Ordering Numbers within 30/50/100

Children should be able to recognise and put in order the numbers up to 30 and then progress on to 50 and then to 100.

A number line/array is often a good help until a child becomes secure in their knowledge and understanding.

The following page contains some number lines/arrays for you to use when working with your child. You can use them to answer questions and reinforce the language of:

- **Number before**
- **Number after**
- **Number in between**
- **Less than**
- **Greater than**
- **Forwards**
- **Backwards**
- **Odd/even**

Arrays

An array shows a set of numbers that are set out in rows of 10. They are similar to number lines and can be used to develop and secure your child's understanding of number. They are very useful for spotting patterns in number and for use in adding and subtracting. All of the above language can be reinforced using a number array as well. The following pages show a 20/30/50 and 100 array.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

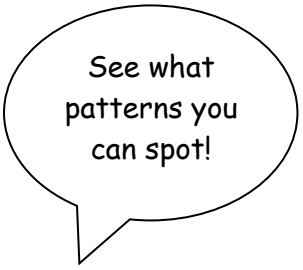
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

100 Hundred Square Pattern Work!

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

← **ROW**



↑ **COLUMN**

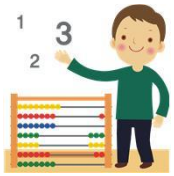
You can spot many patterns on a hundred square!
Looking at the columns you can easily spot odd and even numbers. The first column is all odd numbers, the second is all even numbers, the third odd and so on.
Every number in column one has a 1 in the unit column. Every number in the second column has a 2 in the unit column and so on.

If you want to add 10 to a number you just move down a row. For example: 15 + 10 = 25 (the number under 15 on the hundred square). If you want to add on 20 you move down two rows.

Similarly, if you want to take away 10 you go up 1 row. For example: 67 – 10 = 57 (the number above 67 on the hundred square). If you want to take away 30 you go up 3 rows and so on.

If you move diagonally down to the right from a number you are adding on 11 each time. If you move diagonally down to the left from a number you are adding on 9 each time

If you move diagonally up to the right you are taking away 9 each time. If you move diagonally up to the left you are taking 11 away each time.



Counting in 1's, 2's, 5's, 10's

It is good to practice counting out loud. Counting in multiples makes your maths quicker. It is also essential that you don't always start counting from 1! You should be able to start counting from any given number! Practice makes perfect!

Example: Start counting in **2's** from 10
10, 12, 14, 16, 18…..

Example: Start counting in **10's** from 20
20, 30, 40, 50, 60, 70….

Example: Start counting in **5's** from 5
5, 10, 15, 20, 25, 30…….

You should stay within 30 until you are confident then move onto within 50, then 100. Have Fun!

Being able to count like this will help you with sums like;

* 60 + 20(2 tens) = start at 60 and count on 2 more tens
70, 80 = 80

Now try counting backwards in multiples!

Being able to count backwards will help with sums like;

* 80 – 40(4 tens) = start at 80 and count back 4 tens
70, 60, 50, 40 = 40

Missing Number in a Sequence

Counting in multiples will also help when you need to complete a number sequence. Number sequences are lists of numbers that follow a pattern. They are not difficult you just need to work out what is happening between each number.

Example: 15, 20, 25, ____
5 is being added onto each number
You add 5 to the last number in the sequence so 25 + 5 = 30

Example : 26, 28, 30, ____
2 is being added onto each number so 30 + 2 = 32

Writing Numbers to 100!

You should be able to write numbers up to 100, now you know all about place value.

U

Five – is just 5 units so it is written as 5

T U

Twenty five – is 2 tens(10+10=20) and 5 units so it is written as 2 5

What number is it?

T U

It has two tens and six units? 2 6

H T U

It has one hundred and no tens and no units? 1 0 0

Writing Numbers in Words

1	One	11	Eleven
2	Two	12	Twelve
3	Three	13	Thirteen
4	Four	14	Fourteen
5	Five	15	Fifteen
6	Six	16	Sixteen
7	Seven	17	Seventeen
8	Eight	18	Eighteen
9	Nine	19	Nineteen
10	Ten	20	Twenty

Multiples of 10

20	Twenty
30	Thirty
40	Forty
50	Fifty
60	Sixty
70	Seventy
80	Eighty
90	Ninety
100	One hundred

Example: Write 37 in words

Two-digit numbers are easy. Just write them as you would say them. So, it's '**thirty seven**'

Odd and Even Numbers

Even numbers

2 4 6 8 10 12 14 16 18 20 22 24 26……

All even numbers end with a 0,2,4,6 or 8

So, to work out if a number is even you look at the units column. If it has a 0,2,4,6 or 8 in it then it is an even number.

Odd numbers

1 3 5 7 9 11 13 15 17 19 21 23 25 ……..

All odd numbers end with either a 1,3,5,7 or 9

So, to work out if a number is odd you look at the units column. If it has a 1,3,5,7 or 9 in it then it is an odd number.

It is important for your child to know the odd and even numbers up to 20 then 50 then 100. They could colour them in on their array in different colours. All odd numbers blue and even numbers red for example.

Estimation

Estimation is a very useful skill but it is one that children often find quite difficult to grasp. We would describe it like having a sensible guess. It is getting the children to have a feel for the size of a set of objects. It is good to start with a set within 20 then move on to bigger amounts when you feel their understanding is improving. The aim is to estimate without counting the entire set.

Example: Show them a set of 10 objects and then cover them up quickly. The aim is for them to take a guess as to how many are there without counting. As their understanding of number gets better their guesses should become more sensible. Ask the child to check if they are right or close by counting the objects one by one. You should always focus on the positive and congratulate them on a good guess and discuss why they felt there was that number there. Guide them in ways to make sensible guesses.

Number Facts That Your Child Needs to Know!

Recall of number facts is a key skill that will help your child with their maths. Below is a list of number facts that your child should know by the end of Year 3. Some will know them before entering Year 3 but they are continually revised throughout Year 3 and beyond!

Story of 

0 + 5 = 5
1 + 4 = 5
2 + 3 = 5
3 + 2 = 5
4 + 1 = 5
5 + 0 = 5

Story of 

0 + 10 = 10
1 + 9 = 10
2 + 8 = 10
3 + 7 = 10
4 + 6 = 10
5 + 5 = 10
6 + 4 = 10
7 + 3 = 10
8 + 2 = 10
9 + 1 = 10
10 + 0 = 10

Story of 100

0 +100= 100
10 + 90 =100
20 + 80= 100
30 + 70 = 100
40 + 60 =100
50 + 50 =100
60 + 40 = 100
70 + 30 = 100
80 + 20 =100
90 + 10 = 100
100 + 0 = 100

Doubles

1 + 1 = 2
2 + 2 = 4
3 + 3 = 6
4 + 4 = 8
5 + 5 = 10
6+6= 12
7+7= 14
8+8= 16
9+9= 18
10+10=20

Near Doubles

1+1=2 so 1+2=3
2+2= 4 so 2+3=5
and so on

Subtract 1 (number before)

1-1 = 0
2-1 = 1
3-1 = 2
4-1 = 3
5-1 = 4
6-1 = 5
7-1 = 6
8-1 = 7
9-1 = 8
10-1 = 9

Add 1 (number after)

1 + 1 = 2
2 + 1 = 3
3 + 1 = 4
4 + 1 = 5
5 + 1 = 6
6 + 1 = 7
7 + 1 = 8
8 + 1 = 9
9 + 1 = 10
0 + 1 = 10

Add/Subtract 0 (the number does not change) Eg: 7 – 0 = 7
7 + 0 = 7

Subtract a number from itself you are always left with zero

Eg: 4-4=0
7-7=0