Year 1& 2 – Medium Term Planning

Alongside this document, ensure that the Calculation Policy is being used at all times:

Non-Negotiables:

- All lessons must include opportunities for children to develop **Fluency**, **Reasoning** and **Problem Solving** skills.
- All lessons must offer **Greater Depth** opportunities for higher achievers
- Children must be taught to understand Mathematical structures through the use of models and images
- Children should be guided in their reasoning through the use of **Stem Sentences** and explicit use of accurate mathematical language by the teacher and children.
  - The Units below **MUST** be taught in this order – Please discuss with your Maths Leader if you wish to change this for any reason.

Assessments

- Daily recording in Maths books inform instant interventions and adapt lessons to meet the needs of all learners
- Fluency Tests to be taken once every half term
- Previous SAT papers will be used from the Spring Term for Year 2
- Children take Arithmetic and Reasoning SAT papers in May (Year 2)
- Testbase Assessment to be taken at the end of the Summer term (Year 1)
  NFER Assessments taken in Autumn, Spring and Summer term.

Other Points:

- Any weeks left at the end of each term should be used for **closing the gap** and giving children the opportunity to **apply** their learnt skills to a real life context, a shop, planning a picnic, etc.
- Mental Oral Starters can be used to fulfil part of fluency activities from the policy above but should also be used for a **number of the week** and **shape of the week EVERY** week. Initially, these will be used to **apply skills learnt from EYFS** until the subject areas are covered in Year 1.
- It is recommended that OMS should regularly include measure tasks

Key Points

- Think about prior learning – look at previous year group curriculum statements and decide which need revisiting before starting the current year group content.
- Then break down the learning into small steps for the unit of work. White Rose can help with this but remember they are a guide. Also, small steps are not lessons, some might be part of 1 lesson and others multiple lessons on their own.

Problem Solving and Reasoning Questions Support

- I See Reasoning for reasoning questions
- White Rose units stated above for Problem Solving and Reasoning questions
- NRICH use the curriculum maps to current teaching (https://nrich.maths.org/teacher-primary)

Greater Depth Questions Support

- NCETM Mastery and Greater Depth https://www.ncetm.org.uk/public/files/23305578/Mastery_Assessment_Y2_High_Res.pdf

Models and Images Support and Ideas

- NCETM Spine Resources – https://www.ncetm.org.uk/resources/52830,- This can also be used to support **subject knowledge**
- White Rose Notebooks https://connect.whiterosemaths.com/interactive-resources#form Number Blocks https://www.ncetm.org.uk/resources/52060

KS1: Number and place value
https://nrich.maths.org/13778
KS1: addition and subtraction
https://nrich.maths.org/13780
KS1: multiplication and division
https://nrich.maths.org/13782

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Years 1 & 2 Autumn Term

Week 1	2	3	4	5	6	7	8	9	10	11	12	13	14
Place Value				Addition & Subtraction					Measures-				

Place Value

Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number.

Count in multiples of twos.
Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward.

Count, read and write numbers to 10 in numerals and words.
Read and write numbers to at least 100 in numerals and words.

Recognise the place value of each digit in a two digit number (tens, ones)
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.

Identify, represent and estimate numbers to 100 using different representations including the number line. Given a number, identify one more or one less.

Compare and order numbers from 0 up to 100; use <, > and = signs.

Use place value and number facts to solve problems.

Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward.

Count, read and write numbers from 1-100 in numerals and words.

Number: Addition & Subtraction

Represent and use number bonds and related subtraction facts (within 10)
Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.

Add and subtract one digit numbers (to 10), including zero.
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.

Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.

Show that the 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.

Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.

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.

Show that the 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.

Length and height

Compare, describe and solve practical problems for: lengths and heights for example, long/short, longer/shorter, tall/short, double/half
Compare and order length and record the results using >, < and =.

Measure and begin to record lengths and heights.
Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm), using rulers and

Measurement: weight and volume

Compare, describe and solve practical problems for 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]
Measure and begin to record mass/weight, capacity and volume.
Measurement: Capacity, volume, mass and temperature
Choose and use appropriate standard units to estimate and measure capacity (litres/ml, mass (kg/g) and temperature (oC) to the nearest appropriate unit, using thermometers, scales and measuring vessels.
Compare and order volume/capacity/mass and record the results using >, < and =.

Possible Stem Sentences:

There are __ tens and __ ones.
The value of this digit is __.
I can partition ___ into (40) and (7)
___ is greater than but less than ___.
There are ten ones in 10 and ten tens in 100.

Possible Stem Sentences:

When I add multiples of ten, the tens go up and the ones stay the same.
When I subtract multiples of ten, the tens go down and the ones stay the same.
Addition is commutative but subtraction is not.
I could check my answer by ….
I know 8 + 7 is 15 because if double 7 is 14 and I need to add one more.
Change is the difference between the cost and the money paid.

Possible Stem Sentences:

10mm = 1cm, 100cm =1m, 1000m =1km
1000g =1kg
1000ml =1l
Temperature is measured in degrees Celsius. The freezing point of water is 0 degrees C and boiling point of water is 100 degrees C

Key Points

- Introduce vocabulary 'whole' 'part' and 'partition'
- Introduce part whole model and bar model during place value, which can then be revisited in addition and subtraction
- Encourage children to speak in full sentences

Bold text refers to upper year group

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Years 1 & 2 Spring Term

Week 1	2	3	4	5	6	7	8	9	10	11
Division & Multiplication				Fractions & Decimals			Measures - Time		Geometry –Position & Direction	Geometry– Properties of shape.
Number: Multiplication and Division Count in multiples of twos, fives and tens. 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. Count in multiples of twos, fives and tens **Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.** **Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.** **I can show that multiplication can be done in any order (commutative) and division of one number by another cannot.**				**Number: Fractions** 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. **Recognise, find, name and write fractions 1/3, ¼, 2/4 & 3/4 of a length, shape, set of objects or quantity.** **Write simple fractions for example, ½ of 6 = 3** **Recognise the equivalence of 2/4 and 1/2.**			**Time** Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. **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.** Recognise and use language relating to dates, including days of the week, weeks, months and years. **Know the number of minutes in an hour and the number of hours in a day.** Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] and measure and begin to record time (hours, minutes, seconds) **Compare and sequence intervals of time.** Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.		**Position & Direction** Describe position, direction and movement, including whole, half, quarter and three quarter turns. **Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise)**	**Geometry: Shape (2D)** Recognise and name common 2D, including rectangles, squares, circles and triangles. **Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line.** **Compare and sort common 2D shapes and everyday objects.** **Order and arrange combinations of mathematical objects in patterns and sequences.**
Possible Stem Sentences: Multiplication is the same as repeated addition. Multiplication of two numbers can be done in any order – commutative. When we divide we can be making groups or sharing. Division is not commutative.				**Possible Stem Sentences:** The bottom number (the denominator) says how many equal parts the whole is divided into. The top number (the numerator) says how many parts we have. The line means divided by. There are 2 halves in a whole etc.			**Possible Stem Sentences:** There are 60 minutes in an hour. There are 24 hours in a day. The short hand shows the hours. The long hand shows the minutes. The short hand will only point exactly at a number when it is an o'clock time. When the long hand is between the 12 and 6 it is past the hour, but if it is between the 6 and the 12 it is towards the next hour.		**Possible Stem Sentences:** One right angle is the same as a quarter turn. A clockwise turn is in the same direction as the hands move on clock.	Possible Stem Sentences: 2D shapes can be rotated and will still be the same shape. Any shape with three straight sides and three vertices is a triangle. All rectangles have 4 sides and 4 right angled vertices. A square is a special type of rectangle that has all its sides the same length. 2D shapes can have straight or curved sides.

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Years 1 & 2 Summer Term

Week 1	2	3	4	5	6	7	8	9	10	11	12
Geometry– Properties of shape.	Money		Place Value & Algebra	**SATS Prep 2-3 weeks**			Statistics (Yr2)		Addition/Subtraction/ Division/Multiplication (Focusing on needs of children)		
Geometry: Shape (3D) Recognise and name common 3D shapes, cuboids, pyramids and spheres. **Order and arrange combinations of mathematical objects in patterns and sequences.** **Possible Stem Sentences:** We describe a 3D shape by thinking about faces, vertices and edges. Edges are where faces join. Vertices are where edges meet. A prism can be sliced into the same shape and size.	**Measurement: Money** Recognise and know the value of different denominations of coins and notes. **Recognise and use symbols of pounds (£) and pence (p); combine amounts to make a particular value.** **Find different combinations of coins that equal the same amounts of money.** Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. **Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.** **Possible stem sentences:** 100p = £1.00 10 10p coins = £1.00		**Place Value** Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number. Count, read and write numbers from 1 to 20 in numerals and words. 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. Count in multiples of twos and fives **Year 2, revisit Aut**	Revisit 4 operations using efficient methods Measurement, including time, particularly scales and units of measures. Some of the statistics will need to be covered.			**Graphs (Yr2)** **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.**		**Number: Four operations** Represent and use number bonds and related subtraction facts within 20. **Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.** Add and subtract one digit and two digit numbers to 20, including zero. **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.** Read, write and interpret mathematical statements involving addition (+), subtraction (-), multiplication (x) and division (÷) and equals (=) signs. **Show that the 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.** Solve one step problems that involve the four operations, using concrete objects and pictorial representations, and missing number problems. **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.** Count in multiples of twos, fives and tens **Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.** **Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.**		

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