Maths fluency in the Larch: principles and practice

Maths fluency sessions take place in addition to the daily maths lesson for Years 1 - 6. These sessions are short and snappy and allow students to reactivate learning of previously taught concepts. As a minimum, this is a timetable allocation of twenty minutes three times a week, but in many classes is more frequent than this dependent on the class data that is analysed termly following summative assessments.

Students rehearse knowledge and skills, so that they become fluent with the mathematics required in their year group across all units. All (or, exceptionally, almost all) children are supported within these sessions with a focus on keeping up with the pace of the intended curriculum, and securing all age-related knowledge.

During fluency sessions, children will develop number sense and become able to use the most appropriate method for the task at hand; they will practice applying a skill to multiple contexts.

The sessions are planned carefully to ensure that they build progressively and sequentially across the days/weeks with small adaptations made to concepts in order to build student confidence. Typically, 4-5 slides will be used in each fluency session, each one covering a different area of mathematics- for example, moving from perimeter to mental strategies for addition to Roman numerals and properties of 3D shape. This is so that children can retrieve knowledge and skills which have been taught previously - bringing them to the forefront of their mind from their long-term memory. The intention is to support them to 'remember' just at the point at which learning may otherwise become too distant to be able to be applied when it is needed. Teachers use precise questioning to test conceptual and procedural knowledge and assess children, across the class, regularly. This also helps teachers to identify starting points for whole class teaching. There is a high expectation for teachers to explicitly model and expect vocabulary to be used routinely by students when discussing mathematical concepts.

Teacher explicit guidance in relation to support planning maths fluency sessions is:

- Use slides that are for your year group, including visuals, vocabulary and open questions for exploration (support and challenge).
- Move through this at a pace of approximately 4 -5 slides a session - as it is not new learning, pace and recall are key principles.
- Use medium term curriculum overviews to determine which content should be revisited and when, bearing in mind the principles above in relation to 'remembering' the whole year's content.
- Be responsive, using assessment for learning sharply to determine the next day's learning - always considering the rationale for the content revisited.
- The focus is on the quality of verbal communication and jottings to support this - do not spend time on cumbersome written work, but maximise mathematical conversations.
- As the principle is for all children to keep up with the pace of the intended curriculum, there is no need to differentiate; instead ensure excellent questions that can provide challenge for all.

The impact of maths fluency is seen in the following ways:

- Improved performance in summative assessments, because students are able to move with ease between different units of learning - rather than there being a conflict between class learning, which may *seem* secure but later not be applied.
- Improved ability to work within calculations or problems which have complicated processes or multiple steps. This is because space in the working memory is created where children can recall previous learning with ease.
- Times tables knowledge, number bonds, subitising and other number skills are recalled easily and quickly.