

HIAS MOODLE+ RESOURCE

Year 6 Unit Plan: 6.7

Spring Term

HIAS Maths Team
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Final version

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Overview

In this document

Year 6 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 students. 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 key skills students need to develop towards competency. It is assumed that teachers will make use of appropriate mathematical representations (manipulatives, visuals and symbolic) to support conceptual understanding for students alongside procedural fluency.

Year 6 Unit 6.7 Plan – Subtraction and addition / NPV / patterning and linear sequences (focus on mental strategies) (10) Fractions (5)

This unit is about addition and subtraction including estimation and the reasonableness of an answer. Linear number sequences encourage pupils to apply the concept of inverse operations with the image of a numberline. Pupils will be encouraged to read calculations and consider whether they can solve the questions mentally or whether a formal written method is required. Calculating with fractions will also be included within the unit of work and pupils may need to find equivalent fractions to solve number sentences.

Session	Unit Objectives	Types of task
1-10	- Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why. - Perform mental calculations, including with mixed operations and large numbers. - Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy - Generate and describe linear number sequences - Add and subtract fractions with the different denominators and mixed numbers, using the concept of equivalent fractions. Use diagrams to support reasoning. - Solve problems which require answers to be rounded to specified degrees of accuracy. - Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.	In this unit emphasize estimation and reasonableness of answers. <i>Tell me how we know that the answer to $534 - 250 = 187$. Encourage reasoning. A part of 500 is 250 and another part is 250. Therefore, if the whole is bigger than 500 and 250 is taken away, the answer must be greater than 250.</i> Continue to teach mental strategies such as rounding and adjusting including with larger numbers. $4356 + 498 = (4356 + 500 - 2) = ?$ Demonstrate why this works on a numberline. Ask pupils to read number sentences and reason about the strategy they would use to solve the calculation encouraging them to look closely at the numbers given. Practise number sequences and encourage pupils to make annotations – ____, 35, 65, ____, 125. Discuss how inverse operations can be included. Make connections with a numberline. Context for learning (Measure): When adding and subtracting make a link with measure. <i>Linda was measuring the amount of water a cup held. Linda had 2 litres of water in a bottle. When she had finished pouring water into the cup, she was left with 1.676litres in the bottle. How much water did the cup hold? Give your answer in litres.</i> Calculating with fractions: Use diagrams to show part whole relationships. Solve calculations that include fractions and equivalent fractions. $5/8 + 2/3 =$ Use the bar model to model how the fractions are being added together to show conceptual understanding. Link with estimation – <i>I know that $5/8$ and $2/3$ are both greater than $1/2$ therefore, the answer will be greater than one.</i> Include examples in which pupils should also rely on known facts to solve problems. $1\frac{1}{2} - \frac{3}{4} = ?$ Do we need to find equivalent fractions? What do we know about $1/2$, $3/4$ and a whole?

Check and refresh	Watch out for...	Building fluency
Addition and subtraction strategies. Rules of rounding How to find equivalent fractions. Fractions of a shape as well as fractions as part of a numberline. Pupils understanding of mixed number fractions Fractions on a fraction wall to help find equivalent fractions.	Pupils flipping numbers when solving subtraction problems rather than exchanging. Pupils writing answers according to the unit of measure required in the question.	Equivalent fractions using multiplication facts – consider reasonableness of answers. $\frac{3}{4} \times 10 =$ flexible thinking $\frac{1}{2} \times 20$. Develop conceptual understanding using a numberline. Mental maths strategies such as rounding and adjusting and application of number bonds to solve problems. Application of known facts to solve problems – because I know that half of 400 is 200 the answer to $389 - 234$ must give me an answer less than 200.

HIAS Maths Team

Jo Lees – Area Inspector

Email: jo.lees@hants.gov.uk

Jacqui Clift – Area Inspector

Email: jacqui.clift@hants.gov.uk

Jenny Burn – Inspector/Adviser

Email: jenny.burn@hants.gov.uk

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

Email: tessa.ingrey@hants.gov.uk

Natalie Ivey – Inspector/Adviser (P/T)

Email: natalie.ivey@hants.gov.uk

Dave Parnell – Teaching & Learning Adviser

Email: dave.parnell@hants.gov.uk

Rebecca Reynolds – Teaching & Learning Adviser

Email: rebecca.reynolds@hants.gov.uk

Brenda Robertson – Inspector/Adviser

Email: brenda.robertson@hants.gov.uk

Kate Spencer – Teaching & Learning Adviser

Email: kathryn.spencer@hants.gov.uk

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Tel: 01962 874820 or email: hias.enquiries@hants.gov.uk

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