Maths: Language / method to be used for tables, computation etc.

Note:
It is vital that children are in the habit of writing one digit per square in their maths copies from Junior Infants onwards.

Addition

	Tables	2 + 4 = 6	Two plus four equals six
Adding a column of single digit Nos. without renaming	**Computation 1**	T U 0 3 + 4 7	Tens & units columns at the top; Begin with the units· Start at the top… 3 plus four is 7
Adding a column of 1 /2 /3 digit Nos. with renaming	**Computation 2**	T U 2 4 + 8 3 2	Tens & units columns at the top; Begin with the units· Start at the top…. 4 plus 8 is 12…· [Rename the 12 into 2 units and 1 ten] Put the units with the units and the tens with the tens 2 plus 1 is 3 etc..

Subtraction

	Tables	4 - 2 = 2	Four take away two equals two
Subtracting single digit numbers without renaming	**Computation 1**	T U 0 6 - 4 2	Tens & units columns at the top; Begin with the units Start at the top.... 6 take away four equals 2
Subtracting two or three digit numbers without renaming.	**Computation 2**	T U 2 4 - 1 2 1 2	Tens & units columns at the top· Begin with the units· Start at the top.... 4 take away 2 equals 2...· Move on to the tens· 2 take away 1 equals 1 etc.....

Computation 3

Subtracting two or three digit numbers with renaming.

Tens & units columns at the top· Begin with the units·

Step 1 Start at the top....

4 take away 6 - I cannot do! ...Rename a ten - 4tens =3tens 10 units

Cross out the four, leaving three tens.
Bring over my ten to the units which means 4 units becomes 14 units.

14 take away 6 equals 8·

T U

3 ~~4~~ 14

- 1 6

8

Step 2

Move on to the tens· 3 take away 1 equals 2

T U

3 ~~4~~ '4

- 1 6

2 8

Answer = 28

Computation 4

Subtracting three digit numbers with renaming (and with zero tens)

Hundreds, Tens & units columns at the top· Begin with the units· Start at the top....

Step 1

4 take away 6 - I cannot do! ...Rename a ten - But there are no tens -

Go to the Hundreds - Rename a 100 making ten tens in the tens column·

H T U

~~4~~ ~~5~~ '0 4

-2 1 6

Start again

Step 2

4 take away 6 - you cannot do! ...Rename a ten - Cross out the ten, leaving nine tens and 14 units

H T U

4 ~~5~~ 9 ~~0~~ '4

-2 1 6

Step 3

Put the units with the units and the tens with the tens.

14 take away 6 equals 8

9 take away 1 equals 8

4 take away 2 equals 2

H T U

4 5 0 4

-2 1 6

2 8 8

Answer 288

Computation 5

Subtracting four digit numbers with renaming (and with zero hundreds tens and unit)

Thousands Hundreds, Tens & units columns at the top·

Step 1 Begin with the units· Start at the top....

0 take away 6 - I cannot do! ...Rename a ten - But there are no tens -

Go to the Hundreds - Rename a 100 - But there are no hundreds

Go to the thousands Rename a 1000 making ten hundreds in the hundeds column·

TH H T U

3 4 0 0 0

- 4 6

Step 2 Start again

0 take away 6 - you cannot do! ... Rename a ten - But there are no tens

Go to the Hundreds – Rename a 100 making ten tens in the tens column·

TH H T U

3 ~~4~~, ~~0~~ 9 '0 0

\- 4 6

Step 3 Start again

0 take away 6 - you cannot do! ...Rename a ten - Cross out the ten, leaving nine tens and ten units

TH H T U

3 ~~4~~, ~~0~~ 9 ~~0~~ 9 '0

\- 4 6

Step 4 Put the units with the units 10 take away 6 equals 4

Put the tens with the tens 9 take away 4 equals 5

Put the hundreds with the hundreds 9 take away 0 equals 9

Put the thousands with the thousands 3 take away 0 equals 3

TH H T U

3 ~~4~~, 9 ~~0~~ 9 '0

\- 4 6

3, 9 5 4 Answer 3,954

Multiplication

	Tables	0 x 2 = 0 1 x 2 = 2 2 x 2 = 4	Zero twos is zero· One two is two· Two twos are four etc
Multiplying a single digit no.by a single digit no·	**Computation 1**	T U 0 2 x 4 8	Tens & units columns at the top;· Begin with the units· Start at the bottom…. 4 twos are 8
Multiplying a single digit no.by a single digit no	**Computation 2**	T U 0 5 x 3 1 5	Tens & units columns at the top· Begin with the units· Start at the bottom…. Three fives are 15 · Write the 1(ten) under the tens column
Multiplying a 2 (or 3 digit) numberby a single digit no. ·	**Computation 3**	HT U 0 2 4 x 2 6 1 4 4	(Hundreds) Tens & units columns at the top· Begin with the units· Start at the bottom…. 6 fours are 24 …Rename put the units with the units and the tens with the tens. Go on to the tens…6 twos are 12 and two (more) is 14
Multiplying a 2 (or 3 digit) number by a two digit no. ·	**Computation 4**	H T U 0 2 4 x(3)6 1 4 4 7 2 0 8 6 4	Circle the number of tens(3) before you start.· Multiply by the units first as per Computation 3 above.· When multiplying by ten(s) put down a zero and multiply by the number of tens so…put down the zero and multiply by 3· Add the two parts together for the final answer.

Division

Four ways of writing a division sum

45 ÷ 9= 5 $9\overline{)45}$ $\begin{array}{r}5\\ 9\overline{)45}\end{array}$ $45/9 = 5$

	Tables	3÷ 3 = 1 6 ÷ 3 = 2 9 ÷ 3 = 3	Three divided by three is one· Six divided by three is two· Nine divided by three is three
Dividing single digit no. by single digit	Short Division	$3\overline{)6}$ $\begin{array}{r}2\\ \hline 2\end{array}$ or $3\overline{)6}$	Three into six goes twice

Dividing a two or three digit No..by a single digit No. with or without remainders

Division without a remainder

H T

0 6 2

4) 2 4 8

H T U

0 6 2

4) 2 4 8

4 does not go into 2. You can put zero above the line in the hundreds place or omit it.Combine 2 hundreds and 4 tens to make 24 tens. 4 does go into 24, six times. Put 6 above the line in the tens place (240÷4 = 60)
4 goes into 8 twice. Put 2 above the line in the units place. (8÷4=2)
Check your answer 62 × 4 = 248

Division with a remainder

```
    H T U
    0 4 1 R1
  ---------
4) 1 6 5
```

4 does not go into 1 (hundred). So combine the 1 hundred with the 6 tens to make 16 tens (160).

4 goes into 16 four times. Put 4 above the line in the tens place (160÷4 = 40)

4 goes into 5 once, . Put 1 above the line in units place . You have a remainder of 1 (unit).

Check your answer
41 × 4 = 164
(add the remainder)
164+1 = 165

Long Division

Long division repeats the basic steps of

Estimate

1) Divide
2) Multiply;
3) Subtract; Drop down the next digit Restart or remainder

Step 1-3 is the procedure to complete the sum.

2678÷21

Estimate

2680÷20 = 134

Step 1 Divide

```
  01
21|2678
```

Twenty one doesn't go into 2 (thousand)
Write 0 on top.
Twenty one goes into 26(hundred) once. Write 1 on top in the hundreds place.

Step 2 Multiply and subtract

```
  01
21|2678
 -21
   5
```

21 × 1 = 21
Write that 21 under 26 and subtract to get a remainder of 5.

Step 3 Drop down the next digit and restart. Estimate and Divide

```
  012
21|2678
 -21
  57
```

Drop down 7
Estimate 60÷20 = 3
57 ÷21
21×3 = 63 too big
21×2 =42
57 ÷21= 2 Write 2 above the line in the tens place.

Step 2 Multiply and subtract

```
  012
21|2678
 -21
  57
 -42
  15
```

21×2 =42
Write 42 under 57 and subtract to get a remainder of 15.

Step 3 Drop down the next digit and restart. Estimate and Divide

```
   0 1 2 7
21| 2 6 7 8
  -21
    57
   -42
    158
```

Drop down 8 158÷21
Estimate 160÷20 = 8 21×8 = 168 too big
21×7 = 147
Write 7 above the line in the units place

Step 2 Multiply and subtract

```
   0 1 2 7 r 11
21| 2 6 7 8
  -21
    57
   -42
    158
  - 147
     11
```

21×7 = 147
Write 147 under 158 and subtract to get remainder of 11.

Answer = 127r11

Check your answer with your calculator by multiplying and adding.

127 ×21= 2667 **2667+ 11 = 2678 (add your remainder)**