

HIAS MOODLE+ RESOURCE

Year 6 Unit Plan: 6.3

Autumn 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 6.3 Plan – Fractions

This unit is about the developing understanding of fractions. Pupils will continue to understand the relationship between fractions, decimals and percentages. Time will be given to comparing and ordering fractions with different denominators as well as comparing and ordering fractions, decimals and percentages. Pupils will be required to reason about why procedures work and develop a depth of understanding of calculating with fractions.

Session	Unit Objectives	Types of task
1-5	• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Compare and order fractions, including fractions larger than one.	Pictorial representations: Use the bar model to represent fractions, revisiting the concept that fractions are equal parts of a whole. Use the bar model to find fraction families. Multi-represent on the numberline. Understanding the relationship between multiplication and division and fractions. Apply knowledge of factors and multiples to fractions. Compare and order fractions using secure understanding of fractions alongside finding common multiples and factors. Order fractions: $\frac{3}{7}$, $\frac{4}{8}$, $\frac{7}{9}$ and $\frac{2}{5}$ - encourage pupils to reason about the fractions and whether they need to find a common denominator for all fractions - $\frac{4}{8}$ is equivalent to $\frac{1}{2}$ and $\frac{7}{9}$ is bigger half. $\frac{3}{7}$ and $\frac{2}{5}$ are smaller than a half. Therefore, the only fractions that I need to find a common denominator for are $\frac{3}{7}$ and $\frac{2}{5}$. Explore mixed numbers and context mixed numbers to improper fractions. Order fractions including mixed numbers and improper fractions. Use bar models and numberlines to represent different fractions. Fractions, decimals and percentages: Use a fraction wall to find decimal and percentages equivalence. Solve questions that include comparison of percentages and fractions. <i>Scott and Mark completed a maths test. The highest amount of marks that they could score in the test was 80. Mark got 65% of the questions correct and Scott managed to get $\frac{11}{16}$ of the questions correct. Who scored the highest in the test?</i>

		Add and subtract fractions including those with different denominators. Model the use of the numberline and bar models to calculate with fractions. Why must the denominator be the same? Why don't we add the denominators? Look at what happens when the denominator is added together. The fraction becomes smaller. Use models and images to support and refer to the place on the numberline. What happens when we add numbers? Answers get bigger. Now use the numberline to add fractions correctly.
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Check and refresh	Watch out for...	Building fluency
Remind pupils of the relationship between fractions, decimals and percentages. Adding/subtracting fractions with the same denominator including calculations that go over one. Fractions are percentages are part of a whole	Thinking that fractions with larger numbers as denominators are larger than fractions with smaller denominators Adding/subtracting the denominator when calculating with fractions due to not conceptually understanding fractions	Application of common multiples and factors to find common denominators Halving and doubling to find fraction, decimal, percentage, equivalents – if $\frac{1}{4}$ equals 25% then $\frac{1}{8}$ must be 12.5% as an $\frac{1}{8}$ is half of a $\frac{1}{4}$. Counting in fractional steps

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