

External Feedback From Hub TRG participants

- **How well are mathematical vocabulary and sentence stems developed alongside key facts and methods? (Declarative knowledge)**
 - Across school use of key mathematical vocabulary was encouraged and used.
 - Teachers reframed children's responses modelling the correct use of key vocabulary and sentence structure.
 - Teachers built on children's responses.
 - In many classrooms, specific key vocabulary was on display and in some cases the children knew they could refer to this and use it.
- **Are all pupils given procedural knowledge that enables them to work in the abstract? (Procedural knowledge)**
 - There was evidence that lessons were building towards procedural efficiency and this was noticed within the journals and in workbook outcomes. Children used manipulatives to unpack structure rather than to do the work.
- **Can pupils solve problems without resorting to unstructured trial and error approaches? (Conditional knowledge)**
 - There was evidence of time spent to unpick tasks, scaffold where necessary and identify the maths through peer discussion, teacher-pupil discussion and modelling. Children drew on prior knowledge and there was evidence across school of children reviewing and retrieving prior knowledge to bring to the learning today.
- **Are pupil errors immediately highlighted and corrected? (components and sequencing)**
 - This was evidenced across school but mistakes were valued, discussed and explained using them as teaching points.
- Are pupils able to refer to work completed and content learned in

previous lessons? (Memory)

- This was evident during pupil voice and also across school in the teaching. Teachers encouraged children to make links with prior learning and children were able to articulate where their learning linked with prior learning. Fluency was identified as strong and this was particularly evidenced across reception into year 1 where the use of Mastering Number had made a notable impact. Children were observed making links between new and prior learning in their peer discussion.
- **Are pupils encouraged to be precise, accurate and systematic in their mathematical endeavours? (Disciplinary rigour)**
- This was encouraged across school in the modelling of vocabulary and teacher modelling using the ipad. The strongest lessons made use of the ipad to model systematic working, accuracy and precision. This was less evident where a laptop was solely used.
- **Does instruction make sense to pupils? (Pedagogy)**
- Teachers used precise language and broke the learning into manageable chunks. Children were encouraged to make use of their declarative knowledge and all children in all classes were accessing the learning.
- **Do pupils know they are improving? (Assessment)**
- Children were able to articulate how they know they are succeeding: feedback, pink highlighters and their own increased understanding and improvement in their journaling.
- **Is quiet, focused scholarship in maths promoted? (Culture)**
- In all classes there was time for children to think quietly and journal thinking. Respectful dialogue was encouraged and children listened intently to each other's ideas.
- **Are adequate resources available? (Policy)**
- Yes-there was evidence of plenty of useful resources being used and it was good to see the same resources being used in EYFs as in year 1 which built continuity.

- How well are staff supported in developing their own subject and subject-specific pedagogical knowledge?
- The use of lesson study was highlighted by teachers as a key way that subject knowledge is developed-this was highlighted as strength within the school.

Other feedback

Visitors noticed the deliberacy within the teaching and that lessons had been carefully studied. Equity was clear between classes and staff had a deep knowledge of their children. It was clear that lessons were based on teacher assessment of the learning and not simply because it was the next lesson to be taught.

There was linkage between subjects with key gpas points being included in expectations for journaling and in the oral use of stem sentences.

Pupil Voice

Visitors commented that all the children were confident, articulate and clearly willing to talk about their learning. They were proud of their journals and enjoyed showing them

When someone is good at maths what does that look like in your school?

Children talked about working being neat, children being smart and pink ticks. More encouraging answers after probing were knowing why something is right or not and being able to explain it. Some children said they feel like smiling when they are good at maths.

How do you know whether you are doing well in maths?

The general consensus was that they know what to do and they get

pink ticks.

What is your journal for?

Children across school knew it was to show maths knowledge and thinking. They had a positive view of their journals and talked about enjoying completing them.

How do you feel about maths?

Visitors felt the children were overwhelmingly positive about maths and appeared enthusiastic and confident.

What helps you in maths?

Younger children talked about knowing number bonds and different equipment. Older children talked about teachers, partners. Year 6 talked about working walls, review journals and looking back in journals.