

HIAS MOODLE+ RESOURCE

Year 3 Unit Plan 3.3

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 3.3 Plan – Multiplication and Division

This unit is about developing conceptual understanding, mental strategies and fluent recall of tables facts building on secure understanding of multiplication and division facts for the 2, 5 and 10 times tables in KS1. There are opportunities for pupils to represent multiplication and division facts as arrays and number lines using a range of resources. Developing pupils' mental fluency of key facts and derived facts for the 3 and 4 multiplication tables. Look at the links between x2 (KS1 work) and x4, and x5 and x10 (KS1). Opportunities to consider different strategies for working out tables' facts need to be modelled and discussed. Problem solving context should be used to support practise, reasoning and recording of solutions. There is a need to provide regular ongoing practise of recall of tables facts throughout the year. Maths team document Learning Tables Facts by Year 4 and Number Facts documents also support this unit.

Session	Unit Objectives	Types of task
1-2	- 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 - Count in multiples of 3 and 4 from zero.	Using counters to model multiplication on number lines and as arrays (grid) making links between the two representations building on 2s, 5s and 10s from KS1. Practising counting in 3s and 4s identifying specific places where pupils get stuck in the number sequence, looking at ways to work out those products using reasoning with known related facts e.g. recalling 3×9 could be linked to knowing $3 \times 10 = 30$ or 3×6 is double 3×3 etc
3-7	- Derive, recall and use multiplication and division facts for 3 and 4 multiplication tables - 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	Applying tables facts to solve problems: multiplication Representing solutions to problems involving groups of 3 and 4 with arrays and number lines alongside the number sentence. Derive families of facts for particular tables linked to arrays eg 4×8, 8×4, $32 \div 4$, $32 \div 8$. Using tables facts to solve division facts focused on groups of 2s, 5s and 10s. Use representations as above to show solutions. Use word problems and missing box calculation examples.
8-10		Division as grouping with multiples of 2s, 5s and 10s Show how to use number lines and arrays to model division as grouping. Introduce bar model alongside number sentence.

Check and refresh	Watch out for	Building fluency
• Independent use of number lines and arrays using counters to model tables facts previously learnt • Understand that repeated addition is the same as multiplication	• In correct use of language 'groups of' 'divided by' 'multiple of' 4 groups / groups of 4' • Pupils only linking multiplication or division to only arrays or number lines – need to be able to transform between these two representations • Ensuring pupils make appropriate links between repeated subtraction and division as grouping, representing on a number line	• Fluent recall and use of multiplication and division facts for the 2, 5 and 10 multiplication tables

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