Place Value (Part 3)
Counting in powers of 10

Remember a power of 10 is any number that can be made when multiplying 10 by itself. For example, 100, 1000, 10 000 and so on.

Activity 1 – Complete these sequences by counting forward or back in powers of 10. Remember to consider which digits will change and which will remain the same!

1	546	556	_____	_____	_____	
2	478	_____	678	_____	_____	
3	4503	_____	_____	4803	_____	
4	_____	67	_____	_____	37	
5	4904	_____	_____	5204	_____	
6	7834	_____	5834	_____	_____	
7	12 034	_____	_____	_____	8034	
8	23 894	33 894	_____	_____	_____	
9	_____	55 903	_____	35 903	_____	
10	190 780	_____	390 780	_____	_____	
11	345 000	_____	_____	315 000	_____	
12	786 457	886 457	_____	_____	_____	
13	_____	_____	212 903	112 903	_____	

Activity 2 – Answer the following questions:

1. What number is 1000 more than 3683?

2. How many less is 5693 than 5703?

3. What number is 10 000 less than 1 234 508?

4. If I add 100 to a number I get 3467. What number did I start with?

5. 23 890 is how many more than 13 890?

6. What number is 100 more than 45 901?

7. Add 10 000 to 270 801.

8. If I subtract 1000 from a number I get 19 230. What number did I start with?

9. What number is 100 000 more than 671 023?

Activity 3 – Write the following as calculations and solve them.

a)   7503 cars go over a bridge in February. In March, 1000 more cars go over the bridge than in February. How many go over the bridge in March?

b)   There are 30,903 books in a mobile library collection, but 1000 of these are on loan. How many books are left in the library?

c)   A girl wins £10,000 for winning a tennis competition. She has now won £35 600 in prize money altogether. How much had she won before winning the £10 000?

d)   A car has 34,678 miles on the milometer, but it had already travelled 100 000 miles. How many miles has it travelled altogether?

e)   A factory makes 305,800 glass bottles a day in March, which is 10 000 more than it made in February. How many bottles did it used to make each day in February?

Rounding

Remember when rounding, you look at the digit before the column you are rounding to to see whether you round up or down. Digits 1-4 mean that the number rounds down and if it is 5-9 then the number rounds up.
E.g. 16,748 to the nearest 10 rounds up because the digit before the tens digit is an 8, so it becomes 16,750.

Activity 1: Match the number, how the number is rounded, and the number to which it is rounded. One has been done for you.

13 790	Nearest 100 000	30 000
29 078	Nearest 100 000	800 000
34 972	Nearest 1000	29 000
145 000	Nearest 10 000	978 000
563 359	Nearest 10 000	600 000
607 450	Nearest 10 000	10 000
784 902	Nearest 1000	150 000
978 236	Nearest 10 000	610 000

Activity 2: Solve the following word problems, rounding the answer as instructed.

1. A supermarket sells 143 687 litres of milk in one month. How many litres is this to the nearest 10 000 and nearest 100 000?

_____   _____

2. There are 487 245 spectators at all the Premier League football matches on a Saturday. How many is this to the nearest 10 000 and nearest 100 000?

_____   _____

3. A newspaper reports that about 160 000 people attended a parade. How is this rounded and what is the range of the precise attendance?

_____   _____

4. 529 876 adults and 225 621 children visit a zoo in one year. To the nearest 10 000 and nearest 100 000, how many people visit the zoo altogether?

_____   _____