

Assessment in Mathematics (2025 onwards)

Purpose: To assess the degree to which pupils have mastered the maths curriculum, to then inform future teaching with mathematical learning being built on solid foundations, which do not need to be re-taught, to ensure the best progress of all pupils.

Frequency: Assessment in mathematics should be a **continual process**.

Teacher Assessment

- **Each** and **every** lesson provides opportunities for informal assessment of understanding.
- **Before a unit of maths is planned (or adapted) and taught**, assessment of current functioning and understanding in this area is essential to pitching the work appropriately to meet the needs of each pupil.
- Across ECM, the [DFE Mathematics Guidance \(June 2020\)](#) will be the main source of diagnostic assessment. Teachers will use the ECM materials, based on the example assessment questions provided, to ensure children are ready for the learning planned. The best forms of ongoing, formative assessment arise from well-structured classroom activities involving interaction and dialogue (between teacher and pupils, and between pupils themselves). The DFE and ECM materials are not always intended to be used as a set of written test questions, which the pupils answer in silence. They are offered to indicate valuable learning activities to be used as an integral part of teaching, providing rich and meaningful assessment information concerning what pupils know, understand and can do. All these questions are available in ECM documents for each strand in a clear, progressive order and in self-contained year-group 'Ready to Progress' (RtP) assessments for each RtP statement (some of these are currently being written and will be released in due course).
- The tasks and activities need not be offered to pupils in written form. They may be presented orally, using equipment and/or as part of a group activity. The encouragement of discussion, debate and the sharing of ideas and strategies will often add to both the quality of the assessment information gained and the richness of the teaching and learning situation.
- The same principles identified above are also relevant for assessing the impact of teaching. **After a unit of work has been taught**, at a reasonable interval afterwards to ensure retention, the DFE and ECM materials can again be used to assess progress made. All the DFE 'ready to progress' criteria are end of year statements and **are not expected to be fully secured** until the end of the academic year.
- Teachers will track progress against the DFE 'ready to progress' criteria and use this information to support **termly reporting** of attainment. This will be used in addition to other measures that a school chooses to use to make a fully rounded judgement on the child.
- Where children are **achieving lower than their age-related expectations**, teachers should use the DFE materials to *accurately ascertain* where in the continuum the pupil currently is operating. This will enable a clear journey to be mapped for the child's needs.
- At the end of each academic year, each teacher will ensure that children have been assessed against the ready to progress criteria and this information will form an essential part of the final reporting of information on pupil performance (and transition).

Reporting of Attainment at Trust Level

- Attainment of children needs to be reported 3 times per year at Trust level, in line with the assessment calendar, with the information detailed above being used to support accurate teacher assessment.
- If pupils are achieving below the expectations for their age then teachers should report the year group that best matches the attainment evidence (as exemplified by the DFE materials).

Moderation

- Maths leaders across ECM will continue to undertake moderation of teacher assessments in mathematics. This will consist of analysing videos of children at work on specified tasks, carried out in teams, to ensure a shared understanding of what 'expected' and 'going deeper' looks like for age related learning. Children's work will also form an important part of the evidence used to moderate judgement. The Director of Teaching and Learning (for Maths) will also support this process across the Trust. **Maths leaders are expected to attend the whole-trust moderation meetings.**

Further information (taken from the NCETM)

Mastery of the curriculum requires that all pupils:

- use mathematical concepts, facts and procedures appropriately, flexibly and fluently
- recall key number facts with speed and accuracy and use them to calculate and work out unknown facts
- have sufficient depth of knowledge and understanding to reason and explain mathematical concepts and procedures and use them to solve a variety of problems

A useful checklist for what to look out for when assessing a pupil's understanding might be:

A pupil really understands a mathematical concept, idea or technique if he or she can:

- describe it in his or her own words
- represent it in a variety of ways (e.g. using concrete materials, pictures and symbols – the CPA approach)
- explain it to someone else
- make up his or her own examples (and non-examples) of it
- see connections between it and other facts or ideas
- recognise it in new situations and contexts
- make use of it in various ways, including in new situations

Developing mastery with greater depth is characterised by pupils' ability to:

- solve problems of greater complexity (i.e. where the approach is not immediately obvious), demonstrating creativity and imagination
- independently explore and investigate mathematical contexts and structures, communicate results clearly and systematically explain and generalise the mathematics.