

Upperwood Academy – Mathematics Sequence 2022 (use in conjunction with Calculation Policy 2020)

- At Upperwood we believe that children need to be fluent in using the age appropriate methods of mathematics (see Calculation Policy) and this fluency is the main vehicle for children to solve problems.
- At Upperwood we are aware that problem solving is at the heart of mathematical capability. Arithmetic skills are not stand alone skills and children must be challenged and presented with a wide range of problems at every stage of their school career.
- We feel the following teaching sequence supports this – ***Please note the two ‘teaching’ stages may take place over one lesson or up to a week depending on the year group and objective.***

Lesson Part	Notes	Examples
Mental Starter (5mins)	An oral activity in relation to the LO or revisits/ reinforces the work of previous weeks. In Y4 children assessed and grouped by ability for additional times tables support 2-3 times a week (mental and arithmetic time)	Rapid recall in relation to LO Songs / chants – X tables, number bonds Times tables stick, TT Rockstars Bingo or other games Thinking and discussing a problem
Arithmetic / Abstract methods recap (10 mins max)	Differentiated independent arithmetic activity as modelled by the teacher / TA Reinforcing the abstract methods appropriate to the year group <i>This work should be evidenced in books where appropriate – no separate arithmetic book</i>	Fluent in 5 Big Maths challenge Rising Stars Arithmetic tests Testbase arithmetic questions Questions on four operations
Teaching Stage 1	Teacher to model the learning objective through the concrete, pictorial, abstract approach (5-10 mins max) <i>Differentiated</i> pupil activities related to what stage of the concrete, abstract pictorial approach they have reached.	Activities applying the skills taught in a range of ways (varied fluency) e.g. inverse operations, missing number problems TES resources Classroom secrets Maths No Problem
Teaching Stage 2	<u>Guided problem solving</u> Teacher models problem solving activities applying the concept learnt in the week including modelling and concrete, pictorial, abstract approach that is needed. <u>Independent problem solving</u> <i>Differentiated</i> independent problem solving activities applying the concept learnt in the week. Problems involving a range of strategies and recapping previous learning to be used where applicable. <u>Challenge</u> – are the problems asking children to apply concepts in different scenarios involving more than one step?	White Rose assessment questions Testbase – past SAT questions White Rose problem of the day Classroom secrets guided and independent problems TES problems

Key

	Daily activities for each lesson
	This stage may take one or more lessons as the children work towards and feel secure in the abstract approach.
	When children are secure in the abstract method at least one lesson to be spent applying these skills to this stage.

At Upperwood Academy we do not follow a scheme of work and use resources and materials from a range of authors. Please ensure that if a resource **does not follow** the methods set out in our calculation policy **it should not be used**. Aiming for 1 worksheet ‘free’ lesson per week