

Maths at St Stephen's Juniors

cycle St Stephen's 2022-23 Key: Blue= KPIs from previous year, Purple = suggested warm-up coverage, Green= lesson coverage, Yellow= suggested measure coverage

Term 1						
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7
<p>Time week!</p> <p>Year 4 KPIs:</p> <ul style="list-style-type: none"> read, write and convert time between analogue and digital 12- and 24-hour clocks solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. <p>Year 5 KPIs:</p> <ul style="list-style-type: none"> solve problems involving converting between units of time 	<p>Place value, including decimals</p> <p>Year 4 KPIs:</p> <ul style="list-style-type: none"> count in multiples of 6, 7, 9, 25 and 1000 find 1000 more or less than a given number count backwards through zero to include negative numbers recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000 identify, represent and estimate numbers using different representations round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. <p>Warm-up coverage:</p> <ul style="list-style-type: none"> find 1000 more or less than a given number. <p>Lesson coverage:</p> <ul style="list-style-type: none"> read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above read Roman numerals to 1000 (M) and recognise years written in Roman numerals <p>In Use It incorporating relevant strands of measure from previous years. (CPA)</p> <ul style="list-style-type: none"> round decimals with one decimal place to the nearest whole number compare numbers with the same number of decimal places up to two decimal places round decimals with two decimal places to the nearest whole number and to one decimal place read, write, order and compare numbers with up to three decimal places 			<p>Addition and Subtraction, including decimals</p> <p>Year 4 KPIs:</p> <ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of addition and subtraction where appropriate estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations to use and why. <p>Warm-up coverage:</p> <ul style="list-style-type: none"> add and subtract numbers mentally with increasingly large numbers <p>Lesson coverage:</p> <ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations to use and why. <p>In Use It incorporating relevant strands of measure from previous years. (CPA)</p> <ul style="list-style-type: none"> measure, compare, add and subtract: lengths (m/cm/mm), mass (kg/g), volume/capacity add and subtract amounts of money to give change, using both £ and p in practical contexts solve problems involving number up to three decimal places use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. 		

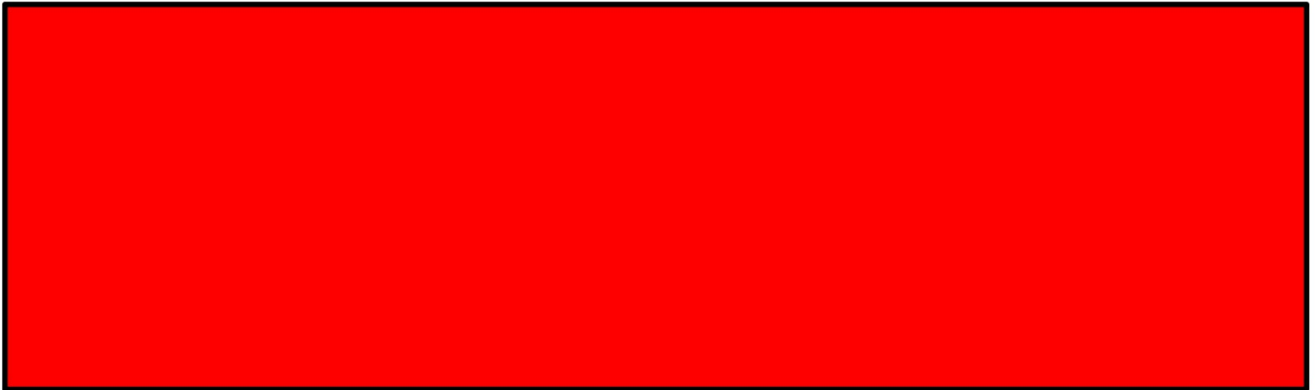
Lesson structure:

- Early morning maths
- Warm-up
- Real life context
- I do (Build STS)
- We do (partners- using partner talk and check STS)
- Hinge 1
- Hinge 1a
- Plenary

Hinge 1:

What is the value of the underlined digit?

30 4



Work structure:

Try it

- 4 questions
- Progressional
- Variation
- Focus on key concept

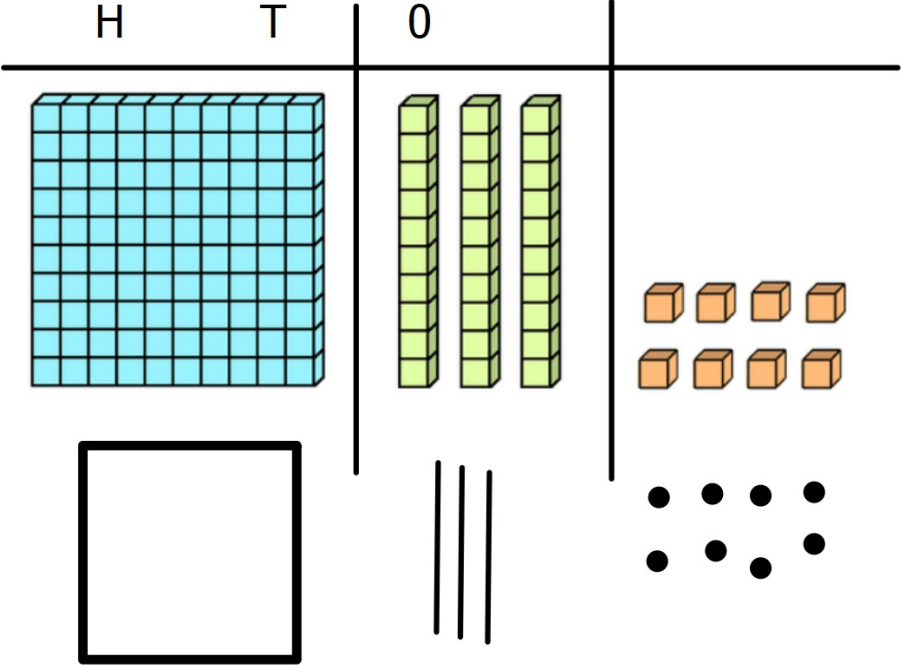
Use it

- Applying concept in a different way

Prove it

- Reasoning

Representation:



Reasoning with place value:

The number in the place value grid is the greatest number you can make with 8 counters.



100s	10s	1s
4	1	1

Do you agree?
Prove your answer.

Using place value counters, how many different ways can you make four hundred and fifty?



Show your solutions as a calculation.

You have the digits 4 7 5.

Complete these statements based on these digits. You can only use each digit once.

The largest number I could make is:

The smallest number I could make is:

A number with a 4 in its tens could be:

A number less than 550 could be:

A number more than 700 could be:

A number divisible by 5 could be:

A number with an odd hundred could be:

A number whose hundreds digit is smaller than its ones digit:

A number whose ones digit is larger than its tens digit:

Times tables:

Key principles

- Teach times tables through recognising the importance of sound pattern and storing knowledge in our verbal memory.
- Learn each number sentence as a memorised phrase by repeating the sound pattern out loud.
- Learn each fact one way round only.

4 x 6 = becomes six fours are twenty-four.

We always state the larger number first. The children very quickly become attuned to this and it just helps in the learning process.

- All sentences for the same fact family are said in the same way, for example:
 $3 \times 6 = 18$ $6 \times 3 = 18$ $18 \div 6 = 3$ $18 \div 3 = 6$
are all said as **six threes are eighteen**
- Each times table is introduced with a whole lesson.
- Learn one new fact at a time. We will look at $6 \times 6 = 36$ one day. Then $7 \times 6 =$ the following day. Etc.
- Children must always say the whole sound pattern ($5 \times 2 = 10$ must be said as five twos are ten) – never just the answer.
- Don't think. We want them to become known facts.
- Progression is 2, 5, 3, 4, 6, 7, 8, 9 (10 will not be taught because we want children to see the importance of place value in multiplying and dividing by a multiple of ten. 12, 11 are stand alone at the end of the progression).
- Booklets are used for the children to test their knowledge.

Any questions?