstrate difficulties in Question 16 when rounding numbers over 1000 to the nearest hundred.

As above the children are provided with blocks with amounts over a 1000 on (use Question 15 yellow sheet for this activity). The children to round each number to the nearest hundred. Children may want to make number lines from the blank templates provided or make large practical ones. Encourage the children to explain how they know whether to round up or down and explain how the value of the tens digit helps.

Yellow Practice: Most suited for children who demonstrate difficulties in Question 17 and are ready to round to the nearest thousand.

As above the children are provided with blocks that include amounts over 1000 (using yellow sheet Q15 sheet). The children are to round each number to the nearest thousand using the hundreds digit to help them to decide whether to round up or down. Most children should be familiar with rounding and will become less reliant on the use of number lines and practical resources. Some children may still benefit from these.

Mastery: Explore

For this activity the children are provided with a problem where they are to explore 4 digit amounts that can be rounded to 5000. The children need to rearrange the cards to make different numbers which can be rounded to 5000. Some children may want to explore different possibilities through trial and improvement. Some children may benefit from having the same number cards in front of them with a place value chart to practically explore the different numbers that can be made.

Key questions:

- What do you know about rounding?
- Which digits are you going to select first? Why? Which digits will change the value when rounded?
- Why have you select these digits here? Are there any other numbers that can be used? Can you make Nathan have the largest number possible? How can you change the value of the digits?

Answers:

Purple:

Green sheet Q15 this time to nearest hundred:

200	200	100
200	300	200
300	600	500
600	600	600
800	800	800

Green:

Yellow sheet Q15 this time to nearest hundred:

1000	1200	1100
3000	1500	4500
1600	2200	2000
2400	4000	1200
1300	3200	1600

Yellow:

Yellow sheet Q15 this time to nearest thousand:

1000	1000	1000
3000	2000	5000
2000	2000	2000
2000	4000	1000
1000	3000	2000

Extra blocks :

Purple blocks to nearest hundred:

| 200 | 700 | 1000 |

Green blocks to nearest hundred:

| 3600 | 2700 | 8800 |
| 2000 | 5600 | 10000 |

Yellow blocks to nearest thousand:

| 1000 | 4000 | 4000 |

| 7000 | 8000 | 10000 |

Mastery:

The children suggest amounts where one child has a 5 digit in the thousands place and a 1 in the hundreds place as this is the only digit less than 5, therefore it is needed here to round down to 5000. The other child will have a 4 in the thousands place and any other digit in the hundreds place will round it up to 5000.

BRICKWORK
Mathematics

150	650	950
3550	2650	8751
1950	5649	9950
1050	3500	4449
7251	7500	9500

BRICKWORK
Mathematics
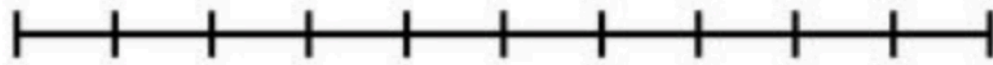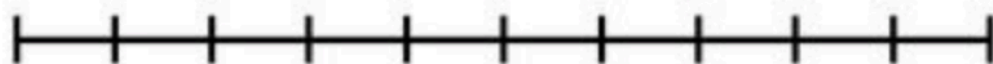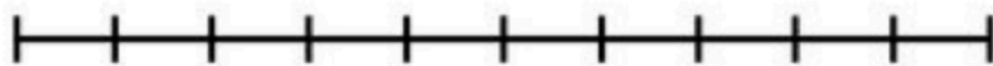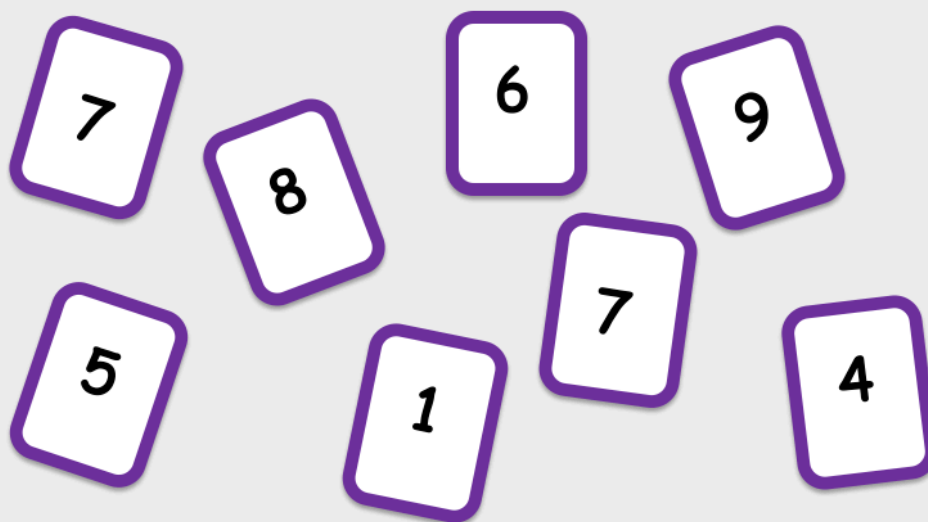
Nathan and Lola play a game. They place these 8 cards upside down and select four each to make a 4 digit number.

| 7 | 8 | 6 | 9 |
| 5 | 1 | 7 | 4 |

They then round their numbers to the nearest thousand to see who has made the largest amount.

They both have the answer of **5000.**

Using the cards, explore what numbers have been made by Lola and Nathan before the amounts were rounded.

Lola

Nathan