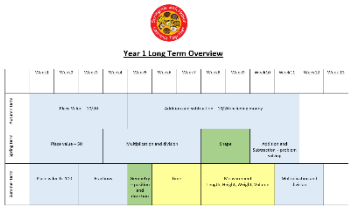
Year 3 Long Term Overview

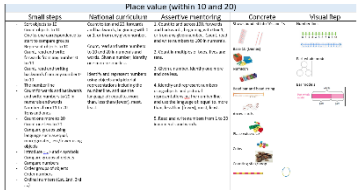
	Week1	Week2	Week3	Week4	Week5	Week6	Week7	Week8	Week9	Week10	Week11	Week12	Week 13
Autumn term	**Place Value** - Up to 1000 - Place value charts - Place value counters - Number lines - < > =			**Addition and Subtraction** - Part, part whole models - Partitioning - Bar models - Number lines - 100 squares - Calculation mats - Measurement - Colum method for addition and expanded sub				**Multiplication and division** - Arrays - Number lines - Partitioning - Grid method - Bar models - Number sentences - Measurement - Sharing and grouping (incl number lines)					
Spring term	**Fractions** - Fractions on number lines - Fraction walls - Bar models - Fractions of amounts				**Multiplication and division** As above		**Length, Area and Perimeter** -measure length -mm and cm -compare lengths -measure perimeter -calculate perimeter		**Time** - Clocks - Digital and analogue - Calendars - Hours in a day - Am and PM - Finding durations				
Summer term	**Money** - Part part whole - Number line - Bar model - Pounds and pence	**Mass and Capacity** -Measure mass -Compare mass -Add/subtract mass -Compare capacity			**Statistics** -Pictograms -Bar charts -Tables		**Geometry – Properties of shapes** -Turns and angles - Right angles in shapes -Compare angles -Horizontal and vertical -Parallel and perpendicular -Recognise 2D shapes -Recognise 3D shapes						

Daily Maths lessons at Hamer

Structure of a lesson

- Counting forwards and backwards (2 minutes)
- 6 a day arithmetic and revision question alternate days (5mins answer – recorded in books) 6 a day – give them the answers/ go over one question, revision question discuss with the children – during the revision question any misconceptions from children on the 6 a day can be targeted
- Vocabulary – including the my turn your turn approach or synonyms for other words eg add. This may be a retrieval based on the previous day.
- Main body of the lesson
- Independent work





When planning for learning:

- Start with the new long term overview
- Use the same document that breaks this down into a medium term plan
- Use the small steps on the medium term plan to support planning
- Go to the White Rose documents on the O drive under – Updated Maths – 00 Maths – Deeping Materials – White Rose Hub – New White Rose – find your year group
- When designing the lesson, consider the following: What is the start point? What existing skills and knowledge may they have or need to revisit? What Concrete resources may you need? What Visual representations may you want use? What is the key learning in the lesson? What language do you need to model? Are there any sentence stems? Are there any key words the children need to know the definitions of? What is the end point?
- For support with designing questions for appropriate activities for independent learning please use the following
    - White Rose (On the O Drive follow above)
    - I See reasoning and problem solving (On the O Drive follow above)
    - Maths Hub – teaching for mastery (On the O Drive follow above)
    - NCTEM (On the O Drive follow above)
    - Classroom secrets
    - Nrich
- Remember the three key elements of Maths – Fluency, Reasoning and Problem Solving (There needs to be a balance between all three of them for children to develop a deep secure understanding and mastery of the curriculum)

	Counting (Forwards and Backwards)	Times tables (Forwards and Backwards)	Resources to support
Nursery	Number rhymes Movement counting Environmental counting Touch counting Counting up to 10		Counting sticks Counting hoops Number lines Hundred squares Multiplication squares Numicon Meter ruler Bead strings Straws Competitions/races/games around tables etc Count me in Clap and count Sensory equipment (eg, use of a bouncing ball, dropping marbles in a jar) Killer 15 21 Fizz Buzz Around the world Clapping and chanting BBC super movers (Goes forwards and backwards) Number fun songs
Reception	Counting to 10 and 20 Counting in 1's from different starting points up to 20 Counting in 2's from different starting points up to 20 Counting in 10s from different starting points up to 100 How many? Subitising – looking at patterns and pictures up to 10 Counting rhymes eg, five little speckled frogs	Counting in 2s, 5s and 10s	
Year 1	Counting to 10 and 20 Counting in 1's from different starting points crossing over 50 Counting in 2's from different starting points crossing over 50 Counting in odd and even numbers Counting in coins (1p, 2p, 5p, 10p, £1, £2, £5, £10) Counting in units of measures (cm)	2, 5 and 10	
Year 2	Revision from Year 1 Counting in 10s from different starting points up to 100 Counting in 2's from different starting points up to 100 Counting in odd and even numbers Counting in coins (1p, 2p, 5p, 10p, 20p, £1, £2, £5, £10) Counting in fractions (halves, quarters and thirds from any number to 10) – using pictures/resources to support Counting in different unit of measures (mm, cm, m) Counting in different times intervals	2, 3, 4, 5 and 10	
Year 3	Revision from Year 2 Counting in 50s/100s from different starting points Counting in 1000s from different starting points Counting in fractions (halves, thirds, quarters, fifths, eighths and tens) – using pictures/resources to support Counting in coins (1p, 2p, 5p, 10p, 20p. 50p, £1, £2, £5, £10) Counting in different unit of measures (mm, cm, m) Counting in different time intervals	2, 3, 4, 5, 6, 8 and 10	
Year 4	Revision from Year 3 Counting in 10's, 25s, 50's, 100s, 1000s from different starting points to 10,000 Counting in 10,000's from any start point Counting in square numbers Counting in coins in any amount (eg, 20p, 30p, 50p) Counting in unit fractions simplifying along the way (Eg ¼. ½. 3/4 , 1) Counting in decimals (tenths and hundredths) Counting in degrees (90, 180, 270 etc) Counting in different unit of measures (mm, cm, m, km) Counting in different time intervals	2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12	
Year 5	Revision from Year 4 Count in 10s, 25s, 50s, 100s, 1000s, 10000s, 100000s from different starting points to a million Counting in different units of measures Counting in prime numbers and cube numbers Counting below zero Counting in non-unit fractions (eg, 3/4)	2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12	
Year 6	Revision from Year 5 Counting in 10s, 25s, 50s, 100s, 1000s, 10000s, 100000s, 1000000s, from different starting points to ten million Counting in squared numbers to 20 Counting in decimals to 2 decimal places (including going below zero)	Times tables up to 15	

Place value

Small steps

- Hundreds
- Represent numbers to 1,000 incl words
- 100s, 10s and 1s (1)
- 100s, 10s and 1s (2)
- Compare objects to 1,000
- Compare numbers to 1,000
- Order numbers to 1000
- Number line to 1,000
- Find 1, 10, 100 more or less than a given number
- Find 100 more or less than a given number
- Count in 50

National curriculum

Identify, represent and estimate numbers using different representations.

Find 10 or 100 more or less than a given number

Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). Compare and order numbers up to 1000

Read and write numbers up to 1000 in numerals and in words. Solve number problems and practical problems involving these ideas.

Count from 0 in multiples of 4, 8, 50 and 100

Assertive mentoring

1.Count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number.

2. Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).

3. Compare and order nos up to 1000. Read and write nos up to 1000 in numerals and in words

4. Identify, represent and estimate numbers using different representations

5. Solve number problems and practical problems involving these ideas.

Concrete

Base 10 (Dienes)



Numicon



Place value counters



Bead bar and bead string





Arrow cards



Place value dice

Coins





Counting stick/hoop



Visual Rep

Place value charts

100s	10s	1s

100 square

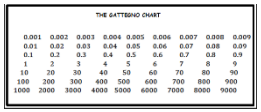


Number lines





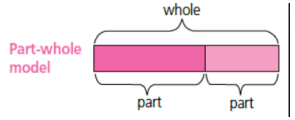
Gattegno chart



Part whole model



Bar models



- Addition – partition/partition jot leading to expanded method. If children are secure, teach column addition.
- Subtraction – using a number line for 10s and 1s jumps leading to expanded columns. If children are secure, teach column subtraction.

Addition and subtraction

Small steps

- Add multiples of 100
- Add 3-digit numbers and ones – not crossing 10
- Add 3-digit and 1-digit numbers – crossing 10
- Add 3-digit numbers and tens – not crossing 100
- Add a 3-digit number and tens – crossing 100
- Add 100s
- Spot the pattern – making it explicit
- Add 2-digit and 3-digit number – not crossing 10 or 100
- Add a 2-digit and3-digit number – crossing 10 or 100
- Add two 3-digit numbers – not crossing 10 or 100
- Add two 3-digit numbers – crossing 10 or 100
- Subtract multiples of 100
- Subtract 3-digit numbers and ones – not crossing 10
- Subtract a 1-digit number from a 3-digit number – crossing 10
- Add and subtract 3-digit numbers and tens – not crossing 100
- Subtract tens from a 3-digit number – crossing 100
- subtract 100s
- Subtract a 2-digit and 3-digit number – not crossing 10 or 100
- Subtract a 2-digit number from a 3-digit number – cross the 10 or 100
- Subtract a 3-digit number from a 3-digit number – no exchange
- Subtract a 3-digit number from a 3-digit number – exchange
- Estimate answers to calculations
- Check

National curriculum

Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three digit number and hundreds.

Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.

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.

Assertive mentoring

6. Add and subtract numbers mentally, including: a 3-digit no and 1s, 10s, 100s.

7. Add and sub numbers with up to 3 digits, using formal written methods of columnar add and sub.

8. Estimate the answer to a calculation and use inverse operations to check answers.

9. Solve probs, inc missing no probs, using number facts, place value, and more complex add/sub.

Concrete

Base 10 (Dienes)



Place value counters

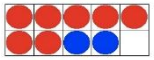


Bead bar and bead string





Tens frames



Discreet sets of objects e.g. counters, multilink





Money



Cuisenaire number rods



Visual Rep

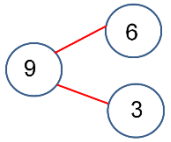
Calculation mat

100s	10s	1s

100 square



Part whole models



Number lines



Bar models

16	25
41	

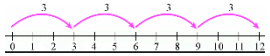
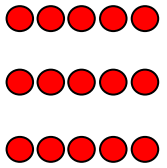
16 + 25 = 41

28	
10	18

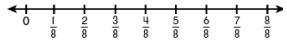
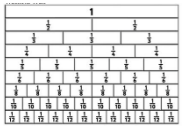
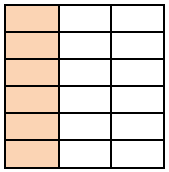
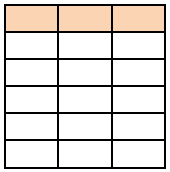
28 – 10 = 18

- Mental calculations as up to x12

Multiplication and Division

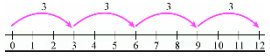
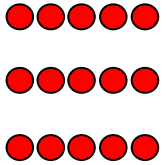
Small steps	National curriculum	Assertive mentoring	Concrete	Visual Rep
- Multiplication – equal groups - Multiplying by 3 - Dividing by 3 - The 3 times-table - Multiplying by 4 - Dividing by 4 - The 4 times-table - Multiplying by 8 - Dividing by 8 - The 8 times-table	Count from 0 in multiples of 4, 8, 50 and 100 Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Write and calculate mathematical statements for multiplication and division using the multiplication tables 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 objectives.	10. Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Base 10 (Dienes)  Numicon  Place value counters  Bead bar and bead string   Discreet sets of objects e.g. counters, multilink to group and share  Money  Arrays  Cuisenaire number rods	Multiplication grid  Number lines  Bar models 7 7 7 21 7 x 3 = 21 24 8 8 8 24 ÷ 8 = 3 Arrays  5 x 3 = 15 15 ÷ 5 = 3

Fractions

Small steps	National curriculum	Assertive mentoring	Concrete	Visual Rep
- Unit and non-unit fractions - Tenths - Count in tenths - Making the whole - Tenths as decimals (Counting linked to tenths) - Fractions of a number line (Counting) - Fractions of a set of amounts (1) - Fractions of a set of amounts (2) - Fractions of a set of amounts (3) - Equivalent fractions (1) - Equivalent fractions (2) - Equivalent fractions (3) - Compare fractions - Order fractions - Add fractions - Subtract fractions	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, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Solve problems that involve all of the above Recognise and show, using diagrams, equivalent fractions with small denominators. Compare and order unit fractions, and fractions with the same denominators. Add and subtract fractions with the same denominator within one whole [for example,! "+$ "=& "	13. 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. 14. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. 15. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. 16. Recognise and show, using diagrams, equivalent fractions with small denominators. 17. Add and sub fractions with the same denominator within one whole (e.g. $^5/_7 + {}^1/_7 = {}^6/_7$). 18. Compare and order unit fractions, and fractions with the same denominators	Cuisenaire number rods  Numicon  Discreet sets of objects e.g. counters, multilink   Paper strips  Fraction tiles 	Fraction number lines  Fraction wall  Bar models 12 3 3 3 3 ? ¼ of 12 = 3 1 1/6 1/6 1/6 1/6 1/6 1/6 3/6 + 2/6 = 5/6 Arrays/area model   1/3 + 1/6 6/18 + | 3/18 = 9/18 = 1/2

- Multiplication – partitioning into grid method leading to expanded columns. If secure, teach column multiplication.
- Division – grouping grid (LA), chunking jumps and find the hunk. Secure children to move on to short division.

Multiplication and Division

Small steps	National curriculum	Assertive mentoring	Concrete	Visual Rep
- Comparing statements - Related calculations - Multiply 2-digits by 1-digit (1 - Multiply 2-digits by 1-digit(2) - Divide 2-digits by 1-digit (1) - Divide 2-digits by 1-digit (2) - Divide 2-digits by 1-digit (3) - Scaling - How many ways	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Write and calculate mathematical statements for multiplication and division using the multiplication tables 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 objectives.	11. Write and calc math statements for x and ÷ using the tables they know, including 2-digit numbers times 1-digit numbers, using mental and formal written methods. 12. Solve probs and missing number probs, involving x and ÷, including integer scaling probs and correspondence probs in which n objects are connected to m objects.	Base 10 (Dienes)  Numicon  Place value counters  Bead bar and bead string   Discreet sets of objects e.g. counters, multilink to group and share   Money  Arrays    Cuisenaire number rods 	Multiplication grid  Number lines  Bar models 7 | 7 | 7 21 7 x 3 = 21 24 8 | 8 | 8 24 ÷ 8 = 3 Arrays  5 x 3 = 15 15 ÷ 5 = 3

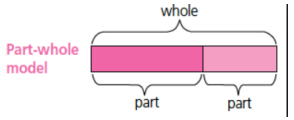
Measurement (Length and Perimeter)

Small steps	National curriculum	Assertive mentoring	Concrete	Visual Rep
- Measure length - Equivalent lengths –mm & cm - Equivalent lengths –m & cm - Compare lengths - Add lengths - Subtract lengths - Measure perimeter - Calculate perimeter	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). Measure the perimeter of simple 2D shapes.	20. Measure the perimeter of simple 2-D shapes. 19. Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).	Ruler  Meter stick  Link to real life objects eg, pencils, books, tables	2d shapes 

Time

Small steps	National curriculum	Assertive mentoring	Concrete	Visual Rep
- Months and years - Hours in a day - Telling time to 5 minutes - Telling time to the nearest minute - AM and PM - 24 hourclock - Find the duration - Compare the duration - Find start and end times - Measure time in seconds	Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks. 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, a.m./p.m., morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events [for example to calculate the time taken by particular events or tasks].	22. Tell/write the time from an analogue clock, inc Roman numerals from I to XII, and 12-hr/24-hr clocks. 23. Estimate and read time with increasing accuracy to nearest min; record/compare time in secs, mins, hrs. Use vocab such as o'clock, a.m./p.m., morning, afternoon, noon and midnight 24. Know the no of seconds in a minute and the number of days in each month, year and leap year	Clocks   Calendar  Stopwatches 	Number lines 

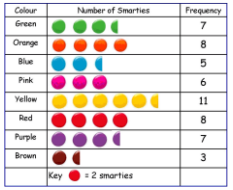
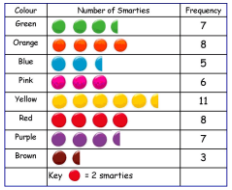
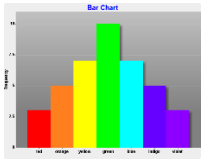
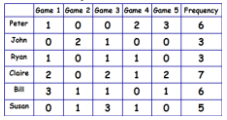
Money

Small steps	National curriculum	Assertive mentoring	Concrete	Visual Rep
- Pounds and pence (Link to tenths and making a whole) - Converting pounds and pence - Adding money - Subtracting money - Giving change	Add and subtract amounts of money to give change, using both £ and p in practical contexts.	21. Add and subtract amounts of money to give change, using both £ and p in practical contexts.	Money  Hamer shop	Bar models 

Mass and Capacity

Small steps	National curriculum	Assertive mentoring	Concrete	Visual Rep
- Measure mass (1) - Measure mass (2) - Compare mass - Add and subtract mass - Measure capacity (1) - Measure capacity (2) - Compare capacity - Add and subtract capacity	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	19. Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml	Range of real objects to compare eg, pencils, children, adults, play-doh Multilink cubes  Pan balance  Range of containers  Scales (Range of scales)  Thermometer (Range of scales) 	Range of real objects Range of containers 

Statistics

Small steps	National curriculum	Assertive mentoring	Concrete	Visual Rep
- Pictograms - Bar Charts - Tables	Interpret and present data using bar charts, pictograms and tables. Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	29. Interpret and present data using bar charts, pictograms and tables 30. Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.	Pictograms  	Pictograms  Bar charts  Variety of tables 

Geometry – properties of shapes

Small steps	National curriculum	Assertive mentoring	Concrete	Visual Rep
- Turns and angles - Right angles in shapes - Compare angles - Draw accurately Horizontal and vertical - Parallel and perpendicular - Recognise 2D shapes - Describe 2D shapes - Draw 2D shapes - Recognise 3D shapes - Describe 3D shapes - Make 3D shapes	Recognise angles as a property of shape or a description of a turn. Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Draw 2-D shapes and make 3-D shapes using modelling materials. Recognise 3-D shapes in different orientations and describe them.	25. Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. 26. Recognise that angles are a property of shape or a description of a turn 27. Identify right angles, recognise that 2 right angles make a half-turn, 3 make three quarters of a turn and 4 a complete turn. Identify whether angles are greater than or less than a right angle. 28. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	Links to real life objects Eg, Pringles tin, Balls, Cereal packets 2d shapes – including quadrilaterals and polygons  3d shapes – cuboids, prisms and cones  Making shapes 2D and 3D including drawing Angle eaters 	2d representations of 3d shapes 