



Year 5 Maths Distance Teaching and Learning

Week beginning: 11th May 2020

Lesson 3			
Learning Intention: WALT: mentally add using the nearest 10 100 1000 10,000 then adjust (use the adjusting method)	Key Vocabulary: mentally mental add nearest rounding adjust	What you will need: Paper (squared preferably) pencil ruler Year 5 Maths Week 4 video3	
Starter			
Today we will need to use simple rounding try these:			
<u>Round these numbers to the nearest 10:</u>			
47 rounds to	92 rounds to	73 rounds to	566 rounds to
<u>Round these to the nearest 100:</u>			
154 rounds to	632 rounds to	469 rounds to	3462 rounds to
<u>Round these to the nearest 1000:</u>			
3100 rounds to	4620 rounds to	8503 rounds to	26,320 rounds to
Check your answers on with the marking scheme.			
Main Teaching			
<p>Sometimes an adding calculation can be easily solved by rounding a number up to it's nearest 10,100,1000,10,000 and then adjusting the answer. This method is called adjusting. We only use it when one of the numbers is very close to a multiple of 10, 100, 1000 or 10,000 It is useful for some adding calculations but not all of them so be careful.</p> <p>Let's look at some examples where you might use it and some where you wouldn't.</p> <p>Look at these 2 adding calculations. Which one do you think we might solve using adjusting?</p> <p>187 + 343 or 187 + 98</p> <p>187+98 can be done quite easily using adjusting in our head.</p> <p>First you would adjust the 98 into 100 (by adding 2 on).</p> <p>Then you would do 187+100 in your head which makes 287.</p> <p>Finally, you would adjust the answer by taking away the 2 you added to the 98. So you would do 287-2=285</p>			



The answer is $187+98=285$

We could show this method like this:

$$187+98 = 187 +100 -2= 287 -2 = 285$$

or you might write it like this:

$$187 + 98 = 187+100-2$$

$$187+100=287$$

$$287-2=285$$

Let's look at some other examples and remember that this is a method that only works easily with some calculations. Today it is up to you to spot the calculations that you would be sensible to use it with.

Example 2

$$45 + 39 =$$

39 is close to 40 (we just add on 1)

so we can do this:

Method 1

$$45 + 39 = 45 + 40 - 1 = 85 - 1 = 84$$

↑
The same as

← Take away 1 because we added 1 to the 39 to make 40

OR YOU MIGHT PREFER THIS WAY

Method 2

$$\begin{aligned} 45 + 39 &= 45 + 40 - 1 \\ &= 85 - 1 \\ &= 84 \end{aligned}$$

Example 3: Which one should we use adjusting with?

$$237 + 563 \quad \text{or} \quad 237 + 1998$$

We should do $237 + 1998$ because the 1998 is nearly 2,000. We just add 2 on.

So let's try our 2 methods

Method 1:

$$237 + 1998 = 237 + 2000 - 2 = 2237 - 2$$

$$= 2235$$

Method 2

$$\begin{aligned} \longrightarrow 237 + 1998 &= 237 + 2000 - 2 \\ &= 2237 - 2 \\ &= 2235 \end{aligned}$$

Independent Tasks

Challenge 1

For each pair of calculation only answer the one you can solve more easily by using the adjusting method we've looked at in the main teaching. Show how you solved them.

$$34 + 897 \quad \text{or} \quad 34 + 19$$

$$74 + 99 \quad \text{or} \quad 74 + 264$$

$$65 + 734 \quad \text{or} \quad 65 + 28$$

$$673 + 199 \quad \text{or} \quad 678 + 64$$

$$823 + 38 \quad \text{or} \quad 823 + 338$$

$$458 + 298 \quad \text{or} \quad 458 + 526$$

$$38 + 783 \quad \text{or} \quad 38 + 415$$

Challenge 2

Six of these calculations are easy to solve with the adjusting method. Can you find them and solve them. Remember to show the adjusting method. You do not need to do the 3 that would not be easy to solve with the adjusting method.

$$348 + 19$$

$$1023 + 439$$

$$1205 + 698$$

$$8874 + 9846$$

$$1253 + 28$$

$$3,780 + 999$$

$$73 + 44 + 764$$

$$12,703 + 9,999$$

$$120,400 + 998$$

Challenge 3

$$? + ? = 673 + 100 - 3 = ?$$

$$? + ? = 12,647 + 1000 - 1 = ?$$

$$? + ? = 78,654 + 10,000 - 4 = ?$$

$$? + ? = 300 + 4560 - 2 = ?$$

$$? + ? = 7832 + 20,000 - 2 = ?$$

$$? + ? = 189,846 + 700,000 - 3 = ?$$

Challenge X

678

892



399 345

456 68

298 999

Make each of these answers by adding 2 of the numbers above:

855

960

1244

876

Review

Can you spot the mistake?

$$638 + 37 = 638 + 40 - 4$$

$$638 + 40 = 678$$

$$678 - 4 = 674$$

Mark Scheme – Lesson 1

Starter

Round these numbers to the nearest 10:

47 rounds to 50 92 rounds to 90 73 rounds to 70 566 rounds to 570

Round these to the nearest 100:

154 rounds to 200 632 rounds to 600 469 rounds to 500 3462 rounds to 3500

Round these to the nearest 1000:

3100 rounds to 3000 4620 rounds to 5000 8503 rounds to 9000

26,320 rounds to 26,000

Independent Tasks

Challenge 1

$$34 + 897 \quad \text{or} \quad \underline{34 + 19 = 53}$$

$$\underline{34 + 20 - 1 = 53}$$

$$\underline{74 + 99 = 173} \quad \text{or} \quad 74 + 264$$

$$\underline{74 + 100 - 1 = 173}$$

$$65 + 734 \text{ or } \underline{65 + 28 = 93}$$

$$\underline{65 + 30 - 2 = 93}$$

$$\underline{673 + 199 = 872} \text{ or } 678 + 64$$

$$\underline{673 + 200 - 1 = 872}$$

$$\underline{823 + 38} \text{ or } 823 + 338$$

$$\underline{823 + 40 - 2 = 861}$$

$$\underline{458 + 298} = 756 \text{ or } 458 + 526$$

$$\underline{458 + 300 - 2 = 756}$$

$$38 + 783 \text{ or } \underline{38 + 415 = 442}$$

$$\underline{40 + 415 - 2 = 442}$$

Challenge 2

$$\underline{348 + 19 = 348 + 20 - 1 = 367}$$

$$1023 + 439$$

$$\underline{1205 + 698 = 1205 + 700 - 2}$$

$$8874 + 9846$$

$$\underline{1253 + 28 = 1253 + 30 - 2 = 1281}$$

$$\underline{3,780 + 999 = 3780 + 1000 - 1 = 4779}$$

$$73 + 44 + 764$$

$$\underline{12,703 + 9,999 = 12,703 + 10,000 - 1 = 22,702}$$

$$\underline{120,400 + 998 = 120,400 + 1000 - 2 = 121,398}$$

Challenge 3

Here is my working out using the adjusting method can you write what the starting calculation was and the final answer?

$$\underline{673 + 97 = 673 + 100 - 3 = 770}$$

$$\underline{12,647 + 999 = 12,647 + 1000 - 1 = 13,646}$$

$$\underline{78,654 + 9,996 = 78,654 + 10,000 - 4 = 88,650}$$

$$\underline{298 + 4560 = 300 + 4560 - 2 = 4858}$$



$$\underline{7832 + 19,998} = 7832 + 20,000 - 2 = \underline{27,830}$$

$$\underline{189,846 + 699,997} = 189,846 + 700,000 - 3 = \underline{889,843}$$

Challenge X

$$678 + 298 = 876$$

$$999 + 345 = 1244$$

$$892 + 68 = 960$$

$$456 + 399 = 855$$

Review

Can you spot the mistake?

$$638 + 37 = 638 + 40 - 4 \quad \underline{\text{This should be } -3 \text{ because } 40 - 3 = 37}$$

$$638 + 40 = 678$$

$$\underline{678 - 4 = 674} \quad \text{This should be } 678 - 3 = 675$$