We aim for all children at Holy Trinity to be able to:

- **Develop mathematical fluency**
- **Reason mathematically**
- **Problem solve**
- **Make connections across mathematical ideas**
- **Apply knowledge in other subject areas**

MATHS INFORMATION BOOKLET

YEAR 2

Here are the strategies that you can use to help develop your child's addition, subtraction, multiplication and division skills. They also need to write numbers 1-100 in figures and words.

Addition

Counting objects such as counters.

For example 46 + 5

Using objects. I put 46 cubes in a bag and then put 5 more in. Can you count as I put 5 more in? What is 46 add 5? How many do I have altogether?

Counting on using a number square

E.g 76+24

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

- Moving down one square is adding on 10
- Moving to the right one square is adding on 1

Count on using a number square by adding two tens and then four ones.
Or by doing this mentally, by putting 76 in your head and counting on two tens and then adding four ones.

Counting on using mental methods and explain how they worked it out.

For example 48 + 6   45 + 7
48 + 6 by adding 2 to make 50 and then adding 4
45 + 7 by adding 5 to make 50 and then adding 2
*Numbers can be added in any order.

Number bonds of 10 and 20 – (the two numbers that add together to make 10 and 20)

Use fingers and objects such as toys or counters
For example 7 + 3, 9 + 1, 8 + 2 etc….
Check answers by inverse operation:
10 – 3 = ?   10 – 7 = ?
Learn them regularly so that children can instantly tell you the number they need to add to make 10 or 20 or any multiple of 10.
For example say
'16 add………totals 20'
' 75 add…………makes 80'
'61 add………equals 70'

Adding 10 to a number

If I start at 58 and count 10 steps on a number square where will I stop?
Can you use a number line to work out 58 add 20?

What is 65 add three tens?

Children should be able to use a number square and add these mentally. Children need to know that the ones remain the same.

+9 → to add 9, add 10 first and subtract 1

+11 → to add 11, add 10 first and add 1

Partitioning a number

This means 'separating' the number up into hundreds, tens and ones.

For example

30 + 6 = 36   40 + 5 =45   400 + 30 + 3= 433

Partitioning to help with addition.

Calculation   23 +   21=
                20 3   20 1
Add the tens then the ones. Then add them together.
        20 + 20 = 40
        3 + 1 = 4
        40+4 = 44

Column Addition

```
    3 6              3  6
 +  1 2           +  2  5
 ─────────        ──────────
    4 8              6  1
                  ──────────
                      1
```

Subtraction – taking away

Counting Back in your head

Putting the larger number in your head and count back. For example what is 37 take away 8?

What is 45 minus 34? Children need to put the largest number in their head, take away three lots of ten and then four **ones**.

Counting back using a number line or hundred square.

Using a number line or a 100 square. Children need to know that my moving vertically up the number square they are subtracting in tens, and by moving to the left they are taking away in ones.

Subtracting using mental strategies

72 - 8 by subtracting 2 to give 70 and then subtract the remaining 6

86 - 8 by subtracting 6 to give you 80 and then subtracting the remaining 2.

Column Subtraction using decomposition

```
    8 8          5 6̸ ₁1
-   4 2        -  3   8
    4 6           2   3
```

Partitioning to help with subtraction.

Calculation   53 - 3 1 =
                    ╱ ╲
                  30   1
Only partition the second number
Take away the tens then take away the ones from that number.
53 – 30 = 23
23 – 1 = 22

Difference

This is the same as asking how much bigger is one number than the other? One way to find this out is to count up from the smaller number to the larger number. For example

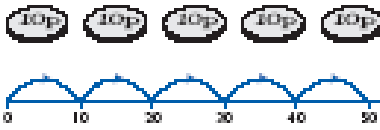What is the difference between 56 and 83?
Amy is 35Kg and Carl is 52kg what is the difference in their weights?
You can also use a blank numberline.

Multiplication

Counting on in 2's, 3's, 5's and 10's by grouping objects.

Count to find out how many there are in several groups of 2's,3's, 5's, 10's etc using multi-links, socks, fingers, coins etc…

You can then ask questions such as

- what multiple comes after 70 when we count in 10s?
- what three numbers come next 35, 40, 45 _____?
- When you count in 2's what is the next even number after 24?

Repeat addition and then times tables.

6 x 3 =
6 + 6 + 6
Encourage your child to notice any patterns in the times tables.

Children should then be able to answer questions such as What are 4 lots of 5?

What is the total of 10 lots of 3?
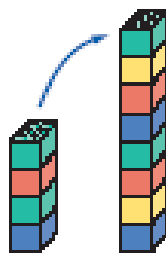*Multiplication can be calculated in any order
e.g 5 x 3   or 3 x 5

Doubling

Choose a number and double it
Or practically with toy cars, cubes etc
Roll a dice when playing a game – what is the double?

double 4 is 8
4 x 2 = 8

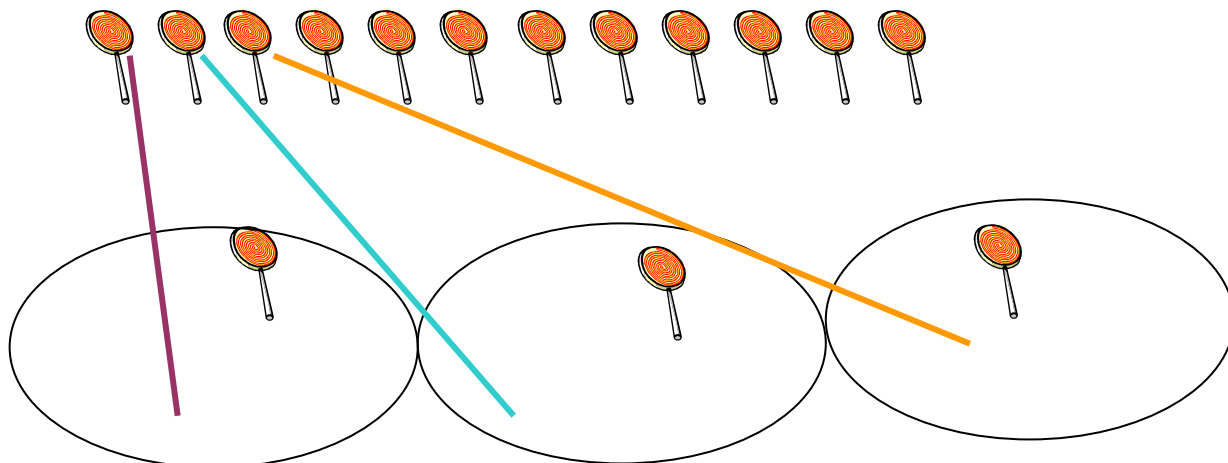Children can then begin to double two digit number by partitioning.
For example double 12 double 10 is 20, double 2 is 4, so double 12 is 24.

$$1 \qquad 2$$
$$10 + 10 \qquad 2+2$$
$$20 \quad + \quad 4 \quad = 24$$

Division- sharing

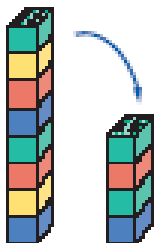**Sharing a group of objects practically.**

$12 \div 3 =$

Division as sharing

18 crayons are divided equally between 6 pots. How many crayons are there in each pot?

A 20cm piece of string is cut into five equal pieces. How long is each piece?

Halving

half of 8 is 4

$8 \div 2 = 4$

Give your child a set of cubes, toys, etc and ask them to find half (divide into two groups.) Give similar questions for quarters, eighths and thirds.

Try and encourage your child to explain what they are doing and talk through how they are working out the answers. Encourage your child to jot down their workings out.

Give your child a number problem to solve. Talk through the question and ask your child to figure out if it is an addition, subtraction, multiplication or division calculation first.

For example
A pack of sweets cost 5p how many would 9 packets cost?

If I went into a shop with 50p and brought a toy for 10p and an apple for 15p how much change would I have?

If I had a pack of 25 lollipops and I wanted to share them with 5 friends how many would they have each? Can you write down how you would work this out?