Second Level Addition and Subtraction

By the end of P7, most pupils can:

Add and subtract multiples of 10, 100 and 1000 to and from whole numbers

Add and subtract whole numbers with the number range 0 to 1,000,000

(*taken from Education Scotland Benchmarks Numeracy and Mathematics 2017. To see all visit: https://education.gov.scot/improvement/documents/numeracyandmathematicsbenchmarks.pdf*)

Strategies that may be taught throughout p5-p7	**What can be done at home to help?**
The strategies that may be taught are: • Jump • Over-jump • Split • Compensation • Transformation • Complementary addition • Formal written method p5 – p7 pupils may use these strategies to work with 3,4,5 and 6 digits **<u>The jump strategy</u>** The jump strategy is when you either jump forwards or backwards using a number line. https://www.youtube.com/watch?v=0ABI7UFDg2o **<u>The over jump strategy</u>** The over jump strategy is when you round a number that is close to 10 so for example 53 – 19 = could be worked out by 53-20=33+1 **<u>The split strategy</u>** The split strategy is when the tens and ones are spit and then recombined. So 37 + 25 = 30 +20 = 50 7 + 5 = 12 50 + 12 = 62	Improve mental agility by asking number facts within 20 as these should now be very quick so 4+2 = 5+8= 9+2= 15+4= You could do this when counting objects, playing board games with 2 dice, shopping etc Discuss real life scenarios involving the addition and subtraction of 3,4,5 and 6 digit numbers – If you are looking for a new holiday, TV, car or house, compare prices: “how much more is this one compared to that one?”, “how much more would we need to save up?”, “how much would we save if it was half price”, “how much would we get back if we paid £___” Support your child with the strategy they are currently working on. For addition, subtraction, multiplication and division your child will be encouraged to use and practise a taught strategy in class as well as the written method. Once taught the written method, many children can become reliant on it but should be encouraged to use the taught strategy and reserve the written method for larger numbers.

Compensation Strategy

The compensation strategy is when one number is adjusted which makes it easier to add or subtract.
So 37 +25 could be thought of as 40 + 25
= 65 and then subtract the 3 = 62

Transformation

The transformation strategy is when both numbers can be adjusted
So 37 + 25 can be thought of as 40 + 22 by adding 3 to 37 and taking it from 25 = 62

Complementary addition

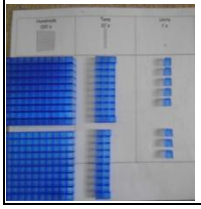
The complementary addition strategy is often used when shopping and is when something is unknown. For example I have 39p, how much more would I need to spend 53
So 39 + ? = 53
From 39 to 40 = 1
From 40 to 50 = 10
From 50 to 53 = 3
1 + 10 + 3 = 14

Formal written method

This is a step by step procedure with a very precise layout.

Materials that may be used in class

- 100 squares
- Blank number lines
- Place value materials (Hundreds, Tens and ones)
- Calculators
- Squared paper
- Abacus
- Counters



There are lots of online games which the children use in school but could also do at home:

- Education City (account will have been set up by class teacher)
- Sum Dog (account will have been set up by class teacher)
- Doodle Maths
- Mathletics
- Number Run
- Eggs on Legs

Second Level Multiplication and Division

By the end of p7, most pupils can:

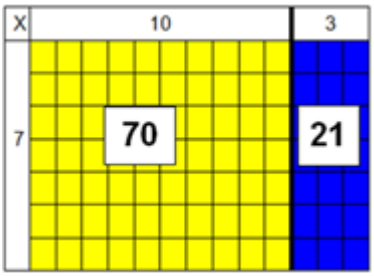
Multiply and divide whole numbers by multiples of 10, 100 and 1000.

Multiply whole numbers by two digit numbers.

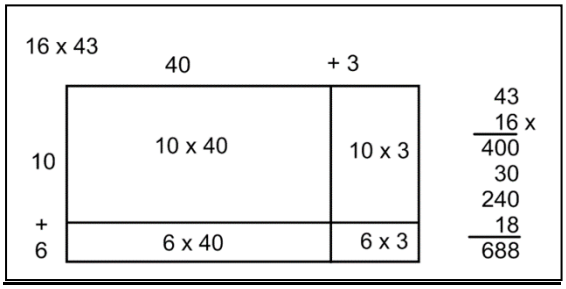
Strategies that may be taught throughout p5-p7	**What can be done at home to help?**
The strategies that may be taught are: • Counting sticks • Doubling and Halving • Partitioning • Factorising • Arrays • Splitting up • Table method • Standard written method **Counting Sticks** A stick can be used to count forwards and backwards throughout the table stations. https://www.youtube.com/watch?v=8N8NX3UgCjY **Doubling and Halving** Doubling and halving numbers reinforces the connection between the 2,4,8 times table **Partitioning** The partitioning strategy is when you are multiplying/ dividing a 2/3 digit number and a single digit. For example: 78 ÷ 6 The 2 digit number can be split up to: 60÷6 =10 18÷6 =3 So 78 ÷ 6 = 13 **Factorising** The factorising strategy is when you are multiplying/ dividing a 2 digit number by a 3 digit number: 40 x 15 = 40 x 5 x 3 = 200 x 3 = 600 600 ÷ 15 = (600 ÷ 3) ÷ 5 = 200 ÷ 5 = 40	Improve mental agility with quick recall of multiplication facts by: • Reciting table facts forwards and backwards • Answering table fact questions **Real life examples** Buying multiple items at the shops eg. If a single banana cost 12p and a bunch of 6 costs 90p – are you cheaper buying 6 singles or the bunch? There are lots of online games which the children use in school but could also do at home: • Education City (account will have been set up by class teacher) • Sum Dog (account will have been set up by class teacher) • Doodle Maths • Mathletics • Number Run • Eggs on Legs • Ibbleobble • Multiple wipe out • Montessori Maths Multiplication • Squeebles Maths Play • Multiply Pizza Pie

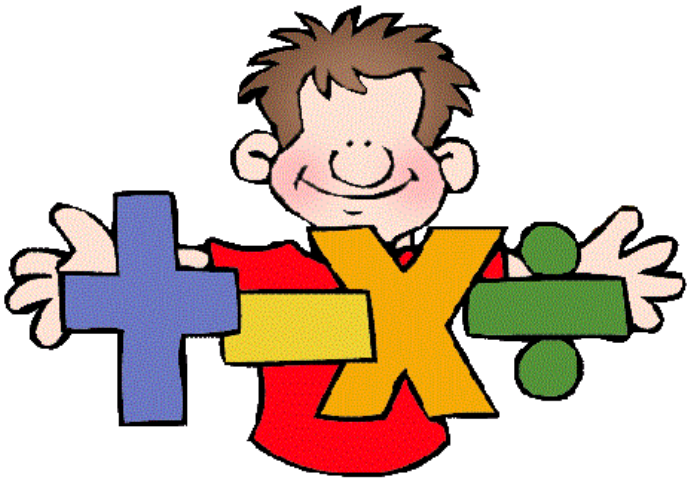
Arrays

Arrays are a visual representation of a times table



Splitting up/ Table Strategy



Formal Written Method

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