| St Vincent's Catholic Primary School WHOLE SCHOOL MATHS CURRICULUM MAP N/NTM |  |  | Together Through Christ We Grow and Learn |
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| NURSERY |  |  |  |
| Autumn 1 | Topic- <br> All about Me | Learning Journey Objectives N: Emerging N:Developing | National Curriculum Objectives - Early Learning Goals N: Secure |
| Week 1/2 | Number and Place Value SSM | ( $\mathrm{NU}: 30+$ )Uses some number names and number language spontaneously <br> ( $\mathrm{NU}: 40+$ ) Uses some number names accurately in play. <br> (SSM:30+) Understands some talk about immediate past and future, e.g. 'before', 'later' or 'soon'. <br> (SSM:30+) Anticipates specific time-based events such as mealtimes or home time. | ( $\mathrm{NU}: 50+$ )Counts up to three or four objects by saying one number name for each item |
| Week 3 | Number and Place Value | ( $\mathrm{NU}: 30+$ )Begins to make comparisons between quantities <br> ( $\mathrm{NU}: 40+$ )Compares two groups of objects, saying when they have the same number. <br> (NU:40+)Recites numbers in order to 10 . | NU:50+)Counts an irregular arrangement of up to ten objects. |
| Week 4 | Number and Place Value | ( $\mathrm{NU}: 30+$ )Recites some number names in sequence. <br> ( $\mathrm{NU}: 40+$ )Knows that numbers identify how many objects are in a set. <br> ( $\mathrm{NU}: 40+$ )Sometimes matches numeral and quantity correctly. | $\mathrm{NU}: 50+$ )Counts up to three or four objects by saying one number name for each item <br> (NU:50+)Recognise some numerals of personal significance. |
| Week 5 | SSM | (SSM:30+) Notices simple shapes and patterns in pictures. <br> SSM:40+) Shows interest in shape \& space by sustained construction activity or by talking about shapes or arrangements. | SSM:50+) Selects a particular named shape <br> (SSM:50+) Uses familiar objects and common shapes to build models. |
| Week 6 | Money (Enterprise Week) | ( $\mathrm{NU}: 30+$ ) Uses some language of quantities, such as 'more' and 'a lot'. <br> ( $N \mathrm{~N}: 40+$ )Shows an interest in number problems. | SSM:50+) Beginning to use everyday language related to money. |
| Autumn 2 | TopicCelebrations | Learning Journey Objectives N: Emerging | National Curriculum Objectives - Early Learning Goals N: Secure |
| Week 1 | SSM | SSM:30+) Beginning to categorise objects according to properties such as shape or size <br> (SSM:40+) Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'. <br> SSM:40+) Shows interest in shape \& space by sustained construction activity or by talking about shapes or arrangements. | SSM:50+) Selects a particular named shape |
| Week 2 | SSM | SSM:30+) Beginning to categorise objects according to properties such as shape or size <br> (SSM:40+) Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'. <br> SSM:40+) Shows interest in shape \& space by sustained construction activity or by talking about shapes or arrangements. | SSM:50+) Orders two items by length or height. |
| Week 3 | Number and Place Value | ( $\mathrm{NU}: 30+$ )Recites some number names in sequence. <br> NU:40+)Shows an interest in number problems <br> $\mathrm{NU}: 40+$ )Compares two groups of objects, saying when they have the same number | NU:50+)Finds the total number of items in two groups by counting all of them. |
| Week 4 | Number and Place Value | ( $\mathrm{NU}: 30+$ )Recites some number names in sequence. <br> ( $\mathrm{NU}: 40+$ )Shows an interest in number problems <br> (NU:40+)Knows that numbers identify how many objects are in a set | $\mathrm{NU}: 50+$ )Selects the correct numeral to represent up to 5 objects. |
| Week 5/6 | SSM | SSM:30+) Beginning to categorise objects according to properties such as shape or size <br> (SSM:40+) Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'. <br> SSM:40+) Shows interest in shape \& space by sustained construction activity or by talking about shapes or arrangements. | SSM:50+) Selects a particular named shape |
| Week 7/8 | SSM | SSM:30+) Beginning to categorise objects according to properties such as shape or size <br> (SSM:40+) Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'. <br> SSM:40+) Shows interest in shape \& space by sustained construction activity or by talking about shapes or arrangements. | SSM:50+) Selects a particular named shape |


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| Spring 1 Topic- Under <br> the Sea |  | Learning Journey Objectives <br> N : Emerging <br> $\mathrm{N}:$ Developing | National Curriculum Objectives - Early Learning Goals |
|  |  |  |  |
| Week 1 | Number and Place Value | $(\mathrm{NU}: 30+)$ Uses some language of quantities, such as 'more' and 'a lot'. <br> NU:40+)Knows that numbers identify how many objects are in a set.. | (NU:50+)Counts out up to 6 objects from a larger group <br> ( $\mathrm{NU}: 50+$ ) Counts an irregular arrangement of up to ten objects. |
| Week 2 | Number and Place Value | $\mathrm{NU}: 30+$ )Begins to make comparisons between quantities. <br> ( $\mathrm{NU}: 40+$ )Compares two groups of objects, saying when they have the same number | $\mathrm{NU}: 50+$ )Finds the total number of items in two groups by counting all of them. <br> [NU:D) Uses the language of 'more' and 'fewer' to compare two sets of objects. |
| Week 3 | Number and Place Value | ( $\mathrm{NU}: 30+$ )Creates and experiments with symbols and marks representing ideas of number. <br> ( $\mathrm{NU}: 40+$ )Shows an interest in representing numbers. | $\mathrm{NU}: 50+$ )Beginning to represent numbers using fingers, marks on paper or pictures. <br> (NU:D) Records, using marks that they can interpret and explain.) |
| Week 4 | SSM | (SSM:30+) Beginning to categorise objects according to properties such as shape or size. <br> (SSM:40+) Shows interest in shape \& space by sustained construction activity or by talking about shapes or arrangement | (SSM:50+) Selects a particular named shape <br> (SSM:D) Beginning to use mathematical names for 'fflat' 2 D shapes, and mathematical terms to describe shapes. |
| Week 5 | Number and Place Value | (NU:40+)Sometimes matches numeral and quantity correctly. <br> (NU:AO+)Shows an interest in numerals in the environment. | $\mathrm{NU}: 50+$ )Selects the correct numeral to represent up to 5 objects. <br> NU:D) Selects the correct numeral to represent up to 10 objects. |
| Week 5 | Number and Place Value | ASSSESSMENT WEEK |  |
| Week 6 | SSM | (SSM:40+) Shows interest in space by by talking about arrangements. <br> SSM:40+) Responds to positional language. <br> SSM:40+) Uses positional language. | [SSM:D) Can describe their relative position such as 'behind' |
| Spring 2 | TopicGrowing | Learning Journey Objectives <br> N : Emerging <br> $\mathrm{N}:$ Developing | National Curriculum Objectives - Early Learning Goals <br> N: Secure <br> N: Exceeding=R: Developing |
| Week 1 | SSM | SSM:30+) Beginning to use the language of size. <br> (SSM:40+) Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'. | SSM: $50+$ ) Orders two items by length or height <br> (SSM:D) Orders two or three items by length or height. |
| Week 2 | Number and Place Value | $\mathrm{NU}: 30+$ )Recites some number names in sequence. <br> ( $\mathrm{NU}: 40+$ )Recites numbers in order to 10 . | $\mathrm{NU}: 50+$ )Counts objects to 10 , and beginning to count beyond 10 <br> (NU:D) Says the number that is one more than a given number |
| Week 3 | Number and Place Value | ( $\mathrm{NU}: 30+$ )Knows that a group of things changes in quantity when something is added or taken away. <br> (NU::4O+)Separates a group of three or four objects in different ways, begining to recognise that the total is still the same. | (NU:50+)Counts objects to 10, and beginning to count beyond 10. <br> (NU:D) Finds one more or one less from a group of up to five objects, then ten objects. |
| Week 4 | Number and Place Value | NU:40+)Realises not only objects, but anything can be counted, including steps, claps or jumps. <br> ( $\mathrm{NU}: 40+$ )Sometimes matches numeral and quantity correctly. | $\mathrm{NU}: 50+$ )Beginning to represent numbers using fingers, marks on paper or pictures. <br> $N U: D)$ Selects the correct numeral to represent up to 10 objects |
| Week 5 | Number and Place Value | ( $\mathrm{NU}: 40+$ )Shows curiosity about numbers by offering comments or asking questions. <br> ( $\mathrm{NU}: 40+$ )Shows an interest in number problems. | (NU:D) Begins to identify own mathematical problems based on own interests and fascinations <br> NU:D) Estimates how many objects they can see and checks by counting them |
| Week 6 | SSM | (SSM:40+) Uses shapes appropriately for tasks. SSM:40+) Uses positional language. | (SSM:50+) Uses familiar objects and common shapes to recreate patterns. (SSM:ELG) Recognises, creates and describes patterns. |


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| :---: | :---: | :---: | :---: |
| Summer 1 | TopicTraditional tales | Learning Journey Objectives <br> N : Emerging <br> $\mathrm{N}:$ Developing | National Curriculum Objectives - Early Learning Goals <br> N: Secure <br> N: Exceeding/R: Developing |
| Week 1 |  | $\mathrm{NU}: 30+$ )Recites some number names in sequence. <br> (NU:30+)Creates and experiments with symbols and marks representing ideas of number. <br> ( $\mathrm{NU}: 30+$ )Begins to make comparisons between quantities. <br> ( $\mathrm{NU}: 30+$ )Uses some language of quantities, such as 'more' and 'a lot'. <br> ( $\mathrm{NU}: 30+$ )Knows that a group of things changes in quantity when something is added or taken away. <br> (NU:30+)Uses some number names and number language spontaneously. <br> $\mathrm{NU}: 40+$ ) Uses some number names accurately in play. <br> ( $\mathrm{NU}: 40+$ )Recites numbers in order to 10. <br> ( $\mathrm{NU}: 40+$ )Knows that numbers identify how many objects are in a set. <br> ( $\mathrm{NU}: 40+$ )Sometimes matches numeral and quantity correctly. <br> (NU:40+)Shows curiosity about numbers by offering comments or asking questions. <br> (NU:40+)Compares two groups of objects, saying when they have the same number. <br> ( $\mathrm{NU}: 40+$ )Shows an interest in number problems. <br> ( $\mathrm{NU}: 40+$ )Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same. <br> ( $\mathrm{NU}: 40+$ )Shows an interest in numerals in the environment. <br> (NU:40+)Shows an interest in representing numbers. <br> (NU:40+)Realises not only objects, but anything can be counted, including steps, claps or jumps. | NU:50+)Recognise some numerals of personal significance. <br> ( $\mathrm{NU}: 50+$ )Counts up to three or four objects by saying one number name for each item <br> ( $N \mathrm{~N}: 50+$ ) Selects the correct numeral to represent up to 5 objects. <br> ( $\mathrm{NU}: 50+$ )Finds the total number of items in two groups by counting all of them. <br> ( $\mathrm{NU}: 50+$ ) Counts an irregular arrangement of up to ten objects. <br> ( $N$ U:50+)Counts objects to 10 , and beginning to count beyond 10. <br> ( $\mathrm{NU}: 50+$ )Counts out up to 6 objects from a larger group. <br> ( $N \mathrm{~N}: 50+$ )Beginning to represent numbers using fingers, marks on paper or pictures. <br> $\mathrm{NU}: \mathrm{D})$ Selects the correct numeral to represent up to 10 objects. <br> [NU:D) Estimates how many objects they can see and checks by counting them. <br> (NU:D) Uses the language of 'more' and 'fewer' to compare two sets of objects. <br> (NU:D) Says the number that is one more than a given number. <br> (NU:D) Finds one more or one less from a group of up to five objects, then ten objects. <br> [NU:D) In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting. <br> (NU:D) Records, using marks that they can interpret and explain. <br> (NU:D) Begins to identify own mathematical problems based on own interests and fascinations. |
| Week 2 |  |  |  |
| Week 3 |  |  |  |
| Week 4 |  |  |  |
| Week 5 | ASSESSMENT WEEK |  |  |
| Week 6 |  |  |  |
| Summer 2 | Topicminibeasts | Learning Journey Objectives <br> $\mathrm{N}:$ Emerging <br> $N:$ Developing | National Curriculum Objectives - Early Learning Goals <br> N: Secure <br> N: Exceeding/R: Developing |
| Week 1 |  |  |  |
| Week 2 |  |  |  |
| Week 3 |  |  |  |
| Week 4 |  |  |  |
| Week 5 |  |  |  |
| Week 6 |  |  |  |
| Week 7 |  |  |  |



| Autumn 2 | TopicCelebrations around the World | Learning Journey Objectives | Early Learning Goals |
| :---: | :---: | :---: | :---: |
| Week 1 | Recap / addressing topics arising from Autumn 1 and assessment |  |  |
| Week 2 | Number: Counting, estimating and comparing. | (NU:50+) Finds the total number of items in two groups by counting all of them. <br> (NU:50+) Counts out up to 6 objects from a larger group. | (NU:ELG) Counts reliably with numbers to 20. <br> (NU:ELG) Places numbers to 20 in order. <br> (NU:ELG) Says which number is one more or one less than a given number. |
| Week 3 |  | (NU:D) Selects the correct numeral to represent up to 10 objects. <br> (NU:D) Estimates how many objects they can see and checks by counting them. |  |
| Week 4 |  | (NU:D) Uses the language of 'more' and 'fewer' to compare two sets of objects. <br> (NU:D) Says the number that is one more than a given number. |  |
| Week 5 | Number: <br> Addition and Subtraction | (NU:D) Finds one more or one less from a group of up to five objects. <br> (NU:D) In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting. | (NU:ELG) Using quantities and objects, adds and subtracts two single-digit numbers and counts on or back to find the answer. |
| Week 6 |  | (NU:D) Finds one more or one less from a group of up to ten objects. <br> (NU:D) In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting. |  |
| Week 7 |  | (NU:D) Records, using marks that they can interpret and explain. <br> (NU:D) Begins to identify own mathematical problems based on own interests and fascinations. |  |

St Vincent's Catholic Primary School WHOLE SCHOOL MATHS CURRICULUM MAP Together Through Christ We Grow and Learn

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| Week 8 | Measurement: <br> Position | (SSM:D) Can describe their relative <br> position such as 'behind' | (SSM:ELG) Uses everyday language to talk about position. |


| Spring 1 | TopicDinosaurs | Learning Journey Objectives | Early Learning Goals/ Exceeding |
| :---: | :---: | :---: | :---: |
| Week 1 | Recap / addressing topics arising from Autumn 2 and assessment |  |  |
| Week 2 | Number, Place value, <br> Addition and subtraction | (NU:ELG) Counts reliably with numbers to 20. <br> (NU:ELG) Places numbers to 20 in order. | (NU:ELG) Using quantities and objects, adds and subtracts two single-digit numbers and counts on or back to find the answer. <br> (NU:Ex) Estimates a number of objects and check quantities by counting up to 20 . |
| Week 3 |  | (NU:ELG) Says which number is one more than a given number. <br> (NU:ELG) Using quantities and objects, adds two single-digit numbers and counts on to find the answer. |  |
| Week 4 |  | (NU:ELG) Says which number is one less than a given number. <br> (NU:ELG) Using quantities and objects, subtracts two single-digit numbers and counts back to find the answer. |  |
| Week 5 | Time | (SSM:50+) Uses everyday language related to time. <br> (SSM:D) Orders and sequences familiar events. | (NU:ELG) Uses everyday language to talk about time. |
| Week 6 |  | (SSM:50+) Uses everyday language related to time. <br> (SSM:D) Measures short periods of time in simple ways. |  |
| Spring 2 | Topic- Seasons | Learning Journey Objectives | Early Learning Goals / Exceeding |



| St Vincent's Catholic Primary School WHOLE SCHOOL MATHS CURRICULUM MAP |  |  | Together Through Christ We Grow and Learn |
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| YEAR 1 |  |  |  |
| Week | Topic | Learning Journey Objectives | National Curriculum Objectives |
| Autumn Term |  |  |  |
| Week 1 <br> Week 2 <br> Week 3 | Number and Place Value | - *I can count to and across 100, forwards and backwards, beginning with 0 or 1 , or from any given number. <br> - *I can read and write numbers to 100 in numerals. <br> - *I can count in multiples of twos, fives and tens. | - count to and across 100 , forwards and backwards, beginning with 0 or 1 , or from any given number <br> - count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens <br> - given a number, identify one more and one less <br> - identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least <br> - read and write numbers from 1 to 20 in numerals and words. |
| Week 4 Week 5 | Calculation | - *I can identify one more and one less than a given number. <br> - *I can represent and use number bonds and related subtraction facts within 20. <br> - I can add using concrete objects and/or pictorial representations. <br> - *I can subtract using concrete objects and/or pictorial representations. | - read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs <br> - represent and use number bonds and related subtraction facts within 20 <br> - add and subtract one-digit and two-digit numbers to 20 , including zero <br> - solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=$ $\qquad$ -9 . |
| Week 6 <br> Assessment week |  |  |  |
| Week 7 Enterprise Week | Money | - I can recognise and know the value of different denominations of coins and notes. | - Recognise and know the value of different denominations of coins and notes |
| Week 1 | Number and Place Value revision | - *I can count to and across 100, forwards and backwards, beginning with 0 or 1 , or from any given number. <br> - *I can read and write numbers to 100 in numerals. <br> - *I can count in multiples of twos, fives and tens. | - count to and across 100 , forwards and backwards, beginning with 0 or 1 , or from any given number <br> - count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens <br> - given a number, identify one more and one less <br> - identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least <br> - Read and write numbers from 1 to 20 in numerals and words. |
| Week 2 Week 3 | Calculation | - *I can identify one more and one less than a given number. <br> - *I can represent and use number bonds and related subtraction facts within 20. <br> - I can add using concrete objects and/or pictorial representations. <br> - *I can subtract using concrete objects and/or pictorial representations. <br> - I can use concrete objects, pictorial representation and arrays to solve multiplication and division questions in the 2, 5 and 10 times tables. | - read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs <br> - represent and use number bonds and related subtraction facts within 20 <br> - add and subtract one-digit and two-digit numbers to 20 , including zero <br> - solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=$ $\qquad$ -9 . <br> Multiplication and Division <br> - solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. |
| Week 4 <br> Week 5 | Fractions, Decimals and Percentages | - *I can recognise, find and name a half as one of two equal parts of an object, shape or quantity. | - Recognise, find and name a half as one of two equal parts of an object, shape or quantity <br> - Recognise , find and name a quarter as one of four equal parts of an object, shape or quantity. |
| Week 6 | Geometry | - *I can recognise and name common 2D shapes (e.g. rectangles, squares, circles and triangles) <br> - *I can recognise and name common 3D shapes (e.g. cuboids, cubes, pyramids and spheres) | - recognise and name common 2-D and 3-D shapes, including: <br> - 2-D shapes [for example, rectangles (including squares), circles and triangles] <br> - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. |
| Week 7 <br> Assessment Week |  |  |  |
| Week 8 | Recap / addressing topics arising from Autumn 1 and assessment |  |  |

## Spring Term

| Spring Term |  |  |
| :---: | :---: | :---: |
| Week 1 | Recap / addressing topics arising f |  |
| Week 2 | Geometry |  |
| Week 3 Week 4 | Measurement | - *I can describe and compare different quantities (e.g. length, mass and capacity/volume) <br> - *I can tell the time to the hour and half past the hour. <br> - *\| can draw the hands on a clock face to show o'clock and half past. |
| Week 5 |  |  |

- describe position, direction and movement, including whole, half, quarter and three quarter turns.
- compare, describe and solve practical problems for
- lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
mass/weight [for example, heavy/light, heavier than, lighter than]
- capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
- time [for example, quicker, slower, earlier, later]
- measure and begin to record the following:
- lengths and heights
- mass/weight
capacity and volume
- time (hours, minutes, seconds)
- sequence events in chronological order using language [for example, before and after next, first, today, yesterday, tomorrow, morning, afternoon and evening]
- recognise and use language relating to dates, including days of the week, weeks, months and years
- tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.


## Assessment Week

Half Term


- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
- given a number, identify one more and one less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words.
- read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20 , including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=\ldots \quad-9$

| Week 1 | Measurement (Review) | - *I can describe and compare different quantities (e.g. length, mass and capacity/volume) <br> - *I can tell the time to the hour and half past the hour. <br> *I can draw the hands on a clock face to show o'clock and half past. | - compare, describe and solve practical problems for: <br> - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] <br> - mass/weight [for example, heavy/light, heavier than, lighter than] <br> - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] <br> - time [for example, quicker, slower, earlier, later] <br> - measure and begin to record the following: <br> - lengths and heights <br> - mass/weight <br> - capacity and volume <br> - time (hours, minutes, seconds) <br> - sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] <br> - recognise and use language relating to dates, including days of the week, weeks, months and years <br> - tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. |
| :---: | :---: | :---: | :---: |
| Week 2 | Geometry (Review) | - *I can recognise and name common 2D shapes (e.g. rectangles, squares, circles and triangles) <br> - *I can recognise and name common 3D shapes (e.g. cuboids, cubes, pyramids and spheres) | - describe position, direction and movement, including whole, half, quarter and three-quarter turns. <br> - recognise and name common 2-D and 3-D shapes, including: <br> - 2-D shapes [for example, rectangles (including squares), circles and triangles] <br> - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. |
| Week 3 | Calculation (Review) | - *l can identify one more and one less than a given number. <br> - *I can represent and use number bonds and related subtraction facts within 20. <br> - I can add using concrete objects and/or pictorial representations. <br> - *I can subtract using concrete objects and/or pictorial representations. <br> - I can use concrete objects, pictorial representation and arrays to solve multiplication and division questions in the 2,5 and 10 times tables. | - read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs <br> - represent and use number bonds and related subtraction facts within 20 <br> - add and subtract one-digit and two-digit numbers to 20 , including zero <br> - solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=$ $\qquad$ -9 . |
| Week 4 | Fractions, Decimals and Percentages (Review) | - *I can recognise, find and name a half as one of two equal parts of an object, shape or quantity. | - recognise, find and name a half as one of two equal parts of an object, shape or quantity <br> - recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. |
| Week 5 | Revision Week |  |  |
| Week 1 Week 6 | Week 6 |  |  |
|  | Number and Place Value (Revisiting) | I can count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. <br> *I can read and write numbers to 100 in numerals. <br> - *I can count in multiples of twos, fives and tens. | - count to and across 100 , forwards and backwards, beginning with 0 or 1 , or from any given number <br> - count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens <br> - given a number, identify one more and one less <br> - identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least <br> - read and write numbers from 1 to 20 in numerals and words. |
| Week 2 | Calculation (Review) | - *l can identify one more and one less than a given number. <br> - *I can represent and use number bonds and related subtraction facts within 20. <br> - I can add using concrete objects and/or pictorial representations. <br> - *I can subtract using concrete objects and/or pictorial representations. | - read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs <br> - represent and use number bonds and related subtraction facts within 20 <br> - add and subtract one-digit and two-digit numbers to 20, including zero <br> - solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=$ $\qquad$ -9 . |


|  |  | I can use concrete objects, pictorial representation and arrays to solve multiplication and division questions in the 2,5 and 10 times tables. |
| :---: | :---: | :---: |
| Week 3 | Measurement (Review) | - *I can describe and compare different quantities (e.g. length, mass and capacity/volume) <br> - *I can tell the time to the hour and half past the hour. <br> *I can draw the hands on a clock face to show o'clock and half past. |
| Week 4 | Geometry (Review) | - *l can recognise and name common 2D shapes (e.g. rectangles, squares, circles and triangles) <br> *I can recognise and name common 3D shapes (e.g. cuboids, cubes, pyramids and spheres) |
| Week 5 | Fractions, Decimals and Percentages (Review) | *I can recognise, find and name a half as one of two equal parts of an object, shape or quantity. |

- compare, describe and solve practical problems for.
- lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
- mass/weight [for example, heavy/light, heavier than, lighter than]
- capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
- time [for example, quicker, slower, earlier, later]
- measure and begin to record the following:
- lengths and heights
- mass/weight
- capacity and volume
- time (hours, minutes, seconds)
- sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
- recognise and use language relating to dates, including days of the week, weeks, months and years
- tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
- describe position, direction and movement, including whole, half, quarter and three-quarter turns.
- recognise and name common 2-D and 3-D shapes, including
- 2-D shapes [for example, rectangles (including squares), circles and triangles]
- 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].
- 
- recognise, find and name a half as one of two equal parts of an object, shape or quantity
- recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Revision Week


| Week 3 | Measurement |
| :--- | :---: |
| Week 4 |  |
| Week 5 | Fractions, <br> Decimals and <br> Percentages |
| Week 6 |  |

${ }^{\text {® }}$ EXS
I can read scales in divisions of ones, twos, fives and tens GDS
can read scales where not all numbers on the scale are given and estimate points in between.
EXS
can identify $1 / 4,1 / 3,1 / 2,2 / 4,3 / 4$ of a number or shape, and know that all parts must be equal parts of the whole.

- choose and use appropriate standard units to estimate and measure length/height in any direction $(\mathrm{m} / \mathrm{cm})$; mass $(\mathrm{kg} / \mathrm{g})$; temperature $\left({ }^{\circ} \mathrm{C}\right)$; capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels -compare and order lengths, mass, volume/capacity and record the results using >, < and =
- •recognise, find, name and write fractions $1 / 3,1 / 4,2 / 4$ and $3 / 4$ of a length, shape, set of objects or quantity
- -write simple fractions, for example $1 / 2$ of $6=3$ and recognise the equivalence of $2 / 4$ and $1 / 2$


## Week 7

Assessment Week

## Spring Term

| Week 1 <br>  <br> Week 2 | Calculation (revision) | WTS <br> *I can add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required, explaining my method verbally, in pictures or using apparatus. <br> *I can count in twos, fives and tens from 0 and use this to solve problems. <br> EXS <br> *I can add and subtract any 2 two-digit numbers using an efficient strategy, explaining my method verbally, in pictures or using apparatus. <br> *I can recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating an understanding of commutativity as necessary. <br> GDS <br> *I can recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts. |  |
| :---: | :---: | :---: | :---: |
| Week 3 | Statistics | EXS <br> *। can read scales in divisions of ones, twos, fives and tense. <br> GDS <br> *I can read scales where not all numbers on the scale are given and estimate points in between. |  |
| Week 4 <br> Week 5 | Measurement | EXS <br> *I can read the time on a clock to the nearest 15 minutes. GDS <br> *। can read the time on a clock to the nearest 5 minutes. |  |

$\xrightarrow{\text { Addition and Subtraction }}$ solve problems with addition and subtraction

- using concrete objects and pictorial representations, including those involving numbers, quantities and measures
- applying their increasing knowledge of mental and written methods
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
- a two-digit number and ones
- a two-digit number and tens
- two two-digit numbers
- adding three one-digit numbers
- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.


## Multiplication and Division

- -recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers
- -calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication $(\times)$, division $(\div)$ and equals (=) signs
- •show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot
- •solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts
- interpret and construct simple pictograms, tally charts, block diagrams and simple tables
- ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
- ask and answer questions about totalling and comparing categorical data.
- •compare and sequence intervals of time
- •tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times - •know the number of minutes in an hour and the number of hours in a day.


## Week 6

## Assessment Week

Half Term

## mber and Place value

- count in steps of 2,3 , and 5 from 0 , and in 10 s from any number, forward and backward
- -recognise the place value of each digit in a two-digit number ( $10 \mathrm{~s}, 1 \mathrm{~s}$ )
- •identify, represent and estimate numbers using different representations, including the number line
- -compare and order numbers from 0 up to 100 ; use $<,>$ and = signs
- -read and write numbers to at least 100 in numerals and in words


|  |  |  |
| :--- | :---: | :---: |
| Week 5 | Fractions, <br> Decimals and <br> Percentages | EX <br> */ c <br> and |

## EXS

${ }^{-}$I can identify $1 / 4,1 / 3,1 / 2,2 / 4,3 / 4$ of a number or shape, and know that all parts must be equal parts of the whole.

- solve proble facts, including problems in contexts
recognise, find, name and write fractions $1 / 3,1 / 4,2 / 4$ and $3 / 4$ and of a length, shape, set of objects or quantity
- write simple fractions for example, $1 / 2$ of $6=3$ and recognise the equivalence of $2 / 4$ and $1 / 2$.


## Revision Week

## Week 7

## Assessment Week

Calculation (Review)
Number and
Place Value (Review)

Geometry

WTS
${ }^{*}$ I can read and write numbers in numerals up to 100 *I can partition a two-digit number into tens and ones to demonstrate an understanding of place value, using ${ }^{*}$ oncrete objects to help. and reason about associated facts. EXS
${ }^{*}$ I can read scales in divisions of ones, twos, fives and tense.
*। can partition any two-digit number into different combinations of tens and ones, explaining my thinking verbally, in pictures or using apparatus.
${ }^{1}$ I can recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships. GDS
*I can read scales where not all numbers on the scale are given and estimate points in between

* can use reasoning about numbers and relationships to solve more complex problems and explain my thinking.
*। can add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required, explaining my method verbally, in pictures or using apparatus.
*I can count in twos, fives and tens from 0 and use this to


## EXS

*I can add and subtract any 2 two-digit numbers using an efficient strategy, explaining my method verbally, in pictures or using apparatus.
${ }^{*}$ I can recall multiplication and division facts for 2,5 and 10 and use them to solve simple problems,
demonstrating an understanding of commutativity as

## GDS

*I can recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts.

## WTS

*। can name some common 2-D and 3-D shapes from a group of shapes or from pictures of the shapes, and EXS
*I can name and describe properties of 2-D and 3-D shapes, including number of sides, vertices, edges, faces and lines of symmetry
GDS
*I can describe similarities and difference of 2-D and 3-D
-count in steps of 2, 3, and 5 from 0 , and in 10s from any number, forward and backward

- $\cdot$ recognise the place value of each digit in a two-digit number (10s, 1s)
- •identify, represent and estimate numbers using different representations, including the number line
- -compare and order numbers from 0 up to 100; use <, > and = signs
- •read and write numbers to at least 100 in numerals and in words
-use place value and number facts to solve problems


## Addition and Subtractio

- solve problems with addition and subtraction
- using concrete objects and pictorial representations, including those involving numbers, quantities and measures

0 applying their increasing knowledge of mental and written methods

- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
- a two-digit number and ones
- a two-digit number and tens
- two two-digit numbers
adding three one-digit numbers
- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
Multiplication and Division
- •recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( x ), division ( $\div$ ) and equals (=) signs
- -show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another canno
-solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts


## Position and Direction

- order and arrange combinations of mathematical objects in patterns and sequences
- mosthematical vocabulary to describe position, direction and movement, including
terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise),


## Properties of Shapes

- identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line
- identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
- identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid]
- compare and sort common 2-D and 3-D shapes and everyday objects.

| Week 5 | Fractions, Decimals and Percentages (Review) | EXS <br> *I can identify $1 / 4,1 / 3,1 / 2,2 / 4,3 / 4$ of a number or shape, and know that all parts must be equal parts of the whole. | - recognise, find, name and write fractions $1 / 3,1 / 4,2 / 4$ and $3 / 4$ and of a length, shape, set of objects or quantity <br> - write simple fractions for example, $1 / 2$ of $6=3$ and recognise the equivalence of $2 / 4$ and $1 / 2$. |
| :---: | :---: | :---: | :---: |
| Week 6 Week 7 |  |  | Revision Weeks |



|  | Spring Term |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week 1 | Revision Week |  |  |  |  |  |  |  |  |
| Week 2 | Calculation | - *I can add mentally a three digit number and either ones, tens or hundreds. <br> - *I can subtract mentally a three digit number and either ones, tens or hundreds. <br> - *I can use a written method to add two numbers together with up to 3 digits <br> - *I can use a written method to subtract two numbers together with up to 3 digits. <br> - *I can recall and use my multiplication and division facts for the 3,4 and 8 times tables. <br> - *I can use a formal written method to work out multiplication calculations involving a one and two digit number (using times tables that I know). <br> - *I can use a formal written method to work out division calculations involving a one and two digit number (using times tables that I know). | Addition and Subtraction <br> - add and subtract numbers mentally, including: <br> - a three-digit number and ones <br> - a three-digit number and tens <br> - a three-digit number and hundreds <br> - add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction <br> - estimate the answer to a calculation and use inverse operations to check answers <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. <br> - add and subtract amounts of money to give change, using both $£$ and $p$ in practical contexts |  |  |  |  |  |  |
| Week 4 | Measurement | - *I can measure, compare, add and subtract lengths $(\mathrm{m} / \mathrm{cm} / \mathrm{mm})$; mass $(\mathrm{kg} / \mathrm{g})$; volume $/$ capacity $(1 / \mathrm{ml})$. | - •measure, compare, add and subtract: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass (kg/g); volume/capacity (1/ml) |  |  |  |  |  |  |
| Week 5 | Statistics | - *l can interpret and present data using bar charts, pictograms and tables. | - •interpret and present data using bar charts, pictograms and tables <br> - •solve one-step and two-step questions [for example 'How many more?' and 'How many fewer?'] using information presented in charts and pictograms and tables <br> Week 6 <br> Assessment Week |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Half Term |  |  |  |  |  |  |  |  |  |
| Week 1 <br>  <br> Week 2 | Fractions, Decimals and Percentages | - *I can count up and down in tenths. <br> - *I can divide one-digit numbers or quantities by 10 , and know that this is dividing quantities into tenths. <br> - *I can recognise, find and write fractions of a set of objects (including unit fractions and non-unit fractions with small denominators). <br> - *I can recognise and show, using diagrams, equivalent fractions with small denominators. | - count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 <br> - recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators <br> - recognise and show, using diagrams, equivalent fractions with small denominators <br> - add and subtract fractions with the same denominator within one whole [for example, $5 / 7+1 / 7=6 / 7$ ] <br> - compare and order unit fractions, and fractions with the same denominators |  |  |  |  |  |  |
| Week 3 <br>  <br>  <br> Week 4 | Geometry | - I can identify a right angle. <br> - *I can recognise how many right angles make a halfturn, three quarters-turn or complete turn. <br> - *I can identify whether angles are greater than or less than a right angle <br> - *I can compare different shapes with reference to its angles. | Position and Movement <br> - describe positions on a 2-D grid as coordinates in the first quadrant <br> - describe movements between positions as translations of a given unit to the left/right and up/down <br> - plot specified points and draw sides to complete a given polygon. <br> Perimeter <br> - measure the perimeter of simple 2-D shapes <br> Properties of shape <br> -draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them |  |  |  |  |  |  |
| Week 5 | Revision Week |  |  |  |  |  |  |  |  |

## Summer Term

| Week 1 | Number and Place Value (Review) | - *I can count from 0 in multiples of $4,8,50$ and 100. <br> - *I can work out if a given number is greater or less than 10 or 100. <br> - *I can recognise the place value of each digit in a three-digit number. *I can solve place problems involving number and place value. | - count from 0 in multiples of $4,8,50$ and 100 ; find 10 or 100 more or less than a given number <br> - recognise the place value of each digit in a three-digit number (hundreds, tens, ones) <br> - compare and order numbers up to 1000 <br> - identify, represent and estimate numbers using different representations <br> - read and write numbers up to 1000 in numerals and in words <br> - solve number problems and practical problems involving these ideas. |
| :---: | :---: | :---: | :---: |
| Week 2 <br> Week 3 | Calculation (Review) | - *I can add mentally a three digit number and either ones, tens or hundreds. <br> - *I can subtract mentally a three digit number and either ones, tens or hundreds. <br> - *I can use a written method to add two numbers together with up to 3 digits <br> - *I can use a written method to subtract two numbers together with up to 3 digits. <br> - *I can recall and use my multiplication and division facts for the 3, 4 and 8 times tables. <br> - *I can use a formal written method to work out multiplication calculations involving a one and two digit number (using times tables that I know). <br> - *I can use a formal written method to work out division calculations involving a one and two digit number (using times tables that I know). | - add and subtract numbers mentally, including: <br> - a three-digit number and ones <br> - a three-digit number and tens <br> - a three-digit number and hundreds <br> - add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction <br> - estimate the answer to a calculation and use inverse operations to check answers <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. <br> - add and subtract amounts of money to give change, using both $£$ and $p$ in practical contexts <br> - recall and use multiplication and division facts for the 3,4 and 8 multiplication tables <br> - write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods <br> - solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. |
| Week 4 | Fractions, Decimals and Percentages (Review) | - *I can count up and down in tenths. <br> - *I can divide one-digit numbers or quantities by 10 , and know that this is dividing quantities into tenths. <br> - *I can recognise, find and write fractions of a set of objects (including unit fractions and non-unit fractions with small denominators). <br> - *I can recognise and show, using diagrams, equivalent fractions with small denominators. | - count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 <br> - recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators <br> - recognise and show, using diagrams, equivalent fractions with small denominators <br> - add and subtract fractions with the same denominator within one whole [for example, $5 / 7+1 / 7=6 / 7$ ] <br> - compare and order unit fractions, and fractions with the same denominators |
| Week 5 | Revision Week |  |  |
| Week 2 | Geometry (Review) | - I can identify a right angle. <br> - *I can recognise how many right angles make a half-turn, three quarters-turn or complete turn. <br> - *I can identify whether angles are greater than or less than a right angle <br> - *I can compare different shapes with reference to its angles. | Position and Movement <br> - describe positions on a 2-D grid as coordinates in the first quadrant <br> - describe movements between positions as translations of a given unit to the left/right and up/down <br> - plot specified points and draw sides to complete a given polygon. <br> Perimeter <br> - measure the perimeter of simple 2-D shapes <br> Properties of shape <br> -draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them |
| Week 3 | Measurement (Review) | *I can measure, compare, add and subtract lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass ( $\mathrm{kg} / \mathrm{g}$ ); volume/capacity ( $1 / \mathrm{ml}$ ). *I can tell and write the time from an analogue clock, and 12 -hour and 24 -hour clocks. | - •measure, compare, add and subtract: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass ( $\mathrm{kg} / \mathrm{g}$ ); volume $/$ capacity ( $1 / \mathrm{ml}$ ) <br> Time <br> - tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 -hour and 24 -hour clocks <br> -estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight <br> $\cdot$ know the number of seconds in a minute and the number of days in each month, year and leap year <br> -compare durations of events [for example, to calculate the time taken by particular events or tasks] |
| Week 4 | Calculation | - *I can add mentally a three digit number and either ones, tens or hundreds. <br> - *I can subtract mentally a three digit number and either ones, tens or hundreds. <br> - *I can use a written method to add two numbers together with up to 3 digits | Addition and Subtraction <br> - add and subtract numbers mentally, including: <br> - a three-digit number and ones <br> - a three-digit number and tens <br> - a three-digit number and hundreds <br> - add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction |

- *I can use a written method to subtract two numbers together with up to 3 digits.
- *I can recall and use my multiplication and division facts for the 3,4 and 8 times tables.
- *I can use a formal written method to work out multiplication calculations involving a one and two digit number (using times tables that I know).
*I can use a formal written method to work out division calculations involving a one and two digit
number (using times tables that I know).
- *I can count up and down in tenths.
- *I can divide one-digit numbers or quantities by 10 , and know that this is quantities by 10, and know tha
dividing quantities into tenths.
- *I can recognise, find and write fractions of a set of objects (including unit fractions and non-unit fractions with small denominators). *I can recognise and show, using diagrams, equivalent fractions with small denominators.
- estimate the answer to a calculation and use inverse operations to check answers
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
- add and subtract amounts of money to give change, using both $£$ and $p$ in practical contexts


## Multiplication and Division

recall and use multiplication and division facts for the 3,4 and 8 multiplication tables
$\cdot$ write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods -solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects

- count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
- recognise and show, using diagrams, equivalent fractions with small denominators
- add and subtract fractions with the same denominator within one whole [for example, $5 / 7+1 / 7=6 / 7$ ]
- compare and order unit fractions, and fractions with the same denominators

| St Vincent's Catholic Primary School WHOLE SCHOOL MATHS CURRICULUM MAP |  |  | Together Through Christ We Grow and Learn |
| :---: | :---: | :---: | :---: |
| YEAR 4 |  |  |  |
| Week | Topic | Learning Journey Objectives | National Curriculum Objectives |
| Autumn Term |  |  |  |
| Week 1 | Number and Place Value | - *I can count in multiples of 6, 7, 9, 25 and 1,000. <br> - *I can count backwards through zero to include negative numbers. <br> - *I can order and compare numbers beyond 1,000. <br> - *I can round any number to the nearest 10,100 or 1,000 . <br> - I can read Roman numerals to 100 (I to C) | - .Count in multiples of 6, 7, 9, 25 and 1,000 |
| Week 2 |  |  | - -count backwards through 0 to include negative numbers <br> - -recognise the place value of each digiti in a four-digit number ( $1,000 \mathrm{~s}, 100 \mathrm{~s}, 10 \mathrm{~s}$, and 1 s ) <br> - -order and compare numbers beyond 1,000 <br> - - identify, represent and estimate numbers using different representations <br> - round any number to the nearest 10,100 or 1,000 <br> - -solve number and practical problems that involve all of the above and with increasingly large positive numbers <br> -read Roman numerals to 100 ( I to C ) and know that over time, the numeral system changed to include the concept of 0 and place value |
| Week 3 | Calculation | - *I can use a written method for addition and subtraction with increasingly large whole numbers. <br> - *I can solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why. <br> - *I can recall all multiplication and division facts for multiplication tables up to $12 \times 12$ with accuracy and speed. <br> - *I can use written methods for multiplication for three and two-digit numbers by 1 one-digit number. <br> - *I can use written methods for division for three and two-digit numbers by 1 one-digit number. <br> - *I can solve multiplication and division two-step problems in context, deciding which operations and methods to use and why. | Addition and Subtraction <br> -add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <br> -estimate and use inverse operations to check answers to a calculation <br> -solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why <br> Multiplication and Division <br> -recall multiplication and division facts for multiplication tables up to $12 \times 12$ <br> -use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and <br> 1 ; dividing by 1 ; multiplying together 3 numbers <br> -recognise and use factor pairs and commutativity in mental calculations <br> -multiply two-digit and three-digit numbers by a one-digit number using formal written layout <br> $\cdot$ solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as nobjects are connected to m objects |
| Week 4 |  |  |  |
| Week 5 |  |  |  |
|  |  |  |  |
| Week 6Assessment week |  |  |  |
| Week 7 Enterprise Week | Money | - I can estimate, compare and calculate different measures, including money in pounds and pence. | - estimate, compare and calculate different measures, including money in pounds and pence |
| Half Term |  |  |  |
| Week 1 | Recap / addressing topics arising from Autumn 1 and assessment |  |  |
| Week 2 | Fractions, Decimals and Percentages | - *। can recognise and show, using diagrams, families of common equivalent fractions. <br> - *I can count up and down in hundredth. <br> - *I can divide one-digit numbers or quantities by 100 and divide tenths by 10 , and know that this is dividing quantities into hundredths. <br> - *I can round decimals with one decimal place to the nearest whole number. <br> - *I can solve a range of problems including those with simple fractions and decimal place value. | -recognise and show, using diagrams, families of common equivalent fractions <br> -count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 <br> -solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number -add and subtract fractions with the same denominator <br> -recognise and write decimal equivalents of any number of tenths or hundreds -recognise and write decimal equivalents to $1 / 4,1 / 2,3 / 4$ <br> -find the effect of dividing a one- or two-digit number by 10 and 100 , identifying the value of the digits in the answer as ones, tenths and hundredths -round decimals with 1 decimal place to the nearest whole number -compare numbers with the same number of decimal places up to 2 decimal places -solve simple measure and money problems involving fractions and decimals to 2 decimal places |
| Week 3 |  |  |  |
| Week 4 | Geometry (properties of shapes) | - *I can compare and classify geometric shapes (including quadrilaterals and triangles) based on their properties and sizes. <br> - *I can draw shapes with accuracy and use their properties to describe them. <br> - *I can identify lines of symmetry in two dimensional shapes presented in different orientations | - •compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes <br> - •identify acute and obtuse angles and compare and order angles up to 2 right angles by size <br> - -identify lines of symmetry in 2-D shapes presented in different orientations <br> - •complete a simple symmetric figure with respect to a specific line of symmetry |


| Week 5 |
| :--- |
| Week 6 |
|  |
| Week 8 |

Measurement | *I can co |
| :--- |
| minute) |

*I can use measuring equipment accurately I can estimate, compare and calculate different measures, including money in pounds and pence.

## Week 7

Assessment Week
Recap / addressing topics arising from Autumn 1 and assessment

## Spring Term

| Week 1 | Recap / addressing topics arising from Autumn 1 and assessment |  |  |
| :---: | :---: | :---: | :---: |
| Week 2 | Calculation | - *I can recall all multiplication and division facts for multiplication tables up to $12 \times 12$ with accuracy and speed. <br> - *I can use written methods for multiplication for three and two-digit numbers by 1 one-digit number. <br> - *I can use written methods for division for three and two-digit numbers by 1 one-digit number. <br> - *I can solve multiplication and division two-step problems in context, deciding which operations and methods to use and why. | Addition and Subtraction <br> -add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <br> -estimate and use inverse operations to check answers to a calculation <br> -solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why <br> Multiplication and Division <br> -recall multiplication and division facts for multiplication tables up to $12 \times 12$ <br> $\cdot$ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together 3 numbers <br> -recognise and use factor pairs and commutativity in mental calculations <br> -multiply two-digit and three-digit numbers by a one-digit number using formal written layout <br> -solve problems involving multiplying and adding, including using the distributive law to multiply twodigit numbers by 1 digit, integer scaling problems and harder correspondence problems such as $n$ objects are connected to m objects |
| Week 4 | Measurement (Time) |  | - read, write and convert time between analogue and digital 12- and 24 -hour clocks <br> - solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days |
| Week 5 | Statistics | *I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. | - •interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs <br> - •solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs |
| Week 6 Assessment Week |  |  |  |
| Half Term |  |  |  |
| Week 1 <br> Week 2 | Fractions, Decimals and Percentages | - *I can recognise and show, using diagrams, families of common equivalent fractions. <br> - *I can count up and down in hundredth. <br> - *I can divide one-digit numbers or quantities by 100 and divide tenths by 10 , and know that this is dividing quantities into hundredths. <br> - *I can round decimals with one decimal place to the nearest whole number. <br> - *I can solve a range of problems including those with simple fractions and decimal place value.* can read, write, order and compare numbers with up to three decimal places. <br> - I can add and subtract decimal numbers. <br> - *I can solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4.1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25 . | - recognise and show, using diagrams, families of common equivalent fractions <br> - count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 <br> - solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number <br> - add and subtract fractions with the same denominator <br> - recognise and write decimal equivalents of any number of tenths or hundreds <br> - recognise and write decimal equivalents to , , <br> - find the effect of dividing a one- or two-digit number by 10 and 100 , identifying the value of the digits in the answer as ones, tenths and hundredths <br> - round decimals with 1 decimal place to the nearest whole number <br> - compare numbers with the same number of decimal places up to 2 decimal places <br> - solve simple measure and money problems involving fractions and decimals to 2 decimal places |
| Week 3 | Geometry | - I can measure and calculate the perimeter of a rectilinear figures (including squares) in cm and m . <br> - *I can plot specified points and draw sides to complete a given polygon. | - -describe positions on a 2-D grid as coordinates in the first quadrant <br> - -describe movements between positions as translations of a given unit to the left/right and up/down |



## Summer Term

| Week 1 | Number and <br> Place Value <br> (Review) |
| :--- | :---: |
|  |  |

- I can count in multiples of 6, 7, 9, 25 and 1,000.
- can count backwards through zero to include negative numbers.
- *I can order and compare numbers beyond 1,000.
- *I can round any number to the neares 10,100 or 1,000 I can read Roman numerals to 100 (I to C)
- *I can use a written method for addition and subtraction with increasingly large whole numbers.
- *I can solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why
- *I can recall all multiplication and division facts for multiplication tables up to $12 \times 12$ with accuracy and speed.
- *I can use written methods for multiplication for three and two-digit numbers by 1 one-digit number
- *I can use written methods for division for three and two-digit numbers by 1 one-digit number.
- *I can solve multiplication and division two-step problems in context, deciding which operations and methods to use which why.
- *I can recognise and show, using diagrams, families of common equivalent fractions.
- *I can count up and down in hundredth
- *I can divide one-digit numbers or quantities by 100 and divide tenths by 10 , and know that this is dividing quantities into hundredths.
- *I can round decimals with one decima place to the nearest whole number.
- *l can solve a range of problems including those with simple fractions and decimal place value.*। can read, write, order and compare numbers with up to three decimal places.
- I can add and subtract decima numbers
*I can solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4$ denominator of a multiple of 10 with a
-count in multiples of 6, 7, 9, 25 and 1,000
- -count backwards through 0 to include negative numbers
- $\cdot$ recognise the place value of each digit in a four-digit number ( $1,000 \mathrm{~s}, 100 \mathrm{~s}, 10 \mathrm{~s}$, and 1 s )
- •order and compare numbers beyond 1,000
- -identify, represent and estimate numbers using different representations
- •round any number to the nearest 10,100 or 1,000
- •solve number and practical problems that involve all of the above and with increasingly large positive numbers read Roman numerals to 100 ( to C) and know that over time, the numeral system changed to include the concept of 0 and place value


## Addition and Subtraction

-add and subtract numbers with up to 4 digits using the formal written methods of columnar 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 and methods to use and why

## Multiplication and Division

-recall multiplication and division facts for multiplication tables up to $12 \times 12$
-use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together numbers
-recognise and use factor pairs and commutativity in mental calculations
-multiply two-digit and three-digit numbers by a one-digit number using formal written layout
-solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects

- recognise and show, using diagrams, families of common equivalent fractions
- count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10
- solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
- add and subtract fractions with the same denominator
- recognise and write decimal equivalents of any number of tenths or hundreds
- recognise and write decimal equivalents to
- find the effect of dividing a one- or two-digit number by 10 and 100 , identifying the value of the digits in the answer as ones, tenths and hundredths
- round decimals with 1 decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to 2 decimal places
- solve simple measure and money problems involving fractions and decimals to 2 decimal places


## Week 6 <br> <br> Assessment Week

 <br> <br> Assessment Week}Measurement
${ }^{\text {I }}$ can convert between different units o measure (e.g. km to m , hour to minute)
*I can use measuring equipment accurately I can estimate, compare and calculate different measures, including money in pounds and pence.
*I can compare and classify geometric shapes (including quadrilaterals and triangles) based on their properties and sizes.

- *I can draw shapes with accuracy and use their properties to describe them. *I can identify lines of symmetry in two dimensional shapes presented in different orientations.
- I can measure and calculate the perimeter of a rectilinear figures *I can plot specified points and draw sides to complete a given polygon.
- *I can use a written method for addition and subtraction with increasingly large whole numbers.
- *I can solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why
-     * can recall all multiplication and division facts for multiplication tables up to $12 \times 12$ with accuracy and speed.
- *I can use written methods for multiplication for three and two-digit numbers by 1 one-digit number
- *I can use written methods for division for three and two-digit numbers by 1 one-digit number
*I can solve multiplication and division two-step problems in context, deciding which operations and methods to use and why.
- *I can recognise and show, using diagrams, families of common equivalent fractions
-     * can count up and down in hundredth
- *I can divide one-digit numbers or quantities by 100 and divide tenths by 10 , and know that this is dividing quantities into hundredths.
- *l can round decimals with one decimal place to the nearest whole number.
- *I can solve a range of problems including those with simple fractions and decimal place value.. ${ }^{*}$ can read, write, order and compare numbers with up to three decimal places.
- can add and subtract decima numbers.
*l can solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4$.
-convert between different units of measure [for example, kilometre to metre; hour to minute]
-measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
- find the area of rectilinear shapes by counting square
- solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days
- •compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
- •identify acute and obtuse angles and compare and order angles up to 2 right angles by size
-     - identify lines of symmetry in 2-D shapes presented in different orientations
-complete a simple symmetric figure with respect to a specific line of symmetry
- -describe positions on a 2-D grid as coordinates in the first quadrant
- -describe movements between positions as translations of a given unit to the left/right and up/down -plot specified points and draw sides to complete a given polygon


## Addition and Subtraction

add and subtract numbers with up to 4 digits using the formal written methods of columnar 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 and methods to use and why

## Multiplication and Division

recall multiplication and division facts for multiplication tables up to $12 \times 12$
$\cdot$ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together 3 numbers
-recognise and use factor pairs and commutativity in mental calculations
-multiply two-digit and three-digit numbers by a one-digit number using formal written layout
-solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects

- recognise and show, using diagrams, families of common equivalent fractions
- count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10
- solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
- add and subtract fractions with the same denominator
- recognise and write decimal equivalents of any number of tenths or hundreds
- recognise and write decimal equivalents to
- find the effect of dividing a one- or two-digit number by 10 and 100 , identifying the value of the digits in the answer as ones, tenths and hundredths
- round decimals with 1 decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to 2 decimal places
- solve simple measure and money problems involving fractions and decimals to 2 decimal places

\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{3}{|l|}{St Vincent's Catholic Primary School WHOLE SCHOOL MATHS CURRICULUM MAP} \& Together Through Christ We Grow and Learn <br>
\hline \multicolumn{4}{|c|}{YEAR 5} <br>
\hline Week \& Topic \& Learning Journey Objectives \& National Curriculum Objectives <br>
\hline \multicolumn{4}{|c|}{Autumn Term} <br>
\hline Week 1

Week 2 \& Number and Place Value \& \begin{tabular}{l}
- *I can read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. <br>
- *I can read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. <br>
- I can solve real life problems involving ordering negative numbers <br>
- I can read Roman numerals to $1000(\mathrm{I}-\mathrm{M})$ and recognise years written in Roman numerals.

 \& 

- •read, write, order and compare numbers to at least $1,000,000$ and determine the value of each digit <br>
- •count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 <br>
- •interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 <br>
- $\cdot$ round any number up to $1,000,000$ to the nearest $10,100,1,000,10,000$ and 100,000 <br>
- •solve number problems and practical problems that involve all of the above <br>
- •read Roman numerals to $1,000(\mathrm{M})$ and recognise years written in Roman numerals
\end{tabular} <br>

\hline Week 3 \& Calculation \& | - *I can add whole numbers with more than four digits, including using formal written methods. |
| :--- |
| - *I can subtract whole numbers with more than four digits, including using formal written methods |
| - I can solve real life problems involving addition and subtraction. |
| - *I can add and subtract numbers mentally with increasingly large numbers (e.g. $12,462-2,300=10,162$ ) |
| - I can use written methods for multiplication for up to four digit | \& | Addition and Subtraction |
| :--- |
| - •add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) |
| - •add and subtract numbers mentally with increasingly large numbers |
| - •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 and methods to use and why | <br>


\hline | Week 4 |
| :--- |
|  |
|  |
|  |
| Week 5 | \& \& | numbers by a one or two-digit number. |
| :--- |
| - I can use written methods for division for up to four digit numbers by a one digit number. |
| - *I can solve problems involving multiplication and division, including using a knowledge of factors and multiples, squares and cubes. | \& | Multiplication and Division |
| :--- |
| -identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers |
| -know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers -establish whether a number up to 100 is prime and recall prime numbers up to 19 |
| -multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers |
| -multiply and divide numbers mentally, drawing upon known facts |
| -divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context |
| -multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 |
| -recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ( ${ }^{3}$ ) -solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes |
| -solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign |
| -solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates | <br>


\hline \multicolumn{4}{|c|}{| Week 6 |
| :--- |
| Assessment week/Recap week |} <br>


\hline | Week 7 |
| :--- |
| Enterprise Week | \& Money \& \& <br>

\hline \multicolumn{4}{|l|}{( Half Term} <br>

\hline Week 1 \& Recap/Geometry \& | - *I can draw given angles and measure them in degrees. |
| :--- |
| - I can classify shapes based on their geometric properties and use the vocabulary needed to describe them (e.g. sorting into a Carroll diagram and explaining my reasoning) |
| - I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles. | \& | Properties of Shapes |
| :--- |
| - •identify 3-D shapes, including cubes and other cuboids, from 2-D representations |
| - •know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles |
| - -draw given angles, and measure them in degrees ( ${ }^{\circ}$ ) |
| - -identify: •angles at a point and 1 whole turn (total $360^{\circ}$ ) |
| - -angles at a point on a straight line and half a turn (total $180^{\circ}$ ) |
| - -other multiples of $90^{\circ}$ |
| - •use the properties of rectangles to deduce related facts and find missing lengths and angles |
| - •distinguish between regular and irregular polygons based on reasoning about equal sides and angles |
| Position and Direction |
| - $\cdot$ dentify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed | <br>

\hline
\end{tabular}

I can add whole numbers with more than four digits, including using formal written methods

- *I can subtract whole numbers with more than four digits, including using formal written methods
- I can solve real life problems involving addition and subtraction.
- *I can add and subtract numbers mentally with increasingly large numbers (e.g. 12,462-2,300 = 10,162)
- I can use written methods for multiplication for up to four digit
numbers by a one or two-digit number.
- I can use written methods for division for up to four digit numbers by
- al
${ }^{*}$ I can solve problems involving multiplication and division, including using a knowledge of factors and multiples, squares and cubes.
- *I can solve problems involving multiplication, including scaling by simple fractions and problems involving simple rates. (e.g. what is half more than 12?)
*। can solve problems involving division, including scaling by simple fractions and problems involving simple rates. (e.g. what is a quarter less than 16?)
- I can compare and order fractions whose denominators are all multiples of the same number.
- *I can read and write decimal numbers as fractions (e.g. $0.71=$ 71/100)
- *I can read, write, order and compare numbers with up to three decimal places.
- I can add and subtract decimal numbers.
-     * can solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4.1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25 .
*I can convert between different units of metric measure (e.g. km / m, cm / m, $\mathrm{cm} / \mathrm{mm}, \mathrm{g} / \mathrm{kg}, \mathrm{l} / \mathrm{ml}$ )
I can measure and calculate the perimeter of composite rectilinear shapes (made up of 2 or more rectangles) in cm and m .
* I can calculate and compare the area of rectangles (including squares), and use standard units, $\mathrm{cm}^{2}$ and $\mathrm{m}^{2}$
I can solve problems involving converting between units of time. I can use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation.


## Addition and Subtraction

-add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

- -add and subtract numbers mentally with increasingly large numbers
- -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 and methods to use and why


## Multiplicalion and Dision

and factors, including finding all factor pairs of a number, and common factors of 2 numbers
know and use the vocabulary of prime numbers, prime factors and composite (non -establish whether a number up to 100 is prime and recall prime numbers up to 19 -multiply numbers up to 4 digits to 100 is prime and recall prime numbers up to 19 long multiplication for two-digit numbers
-multiply and divide numbers mentally, drawing upon known facts
-divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context
-multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000
$\cdot r e c o g n i s e ~ a n d ~ u s e ~ s q u a r e ~ n u m b e r s ~ a n d ~ c u b e ~ n u m b e r s, ~ a n d ~ t h e ~ n o t a t i o n ~ f o r ~ s q u a r e d ~(~(~) ~ a n d ~ c u b e d ~(~(~ 3 ~) ~$ -solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes

- solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
-solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates
- -compare and order fractions whose denominators are all multiples of the same number
- •identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
- •recognise mixed numbers and improper fractions and convert from one form to the other and
write mathematical statements $>1$ as a mixed number [for example, $2 / 5+4 / 5=6 / 5=11 / 5$ ]
- $\cdot$ add and subtract fractions with the same denominator, and denominators that are multiples of the
same number
-multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
-read and write decimal numbers as fractions [for example, $0.71=71 / 100$
- -recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents - •round decimals with 2 decimal places to the nearest whole number and to 1 decimal place
- •read, write, order and compare numbers with up to 3 decimal places
- -solve problems involving number up to 3 decimal places
- -recognise the per cent symbol (\%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction
- •solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4,1 / 5$ -solve problems which require knowing percentage and decimal equivalen
$2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25
- $\cdot$ convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]
- •understand and use approximate equivalences between metric units and common imperial units -understand inches, pounds and pints
- -measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- •calculate and compare the area of rectangles (including squares), including using standard units square centimetres $\left(\mathrm{cm}^{2}\right)$ and square metres ( $\mathrm{m}^{2}$ ), and estimate the area of irregular shapes
- -estimate volume [for example, using $1 \mathrm{~cm}^{3}$ blocks to build cuboids (including cubes)] and - estimate volume [for example, using
- -solve problems involving converting between units of time
- •use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling


## Spring Term

| Week 1 | Geometry |
| :---: | :---: |
| Week 2 |  |
| Week 3 | Statistics |
| Week 4 | Measurement |

- I can classify shapes based on their geometric properties and use the vocabulary needed to describe them (e.g. sorting into a Carroll diagram and explaining my reasoning
- I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Properties of Shapes

- •identify 3-D shapes, including cubes and other cuboids, from 2-D representations
- •know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- -draw given angles, and measure them in degrees ( ${ }^{\circ}$ )
- -identify: •angles at a point and 1 whole turn (total $360^{\circ}$ )
- -angles at a point on a straight line and half a turn (total $180^{\circ}$ )
- -other multiples of $90^{\circ}$
- •use the properties of rectangles to deduce related facts and find missing lengths and angles
- •distinguish between regular and irregular polygons based on reasoning about equal sides and angles Position and Direction
-identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed
-solve comparison, sum and difference problems using information presented in a line graph
-complete, read and interpret information in tables, including timetables
- •convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]
- •understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- -measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- calculate and compare the area of rectangles (including squares), including using standard units,
square centimetres $\left(\mathrm{cm}^{2}\right)$ and square metres $\left(\mathrm{m}^{2}\right)$, and estimate the area of irregular shapes
- estimate volume [for example, using $1 \mathrm{~cm}^{3}$ blocks to build cuboids (including cubes)] and capacity [for example, using water]
- solve problems involving converting between units of time
use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling


## Assessment Revision

## Week 6

Assessment Week

## Half Term

## Week 1

Fractions, Decimals and Percentages

- *I can solve problems involving multiplication, including scaling by simple fractions and problems involving simple rates. (e.g. what is half more than 12?)
-     * can solve problems involving division, including scaling by simple fractions and problems involving simple rates. (e.g. what is a quarter less than 16?)
- I can compare and order fractions whose denominators are all multiples of the same number
- *I can read and write decimal numbers as fractions (e.g. $0.71=71 / 100$ )
- *I can read, write, order and compare numbers with up to three decima places
- I can add and subtract decimal numbers.
*I can solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4.1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25
*     * can add whole numbers with more than four digits, including using formal written methods
- *I can subtract whole numbers with more than four digits, including using formal written methods
- I can solve real life problems involving addition and subtraction.
*I can add and subtract numbers mentally with increasingly large numbers (e.g. $12,462-2,300=10,162$ )
-compare and order fractions whose denominators are all multiples of the same number
- -identify, name and write equivalent fractions of a given fraction, represented visually, including tenth and hundredths
- -recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $2 / 5+4 / 5=6 / 5=11 / 5$ ]
- add and subtract fractions with the same denominator, and denominators that are multiples of the same number
- •multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- -read and write decimal numbers as fractions [for example, $0.71=71 / 100$ ]
- -recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- •round decimals with 2 decimal places to the nearest whole number and to 1 decimal place
- •read, write, order and compare numbers with up to 3 decimal places
- •solve problems involving number up to 3 decimal places
-recognise the per cent symbol (\%) and understand that per cent relates to 'number of parts per 100 and write percentages as a fraction with denominator 100, and as a decimal fraction
-solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4,1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25


## Addition and Subtraction

- •add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- -add and subtract numbers mentally with increasingly large numbers
- •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 and methods to use and why
- I can use written methods for multiplication for up to four digit numbers by
a one or two-digit number
- I can use written methods for division for up to four digit numbers by a
one digit number.
- *I can solve problems involving multiplication and division, including using a knowledge of factors and multiples, squares and cubes.


## Multiplication and Division

oidentify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers -know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers -establish whether a number up to 100 is prime and recall prime numbers up to 1
-multiply numbers up to 4 digits by multiplication for
mentally, drawing upon known facts
-divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context
-multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 -recognise and use square numbers and cube numbers, and the notation for squared $\left(^{2}\right.$ ) and cubed $\left(^{3}\right)$ -solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes
-solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
-solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates

Week 6

| Summer Term |  |  |  |
| :---: | :---: | :---: | :---: |
| Week 1 | Number and Place Value (Review) | - *I can read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. <br> - *I can read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. <br> - I can solve real life problems involving ordering negative numbers <br> I can read Roman numerals to $1000(\mathrm{I}-\mathrm{M})$ and recognise years written in Roman numerals. | - •read, write, order and compare numbers to at least $1,000,000$ and determine the value of each digit <br> - •count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 <br> - •interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 <br> - •round any number up to $1,000,000$ to the nearest $10,100,1,000,10,000$ and 100,000 <br> - •solve number problems and practical problems that involve all of the above -read Roman numerals to $1,000(\mathrm{M})$ and recognise years written in Roman numerals |
| Week 2 | Calculation (Review) | - *I can add whole numbers with more than four digits, including using formal written methods. <br> - *I can subtract whole numbers with more than four digits, including using formal written methods <br> - I can solve real life problems involving addition and subtraction. <br> - *I can add and subtract numbers mentally with increasingly large numbers (e.g. 12,462-2,300 $=10,162$ ) <br> - I can use written methods for multiplication for up to four digit numbers by a one or two-digit number. <br> - I can use written methods for division for up to four digit numbers by a one digit number. <br> *I can solve problems involving multiplication and division, including using a knowledge of factors and multiples, squares and cubes. | Addition and Subtraction <br> - •add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) <br> - •add and subtract numbers mentally with increasingly large numbers <br> - •use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy <br> - •solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <br> Multiplication and Division <br> -identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers <br> -know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers <br> -establish whether a number up to 100 is prime and recall prime numbers up to 19 <br> -multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers <br> -multiply and divide numbers mentally, drawing upon known facts <br> -divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context <br> -multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 <br> -recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ( ${ }^{3}$ ) <br> -solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes <br> -solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <br> -solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates |


| Week 3 | Fractions, <br> Decimals and <br> Percentages <br> (Review) |
| :--- | :--- |

- *I can solve problems involving multiplication, including scaling by simple fractions and problems involving simple rates. (e.g. what is half more than 12?)
- *I can solve problems involving division, including scaling by simple fractions and problems involving simple rates. (e.g. what is a quarter less than 16?)
- I can compare and order fractions whose denominators are all multiples of the same number.
- *I can read and write decimal numbers as fractions (e.g. 0.71 = 71/100)
- *I can read, write, order and compare numbers with up to three decimal places.
- I can add and subtract decimal numbers.
*I can solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4.1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25
-compare and order fractions whose denominators are all multiples of the same number
- •identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
- recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $>1$ as a mixed number [for example, $2 / 5+4 / 5=6 / 5=11 / 5$ ]
- -add and subtract fractions with the same denominator, and denominators that are multiples of the same number
- •multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- -read and write decimal numbers as fractions [for example, $0.71=71 / 100$ ]
- -recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- •round decimals with 2 decimal places to the nearest whole number and to 1 decimal place
- -read, write, order and compare numbers with up to 3 decimal places
- -solve problems involving number up to 3 decimal places
- -recognise the per cent symbol (\%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction with a denominator of a multiple of 10 or 25


## Revision Week

## Week 6

## Assessment Week

| Week 1 | Geometry (Review) | - *I can draw given angles and measure them in degrees. <br> - I can classify shapes based on their geometric properties and use the vocabulary needed to describe them (e.g. sorting into a Carroll diagram and explaining my reasoning) I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles. |
| :---: | :---: | :---: |
| Week 2 | Measurement | - *I can convert between different units of metric measure (e.g. $\mathrm{km} / \mathrm{m}, \mathrm{cm} / \mathrm{m}, \mathrm{cm} / \mathrm{mm}, \mathrm{g} / \mathrm{kg}, \mathrm{l} / \mathrm{ml}$ ) <br> - *I can measure and calculate the perimeter of composite rectilinear shapes (made up of 2 or more rectangles) in cm and $m$. <br> - *I can calculate and compare the area of rectangles (including squares), and use standard units, $\mathrm{cm}^{2}$ and $\mathrm{m}^{2}$ <br> - I can solve problems involving converting between units of time. <br> I can use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation. |
| Week 3 | Statistics (Review) | *I can complete, read and interpret information in tables, including timetables. |

- id of Shapes
-identify 3-D shapes, including cubes and other cuboids, from 2-D representations
- $k n o w$ angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- -draw given angles, and measure them in degrees $\left({ }^{\circ}\right)$
- identify: $\cdot$ angles at a point and 1 whole turn (total $360^{\circ}$ )
- -angles at a point on a straight line and half a turn (total $180^{\circ}$ )
- -other multiples of $90^{\circ}$
- •use the properties of rectangles to deduce related facts and find missing lengths and angles
- •distinguish between regular and irregular polygons based on reasoning about equal sides and angles Position and Direction
-identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed
- -convert between different units of metric measure [for example, kilometre and metre; centimetre and metre;
centimetre and millimetre; gram and kilogram; litre and millilitre]
-understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- -measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
-calculate and compare the area of rectangles (including squares), including using standard units, square centimetres ) and square metres $\left(\mathrm{m}^{2}\right)$, and estimate the area of irregular shapes
-estimate volume [for example, using $1 \mathrm{~cm}^{3}$ blocks to build cuboids (including cubes)] and capacity [for example, using water]
- •solve problems involving converting between units of time
-use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling
- •solve comparison, sum and difference problems using information presented in a line graph
-complete, read and interpret information in tables, including timetables

| Week 4 | Fractions, <br> Decimals and <br> Percentages <br> (Review) |
| :--- | :--- |
| Week 5 | Calculation <br> (Review) |
| Week 6 |  |
| Week |  |

- *I can solve problems involving multiplication, including scaling by simple fractions and problems involving simple rates. (e.g. what is half more than 12?)
- *I can solve problems involving division, including scaling by simple fractions and problems involving simple rates. (e.g. what is a quarter less than 16 ?)
- I can compare and order fractions whose denominators are all multiples of the same number.
- *I can read and write decimal numbers as fractions (e.g. 0.71 $=71 / 100$ )
- *I can read, write, order and compare numbers with up to three decimal places
- I can add and subtract decimal numbers.
*I can solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4.1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25
- *I can add whole numbers with more than four digits,
including using formal written methods.
- *I can subtract whole numbers with more than four digits, including using formal written methods
- I can solve real life problems involving addition and subtraction.
- *I can add and subtract numbers mentally with increasingly large numbers (e.g. 12,462-2,300 = 10,162
- I can use written methods for multiplication for up to four digit numbers by a one or two-digit number.
- I can use written methods for division for up to four digit numbers by a one digit number
* can solve problems involving multiplication and division, including using a knowledge of factors and multiples, squares and cubes.
- -compare and order fractions whose denominators are all multiples of the same number
- •identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
- -recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $>1$ as a mixed number [for example, $2 / 5+4 / 5=6 / 5=11 / 5$ ]
- -add and subtract fractions with the same denominator, and denominators that are multiples of the same number
- -multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- -read and write decimal numbers as fractions [for example, $0.71=71 / 100$ ]
-     - recoad and write and use thousandths and relate them to tenths, hundredths and decimal equivalents
- -round decimals with 2 decimal places to the nearest whole number and to 1 decimal place
- -read, write, order and compare numbers with up to 3 decimal places
- -solve problems involving number up to 3 decimal places
- -recognise the per cent symbol (\%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction
-solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4,1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25

Addition and Subtraction
-add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

- -add and subtract numbers mentally with increasingly large numbers
- •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 and methods to use and why


## Multiplication and Division

-identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers -know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers -establish whether a number up to 100 is prime and recall prime numbers up to 19
-multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers
-multiply and divide numbers mentally, drawing upon known facts
-divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context
-multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000
$\cdot$ recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ( ${ }^{3}$ )
-solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes
-solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
-solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates

| St Vincent's Catholic Primary School WHOLE SCHOOL MATHS CURRICULUM MAP |  |  |  | Together Through Christ We Grow and Learn |
| :---: | :---: | :---: | :---: | :---: |
| YEAR 6 |  |  |  |  |
| Week | Topic | Learning Journey Objectives |  | National Curriculum Objectives |
| Autumn Term |  |  |  |  |
| Week 1 and 2 (week one is Sayers Croft) | Statistics | *I can interpret pie charts and line graphs and use these to solve problems. <br> *I can calculate and interpret the mean as an average. |  | - •interpret and construct pie charts and line graphs and use these to solve problems culate and interpret the mean as an average |
| Week 3 Week 4 | Number and Place Value | - *I can round any whole number to a required degree of accuracy. <br> - *I can use negative numbers in context and calculate intervals across zero. |  | - •read, write, order and compare numbers up to $10,000,000$ and determine the value of each digit <br> - •round any whole number to a required degree of accuracy <br> - •use negative numbers in context, and calculate intervals across 0 <br> - •solve number and practical problems that involve all of the above |
| Week 5 | Calculation | - *I can use a formal written method for addition and subtraction fluently. <br> - *I can multiply multi-digit numbers up to four digits by a two-digit number using the formal written method of long multiplication. <br> - *I can divide numbers up to four digits by a two-digit number using a formal written method, interpreting remainders according to the context (including cases where the answer has up to two decimal places). <br> - *I can solve a wide range of multi-step problems in contexts, deciding which operations and methods to use and why. <br> - *I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. |  | - •multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication <br> - •divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context <br> - •divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context <br> - - perform mental calculations, including with mixed operations and large numbers <br> - -identify common factors, common multiples and prime numbers <br> - •use their knowledge of the order of operations to carry out calculations involving the 4 operations <br> - •solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <br> - •solve problems involving addition, subtraction, multiplication and division <br> - •use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy |
| Week 6 <br> Assessment week |  |  |  |  |
| Week 7 <br> Enterprise Week | Money |  |  |  |
| Half Term |  |  |  |  |
| Week 1 | Recap / addressing topics arising from Autumn 1 and assessment |  |  |  |
| Week 2 <br> Week 3 | Calculation | - *I can use a formal written method for addition and subtraction fluently. <br> - *I can multiply multi-digit numbers up to four digits by a two-digit number using the formal written method of long multiplication. <br> - *I can divide numbers up to four digits by a two-digit number using a formal written method, interpreting remainders according to the context (including cases where the answer has up to two decimal places). <br> - *I can solve a wide range of multi-step problems in contexts, deciding which operations and methods to use and why. <br> - *I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. |  | - multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication <br> - divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context <br> - divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context <br> - perform mental calculations, including with mixed operations and large numbers <br> - identify common factors, common multiples and prime numbers <br> - use their knowledge of the order of operations to carry out calculations involving the 4 operations <br> - solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <br> - solve problems involving addition, subtraction, multiplication and division <br> - use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy |
| Week 4 <br>  <br> Week 5 | Fractions, Decimals and Percentages | - *I can solve problems which require answers to be rounded to specified degrees of accuracy. <br> - I can add and subtraction fractions with different denominators and mixed numbers, using the concept of equivalent fractions. <br> - I can multiply simple pairs of proper fractions, writing the answer in its simplest form. <br> - I can divide proper fractions by whole numbers. |  | - multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication <br> - divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context <br> - divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context <br> - perform mental calculations, including with mixed operations and large numbers <br> - identify common factors, common multiples and prime numbers <br> - use their knowledge of the order of operations to carry out calculations involving the 4 operations |



| Week 6 | Measurement |
| :--- | :--- |
|  |  |

- *I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
- *I can solve problems involving the calculation of percentages and the use of percentages for comparison
- *I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
*I can use, read, write and convert between standard units, converting measurements of length mass volume and time from a smaller unit of measure to a larger unit, and vice versa

$$
\text { using decimal notation up to } 3 \mathrm{dp} \text {. }
$$

I can calculate the area of parallelograms and triangles.

- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- solve problems involving addition, subtraction, multiplication and divisio
- use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places priate
use read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places
convert between miles and kilometres
- ecognise that shapes with the same areas can have different perimeters and vice versa
recognise when it is possible to use formulae for area and volume of shapes
calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres ( $\mathrm{cm}^{3}$ ) and cubic metres $\left(\mathrm{m}^{3}\right)$, and extending to other units [for example, $\mathrm{mm}^{3}$ and $\mathrm{km}^{3}$ ]
Week 7
Assessment Week


## Spring Term

*। can compare and classify geometric shapes based on their properties and sizes.

*     * can find unknown angles in any triangle, quadrilaterals and regular polygons.
- *I can draw and translate simple shapes on the coordinate plane and reflect them in the axes.
- *I can interpret pie charts and line graphs and use these to solve problems.
- *I can calculate and interpret the mean as an average.


## Week 4

Ratio and Proportion (3 lessons)
Geometry

Algebra
*I can use simple formulae (algebra) as a tool for solving a variety of problems.

## Properties of Shapes <br> - draw 2-D shapes using given dimensions and angles

-recognise, describe and build simple 3-D shapes, including making nets
-compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons -illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
-recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles

## Position and Direction

-describe positions on the full coordinate grid (all 4 quadrants)
-draw and translate simple shapes on the coordinate plane, and reflect them in the axes

- •interpret and construct pie charts and line graphs and use these to solve problems
- •calculate and interpret the mean as an average
- solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts
- solve problems involving the calculation of percentages [for example, of measures and such as $15 \%$ of 360 ] and the use of percentages for comparison
- solve problems involving similar shapes where the scale factor is known or can be found
- solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
use simple formulae
- generate and describe linear number sequences
- express missing number problems algebraically
- find pairs of numbers that satisfy an equation with 2 unknowns
- enumerate possibilities of combinations of 2 variables


## Week 6

## Assessment Week

Half Term


Fractions, Decimals and Percentages

| Week 3 |  |
| :--- | :--- |
|  |  |
| Week 4 | Geometry |

Week $4 \quad$ Geometry
*I can use a formal written method for addition and subtraction fluently
*I can multiply multi-digit numbers up to four digits by a two-digit number using the forma

* wrten method of long multiplication.
two-digit number using a formal written
method, interpreting remainders according the context (including cases where the answe has up to two decimal places).
* can solve a wide range of multi-step problems in contexts, deciding which operations and methods to use and why. *I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. I can solve problems which require answers to be rounded to specified degrees of accuracy. I can add and subtraction fractions with different denominators and mixed numbers, using the concept of equivalent fractions. I can multiply simple pairs of proper fractions writing the answer in its simplest form.
I can divide proper fractions by whole numbers. simple fractions de cimals and percentages ferent contexts.
including in different contexts.
*I can solve problems involving the calculation of percentages and the use of percentages for

$$
\begin{aligned}
& \text { and the use of } \\
& \text { comparison. }
\end{aligned}
$$

*I can solve problems involving unequal
sharing and grouping using knowledge of fractions and multiples.
*I can compare and classify geometric shapes based on their properties and sizes.

- *I can find unknown angles in any triangle, quadriaterals and regular polygons.
*I can draw and translate simple shapes on the coordinate plane and reflect them in the axes.
- multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the contex
- divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- perform mental calculations, including with mixed operations and large numbers
- identify common factors, common multiples and prime numbers
- use their knowledge of the order of operations to carry out calculations involving the four operations
- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- solve problems involving addition, subtraction, multiplication and division
- use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
- use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- compare and order fractions, including fractions >
- associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8]
- identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10,100 and 1000 giving answers up to three decimal places
- multiply one-digit numbers with up to two decimal places by whole numbers
- use written division methods in cases where the answer has up to two decimal places
- solve problems which require answers to be rounded to specified degrees of accuracy
- recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.


## Properties of Shapes

- draw 2-D shapes using given dimensions and angles
recognise, describe and build simple 3-D shapes, including making nets
-compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons -illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius -recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles


## Position and Direction

- describe positions on the full coordinate grid (all 4 quadrants)
-draw and translate simple shapes on the coordinate plane, and reflect them in the axes


## Summer Term

*। can use a formal written method for addition and subtraction fluently.
*I can multiply multi-digit numbers up to four digits by a two-digit number using the formal written method of long multiplication.

* can divide numbers up to four digits by a two-digit number using a formal I can divide numbers up to four digits by a two-digit number using a formal cases where the answer has up to two decimal places).
* I can solve a wide range of multi-step problems in contexts, deciding which operations and methods to use and why
*I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- perform mental calculations, including with mixed operations and large numbers
- perform mental calculations, incluaing with mixed operations and
- use their knowledge of the order of operations to carry out calculations involving the four operations
- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- solve problems involving addition, subtraction, multiplication and division


