



Mathematical Fluency

Rationale

As a school, we use MNP! to create fluent, confident mathematicians who enjoy maths and can reason, solve problems and talk with confidence using mathematical language and vocabulary.

Our KS2 results in 2019 showed that reasoning has improved but we still need to improve the arithmetic and mathematical fluency of the children so that Year 2 and Year 6 teachers do not have to do extra teaching. Fluent In Five will ensure the children enter their classes confident using mental and arithmetic methods ready for the end of Key Stage assessments.

Why Fluent In Five?

Fluent in Five provides a daily set of arithmetic practice, designed to help children develop and maintain fluency in both written and mental calculations. The structure of Fluent in Five is also designed to help children distinguish between written and mental calculations.

Regular practice of mental and written arithmetic skills is important in order to keep calculation skills fresh. This is especially important given MNP! structures the curriculum with longer blocks spent on each topic area, but without each topic area being revisited.

Due to the significant time pressures of the KS2 arithmetic tests; some children are not able to complete the full test in the 30 minutes given.

This is often because children are attempting questions which have been designed to be answered mentally using an informal or formal written method, which takes up valuable time. This may be because children are not confident with mental approaches to calculations, or that they are simply 'tricked' by the appearance of a gridded working area after each question. Fluent in Five has been designed to provide this regular practice and help children distinguish between when to use a written method and when a mental method would be more efficient. In turn, this should develop their ability to complete all the questions in an arithmetic test in the time given.

What Fluent In Five looks like at Hunslet Carr:

Every day, there will be a Fluent In Five session before the start of the MNP! lesson dedicated to mathematical fluency, mental and arithmetic methods. These sessions are vital in order to ensure that our pupils are practising their mathematical fluency and are confident using written arithmetic methods ahead of the end of KS1 and KS2 assessments. These skills will also enable our children to be more confident when solving problems during MNP! lessons.

In each Fluent In Five session, pupils are given between three and six questions (depending on their year group) to answer within five minutes. Next to the question, there will be a symbol to indicate to the children whether they should answer the question mentally or using a written method. The

High Expectations, Caring, Positive Attitudes & Successful



children should complete their Fluent In Five work in the back of their maths journals, putting the date, week number and lesson number at the top and underlining using a ruler. The children then put each question number in their books and answer the questions within five minutes. When the five minutes are up, the answers can be displayed on the screen and the pupils can either peer or self-assess. Teacher and TA would quickly scan the room to see if any pupils have really struggled and need support or a follow-up intervention. It is expected that every Friday, teachers collect in the score of the children's Fluent In Five session from that day.

Before the start of a Fluent In Five session, teachers model the methods that will be used during that week on an anchor chart so that pupils can refer back to this for support. Some teachers may prefer to do this after the first Fluent In Five session of the week, so that they have the chance to see what the pupils can do before the methods are modelled. The Fluent In Five programme will indicate what calculations, methods and questions will be covered that week in the "This week in a nutshell" slide.

Before the first week of Fluent In Five, teachers will give the children the Autumn 1 Arithmetic Test for their year group as a pre-assessment. The children will then have four weeks of daily Fluent In Five sessions and then complete the same Autumn 1 Arithmetic Test to see how much progress has been made. Their assessment scores on the Arithmetic Tests will be recorded and sent to Mr Sharpe. This process will then start again with the next Arithmetic Test.

After completing the arithmetic test and marking it, there is an assessment tool at the bottom of each test where children can shade in the question numbers that they got correct. The teacher can then quickly look over the class's self-assessments to see which type of arithmetic questions the children still need work on; these could be modelled and added to an anchor chart.