

HIAS MOODLE+ RESOURCE

Year 3 Unit Plan 3.5

Autumn Term

HIAS Maths Team
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Final Version

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Overview

In this document

Year 3 Unit Plans linked to Medium Term Overview

Points to consider when using this resource

These unit plans provide an example of how medium term planning could be developed into units of work. These unit plans will need to be adapted to meet the needs of pupils. The unit plan provides an outline of a possible learning journey with suggestions of types of tasks that could be used. They also identify key prior learning, some common misconceptions and an indication of number fluency pupils need to develop towards automaticity. It is assumed that pupils will have access to appropriate concrete resources to support conceptual understanding and that teachers will use a CPA (concrete, pictorial and abstract) approach to teaching.

Year 3 Unit 3.5

This unit is about practical measuring and weighing, reading scales accurately using understanding of the number line model (fractions). Opportunities to identify familiar objects which weigh 1 kilogramme and 1 metre and 1 kilometre lengths / distances should be taken to support reasonableness of solutions. Key facts for the units of measure should be emphasised to support calculation including mental strategies related to known facts. Pupils need to make links between key facts in all units. Opportunities through problem solving and reasoning to compare quantities will support conceptual understanding of subtraction model as 'finding the difference between'.

Session	Unit Objectives	Types of task
1-2	Measure and compare lengths (mm/cm/m) - Know that there are 10mm in 1 cm ; 100cm in 1m; 1000mm in 1m - Derive associated facts: 50cm in $\frac{1}{2}$ m, 25cm in $\frac{1}{4}$m and 75cm in $\frac{3}{4}$ m Measure and compare mass (g/kg) - Know that there are 1000g = 1 kg and derive associated facts: 500g = $\frac{1}{2}$ kg ; 250 g = $\frac{1}{4}$ kg ; 750 g = $\frac{3}{4}$ kg; 100g = $\frac{1}{10}$ kg	Use bar models showing $\frac{1}{2}$ and $\frac{1}{4}$ and $\frac{1}{5}$s and $\frac{1}{10}$s to model proportions of the whole unit related to key facts for units of length e.g. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{10}$s of 1cm, 1m and 1km to identify key facts and derive associated facts. Repeat for mass to discuss related facts (g/kg) and represent on a bar model. Count up and down in tenths Use place value counters, Diennes and number lines to model. Use a context e.g. a metre stick to link with recording on a number line when solving problems.
3-6	Count up and down in tenths; recognising that tenths arise from dividing an object into ten equal parts.	Practical tasks involving appropriate measuring equipment for length and mass to solve problems. Make links between a scale and a number line and place value models.
7-10	Recognise the place value of each digit in a 3-digit number (100s, 10s and ones) Find 10 or 100 more or less than a given number	Reasoning tasks involving place value, addition and subtraction in the context of measures. E.g. a length of rope is 2m in length and $\frac{3}{4}$ of it is cut off. How much rope is left? E.g. a sack of potatoes weighs 750g and 100g are added. How much does the sack weigh now? Give solutions as a bar model alongside number sentence.
11-15	Tell and write the time from an analogue clock (12-hour). Use vocabulary such as am/pm, morning, afternoon, noon and midnight. Solve number and practical problems involving these ideas.	Tasks as indicated by the NC statement... Identify key facts using bar models to show $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$ of 1 hour, 1 day, 1 minute

Check and refresh	Watch out for	Building fluency
• Units of measurement for length, mass • Reading a scale with - all numbers there; - in divisions of 1s, 2s, 5s and 10s, - with marks indicating half way between whole units • Reading a scale where not all numbers on the scale are given and estimate points in between • Reading the time to the nearest minute	• Confusing the relationship between units of measurement not realising that the smaller the unit the greater the number of units needed to measure • Measuring from the end of the ruler rather than from the beginning of the scale	• Place value complements to 100 and 1000 in the context of measurement E.g. 1000-900= 100; 1000- 250=750 etc • Knowing $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$ of 1000 • Knowing key facts for time: minute, hour, day, months, year, 12 hour clock, am, pm

HIAS Maths Team

Jo Lees – Area Inspector - Mathematics

Email: jo.lees@hants.gov.uk

Tel: 02380 816139

Jacqui Clifft – Area Inspector - Mathematics

Email: jacqui.clifft@hants.gov.uk

Tel: 02380 816139

Jenny Burn – Inspector/Adviser – Mathematics

Email: jenny.burn@hants.gov.uk

Tel: 01962 876207

Tessa Ingrey – Teaching & Learning Adviser – Mathematics (P/T)

Email: tessa.ingrey@hants.gov.uk

Tel: 01962 876207

Natalie Ivey – Inspector/Adviser – Mathematics (P/T)

Email: natalie.ivey@hants.gov.uk

Tel: 01962 876207

Dave Parnell – Teaching & Learning Adviser – Mathematics

Email: dave.parnell@hants.gov.uk

Tel: 01962 876207

Rebecca Vickers – Teaching & Learning Adviser – Mathematics

Email: rebecca.vickers@hants.gov.uk

Tel: 01962 876207

Brenda Robertson – Inspector/Adviser – Mathematics

Email: brenda.robertson2@hants.gov.uk

Tel: 01962 876207

Kate Spencer – Teaching & Learning Adviser – Mathematics

Email: kathryn.spencer@hants.gov.uk

Tel: 01962 876207

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