Hampshire Services
HIAS SCHOOL IMPROVEMENT

HIAS Maths Team

Maths Year 4 Autumn Term 2020 Catch Up Plans

An outline plan designed to take account of the national school closures between March 2020 and June 2020.

May 2020
Final version

Hampshire County Council

Introduction

This learning schedule is based on the Hampshire Mathematics Scheme of Learning and is designed to take account of the national school closures between March 2020 and July 2020. Learners will be.g.in a new academic year in need of catch-up and consolidation, together with some new learning from the previous academic year that has been missed. This document focusses on the core skills, knowledge and understanding that an 'on-track' learner would be expected to bring to the next stage of their learning and acknowledges that, for many, the habits of learning and the facility to recall previously embedded knowledge will need attention. For this reason, the first elements of this Autumn Term plan address the end of year objectives from the previous year. As the term progresses, the plan seeks to integrate expected prior learning, previously assumed and now no longer can be, into the standard units from the original scheme. In this way, the aim is to build on what is known and recalled in a moderately accelerated way to help learners get back on track for the end of the 20/21 academic year.

Teachers will need to adapt this schedule to meet the needs of their learners.

National curriculum statements are in bold type and Hampshire Maths team guidance is in standard type.

The links to the Hampshire Assessment Model have been retained so that teacher assessment in each domain can be made at Milestone 1.

The Hampshire Mathematics team full scheme of learning for KS1 (Year 1 and Year 2) offers long and medium-term maps with more detail, with end of year expectations broken down into smaller steps, plus linked units of work with key tasks and teaching points. This is available to schools subscribing to Moodle Plus (for further information, please click here).

Year 4

These plans will need to be adapted to meet the needs of pupils. Number of lessons provides a suggested structure, based on hourly lessons. It is expected that domains within units will be connected and integrated. The structure enables pupils to make links and connections across domains. Pupils should develop reasoning through solving problems in each unit of work.

M1	M2	M3	ARE

Measurement: **Find everyday opportunities to tell the time from an analogue clock. Estimate and read time with increasing accuracy to the nearest minute. Use vocabulary of time (am/pm; morning / afternoon, noon / midnight). Know the number of days in each month, year and leap year.**

Subsequent units should continue to revisit material from previous units to deepen learning, encourage automaticity and allow rich connections to be made across the year.

Date	Unit Focus Lessons	Year 4 Objectives	Key teaching points and prior learning
Thur 3-09-20	START OF NEW ACADEMIC YEAR		
Mon 7-09-20 Fri 25-09-20	Unit 4.1 15 Lessons • NPV • Addition and Subtraction	**Solve number problems and practical problems involving:** • **Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens and ones)** Up to 10,000 • **Identify, represent and estimate numbers using different representations** including number-lines • **Find 10 ,100, 1000 more or less than a given number** • **Round any number to the nearest 10,100,1000** (represent on a number line) • **Read and write numbers to at least 1000 in numerals and in words** • **Estimate the answer to a calculation and use inverse operations to check answers** • **Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.**	• Y2**: Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100** • Y3**: Compare and order numbers from zero up to 1000; using < , > and = signs** • Y3: **Add and subtract numbers mentally including a 3-digit number and ones and a 3-digit number and hundreds.** • Secure number bonds of 100 and related subtraction facts • Revise representations for NPV and calculations and solutions to multi- step problems e.g. number sentence (expressions and equations), two and three part 'cherry' models, bar models and number lines • Relate the use of formal methods to a range of representations modelling the structure of the calculations supporting estimating and checking reasonableness of answers including through the use of inverse

Date	Unit Focus Lessons	Year 4 Objectives	Key teaching points and prior learning
Mon 28-09-20 Fri 9-10-20	Unit 4.2 10 Lessons • Addition and Subtraction/ measurement (money) • Addition and subtraction / measurement (length)	• Record addition and subtraction money calculations using pictorial representations such as a number-line and bar-models. • **Estimate, compare and calculate money in £ and p** • **Convert between units (£ and p)** • **Measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m** • **Convert between units (km to m, m to cm, cm to mm (x) and vice versa (÷)** • Know 1000m = 1km • Derive 500m = ½ km, 250 m = ¼ km, 750 km = ¾ km and 100m = 1/10 km • **Solve problems involving all of the above** • **Order and compare numbers beyond 1000** (represent on number lines, context of length)	• Build on and make links with NPV and calculation in Unit 4.1 • **Y3: Add and subtract amounts of money to give change using both £ and p to solve problems** • Use known and derived facts to work out change from £1 (100p), £10, £100 • Know 100p = £1; 2 x 50p = £1; 10 x 10p = £1; 5 x 20p = £1; 20 x 5p = £1; 50 x 2p = £1; relate to multiplication facts/ repeated addition in the context of money. • **Y3: Measure, compare, add and subtract lengths (m/cm/mm)** • **Y3: Measure and compare the perimeter of simple 2-D shapes in practical contexts**

Date	Unit Focus Lessons	Year 4 Objectives	Key teaching points and prior learning
Mon 12-10-20 Fri 23-10-20	Unit 4.3 10 Lessons • Multiplication and Division	• **Use place value, known and derived facts to multiply and divide mentally** • **Count in multiples of 3 and 4 from zero**. • Derive, **recall and use multiplication and division facts for 6x and 12x multiplication tables** • **Solve problems involving multiplying and adding (**partitioning and recombining). E.g. 37 x 8 = (30 x 8) + (7 x 8).	• Y2/3: **Recall and use multiplication and division facts for the 2,3,4,5,8,10 multiplication tables.** • **Y3: Write and calculate mathematical statements for multiplication and division using the tables they know, including for two-digit numbers times one-digit numbers, using mental strategies and** written strategies as appropriate (use arrays to underpin grid method) • Represent multiplication and division facts as arrays using a grid (rather than dots) and a number-line • Y3/ Y4: 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.

Half Term			
Date	**Unit Focus Lessons**	**Year 4 Objectives**	**Key teaching points and prior learning**
Mon 2-10-20 Fri 27-11-20	Unit 4.4 20 Lessons • Fractions • Geometry	• **Count up and down in tenths (proper and decimal fractions); recognise that tenths arise from dividing and object into ten equal parts.** Record using number lines (making explicit links with decimals) and bar models • **Round decimals with one decimal place to the nearest whole number** using different representations, including the number line • **Find the effect of dividing a one-or two-digit number by 10 and 100;** use place value understanding. • **Recognise and show, using diagrams, families of common equivalent fractions** • **Add and subtract fractions with the same denominator (**number-lines and bar-models) • **Compare and classify geometric shapes, including quadrilaterals based on their properties and sizes** • **Identify acute and obtuse angles** • **Complete a simple symmetric figure with respect to a specific line of symmetry** • **Describe positions on a 2-D grid as co-ordinates in the first quadrant (**(x,y) co-ordinates) • **Find the area of rectilinear shapes by counting squares** (relate to tables facts on array grids)	• Y2: Revise counting in $\frac{1}{2}, \frac{1}{4}, \frac{1}{3}$ s recording on number lines showing position using different representations e.g. $\frac{4}{2}$ = 2 etc • Y3: Revise bar models showing fraction families e.g. $\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$ s etc • **Y3: Recognise, find and write fractions of a discrete set of objects (unit and non-unit fractions, small denominators)** • **Y3: Recognise and use fractions as numbers (unit and non-unit fractions, small denominators)** • **Y3: Recognise and show, using diagrams, equivalent fractions with small denominators** • **Y3: Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7= 6/7)** • **Y3: Compare and order fractions with the same denominator within one whole** • Y3: Sort and classify 2-D and 3-D shapes using numbers of faces, edges and vertices. • Y3: Use the vocabulary of **parallel, perpendicular, horizontal and vertical lines** to describe and classify 2-D shapes • **Y3: Recognise 3-D shapes in different orientations and describe them** • Y3: Know the names of common 3-D shapes • Y3: Sort and group according to prisms and pyramids • Y3: Construct prisms and pyramids with prepared nets, describe the shape of the faces.

Date	Unit Focus Lessons	Year 4 Objectives	Key teaching points and prior learning
Mon 30-11-20 Fri 18-12-20	Unit 4.5 15 Lessons • NPV • Measurement measurement (length, mass) • Time (5)	• **Convert between units (km to m, m to cm, cm to mm (x) and vice versa (÷)** • **Measure and compare mass (g/kg)** • **Count up and down in hundredths; recognising that hundredths arise from dividing an object by 100 and dividing tenths by 10.** (bar-model and number-line) • **Recognise the place value of each digit in a 4-digit number (1000s,100s, 10s and ones)** • **Find 1000 more or less than a given number** • **Order and compare numbers beyond 1000** (represent on number lines) • **Read, write and convert time between analogue and digital 12 and 24-hour clocks** • **Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days**	• Build on and revisit Units 4.1, 4.2, 4.3 and 4.4 • Key number facts for 1000 derived from 100 • Know that there are 1000g = 1 kg and derive associated facts: 500g = ½ kg ; 250 g = ¼ kg ; 750 g = ¾ kg; 100g = 1/10 kg; 10g = 1/100 kg • **Y3: Measure and compare lengths (mm/cm/m)** • **Y3: Measure and compare the perimeter of simple 2-D shapes** in practical contexts • **Y3: Solve problems involving length** • **Y3: Count up and down in tenths, recognise that tenths arise from dividing an object into 10 equal parts** • **Y3: Tell the time from an analogue clock, including using Roman numerals I to XII, 12-hour and 24-hour clocks. Use vocabulary such as a.m./p.m., midnight and noon** • **Y3: Estimate and read the time with increasing accuracy to the nearest minute** • **Y3: Record and compare time in terms of seconds, minutes, hours and o'clock, comparing durations of events** • **Y3: Know the number of seconds in a minute and the number of days in each month, year and leap year**

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