Year 4 Summer term 2021

This document could be used by all schools to support teachers in planning learning in all domains of mathematics during the summer term 2021. It is based on the Hampshire Scheme of Learning (HSL), which is available to schools subscribing to Moodle Plus (https://maths.hias.hants.gov.uk). **It does not include all national curriculum statements.** Some additional maths team objectives included as suggestions. Teachers will need to adapt these plans based on prior planning and assessment.

The careful sequencing of domains encourages pupils to make links across domains and supports teachers' use of effective strategies supporting recall of learning, particularly spaced practice and retrieval practice, identified through cognitive psychology research (Weinstein, Sumeracki and Caviglioli, 2019). It is important that children are prompted to access their memories of prior teaching and learned knowledge during periods of remote teaching.

The number of lessons provides a suggested structure, based on hourly lessons.

It will be important for teachers to plan a sequence of a few key tasks and linked skills practise as a 'learning journey' for each unit of work. Pupils will need support to understand the problem and have examples of how to record their solutions. Further examples of similar problems to the key task, using variation techniques, will support pupils to develop confidence and independence with each task.

This document also shows where 'Ready -to- Progress' criteria (RTPs) from the DFE Teaching Mathematics: Guidance for Key Stage 1 and 2 (June 2020)* document could be used to support review, practice, and consolidation. The National Centre for the Teaching of mathematics (NCETM) has produced resource materials to support the RTPs. Each RTP has linked resources, including power point slides, which could be used to support modelling of key mathematical concepts

*(DfE Mathematics Guidance: Key stage 1 and 2, June 2020, https://www.ncetm.org.uk/in-the-classroom/teaching-maths-through-the-pandemic/support-with-2020-dfe-guidance/

The NCETM supporting resource materials can be found at:

https://www.ncetm.org.uk/classroom-resources/exemplification-of-ready-to-progress-criteria/

Points to consider when using RTP resources:

They should be used flexibly, guided by pupils' response, repeating activities where pupils lack confidence. Materials from Year 4 may support addressing gaps and misconceptions for whole class, small groups or 1:1 focused intervention. The ready-to-progress criteria are intended as goals for the end of the year.

Summer 1

Find everyday opportunities to develop children's understanding of time.

lessons	Content Domain	Objectives (HSL Unit 4.11)	DfE RTPs
15	Multiplication and division	• **Multiply two-digit and three-digit numbers by a one-digit number** • **Recognise the place value of each digit in a 3-digit number (100s, 10s and ones)** • **Use place value understanding to divide single digit and 2-digit numbers by 10.** • **Recognise that tenths arise from dividing one digit numbers or quantities by 10.** • **Count from zero in multiples of 3,4,8,50 and 100** • Y2: **Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.** • Represent multiplication and division facts as arrays using a grid (rather than dots) and a number-line • Derive, **recall and use multiplication and division facts for 3 , 4 and 8 multiplication tables** • Understand the links within and between tables facts ('one, ten, five, derive') • **Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, using mental strategies** **Solve problems including missing number problems involving multiplication and division**, recording solutions with a range of representations to include number-lines, bar-models and arrays.	4NF-1 4NF-2 4NF-3 4MD-1 4MD-2 4MD-3

Lessons	Domains	Objectives (HSL Unit 4.12)	DfE RTPs
10	Geometry	• **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 two right angles by size** • **Plot specified points on a 2-D grid as coordinates in the first quadrant and draw sides to complete a given polygon.** • **Find the area of rectilinear shapes by counting squares (on a grid)** Solve more complex problems involving fractions and area of shapes e.g. 'If ¼ of my bedroom is covered in a rug, how much is not?' and 'If 3/7 of a field is planted with carrots and the rest with onions, what fraction of the field is planted with onions and how much area if taken up by onions if the whole field has an area of 140m^2 ?'	4G-1 4G-2 4G-3

Lessons	Domains	Objectives (HSL Unit 4.13)	DfE RTPs
10	Addition and subtraction (statistics)	• **Add and subtract with numbers 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** • **Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs** • **Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs**	

Summer 2

Lessons	Domains	Objectives (HSL 4.14)	DfE RTPs
10	Multiplication and Division	• **Recall 2/3/4/5/6/8 multiplication and division facts for multiplication tables up to 12 x 12** • **Use place value, known and derived facts to multiply and divide mentally, including: by 0 and 1; dividing by 1; multiplying three numbers together.** • **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 one digit (37 x 8 = (30 x 8) + (7 x 8)),** the associative law (2 × 3) × 4 = 2 × (3 × 4)**). integer scaling problems** (six times taller) **and harder correspondence problems such as n objects are connected to m objects (**e.g. the numbers of choices of a meal on a menu, or three cakes shared equally between 10 children. • Combine knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, 2 x 6 x 5 = 10 x 6 = 60. • Solve two-step problems in contexts, choosing the appropriate operation, working with increasingly harder numbers. **Find the effect of dividing a one-or two-digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths**	4MD-1 4MD-2 4MD-3 4F-1 4F-2 4F-3
5	Fractions	• **Recognise and show using diagrams, families of common equivalent fractions.** • **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 hundredths** **Recognise and write decimal equivalents to ½; ½ ; ¾**	

Lessons	Domains	Objectives (HSL 4.15)	DfE RTPs
10	Measure (money (5) and time (5))	• **Solve simple money problems involving fractions and decimals to two decimal places** • **Estimate, compare and calculate with money in £ and p** • **Read, write and convert between analogue and digital 12 and 24-hour clocks** **Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days**	

Lessons	Domains	Objectives (HSL 4.16)	DfE RTPs
10	Measurement (length) (*Mass , volume, capacity could also be addressed here if required)*	• **Convert between kilometres, metres, centimetres and millimetres** • **Estimate, compare and calculate with measures of length** • **Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres** • **Solve length problems involving fractions and decimals to two decimal places** • **Round decimals** in the context of length **to the nearest whole number** **Compare** lengths **with the same number of decimal place (up to two decimal places)**	4NPV-1 4NPV-3 4NPV-4