We want our children to be confident and happy mathematicians!

**Problem solving**

**Fluency**

**Reasoning**

**What do we mean by tables?**

“a list of multiples of a particular number, typically from 1 to 12”

 Patterns of multiples

e.g. 0 3 6 9 12 15 18 21 24 27 30 33 36

3x0=0 3x1=3 3x2=6 3x3=9 3x4=12…….

0x3=0 1x3=3 2x3=6 3x3=9 4x3=12…..

 And the inverse facts 0÷3=0 3÷3=1 6÷3=2…..

**What do we mean by learning?**

**You know it like you know your name**.

Currently, Year 3 children are busy learning tables facts: games, learnits, bronze/silver/gold award cards.

Children still need to do lots of **counting**

0 3 6 9 12….

12 9 6 3 0 forwards and backwards

Multiple addition
3+3+3+3+3+3 is the same as 3x6=18 (is the same as 6x3=18)

In Year 2 children are introduced to arrays.

Here we have columns of 2 counters arranged in rows of 3 Here we have columns of 3 counters arranged in rows of 2

We have 6 counters divided into groups of 2 and 3 (division facts)

Children are introduced to the vocabulary factors and multiples.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |

Children need to understand that the table of 3 is made of multiple additions of 3; that

the multiples can be counted e.g. the first multiple of 3 is 3, the second multiple is 6 and so on and that the multiples can be divided e.g. 9 divided by 3 equals 3.

The children know these facts as “switchers”. 3x6=18 6x3=18 18 ÷3=6 18÷6=3

This is a fact family.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** |
| 1 |  |  |  | 5 |  |  |  |  | 10 |  |  |
| 3 |  |  |  |  |  |  |  |  | 30 |  |  |

Children can learn key facts e.g. they should already know doubles so will know 3x2=6. They will know 3x10=30. They can use these to calculate other facts. E.g. 3x5=15 because this is half of 3x10=30 3x4=12 because this is double 3x2=6.

We encourage children to make links, find patterns and “use what you know”.

Multiplication Tables Check

Our Year 3 children will be the first cohort to take this check in 2020. The check takes place in June when the child is in Year 4.

This is the national Curriculum expectation for the end of Year 4:

‘By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work’

Government advice:

The MTC will be administered as an online, on-screen assessment. The MTC will be administered to pupils in year 4. The check will be available over a 3 week window in June each year. Schools can choose to administer the check at any time within this window. …….

The assessment will consist of multiple, equivalent forms and each pupil will be randomly assigned one of the available forms. ……

Each form consists of 25 questions worth one mark each. Items are not ordered according to difficulty.

Pupils will have 6 seconds to enter a response to the question. The 6 seconds start as soon as the question appears. Pupils will be able to input their response using the computer keyboard, a mouse (or equivalent) and the on-screen number pad, or a touchscreen device and the on-screen number pad. Once the pupil has input their answer, they can press enter to proceed, or wait until the time expires. Once the question is answered, there will be a 3 second pause before the next question appears.

Highlights to notice: The check is taken on line and on a screen.

The children are given multiplication facts and expected to insert an answer. (No division facts).

The responses are timed and the child can change the answer within the time but cannot go back and change an answer.

The focus is on tables facts learnt in Key stage 2: 6 7 8 9 12

There are no reversals.

There are 25 questions.

There are 6 seconds for each question.

**What do we mean by learning?**

**You know it like you know your name**.

Fluency is so important when calculating and reasoning in mathematics.

You need to know multiplication and division facts to understand place value, fractions, ratio and proportion, units of measurement, average, volume, area ….

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Children can use Time tables Rock Stars help with learning tables facts.

There is a link on the website (see Weblinks).