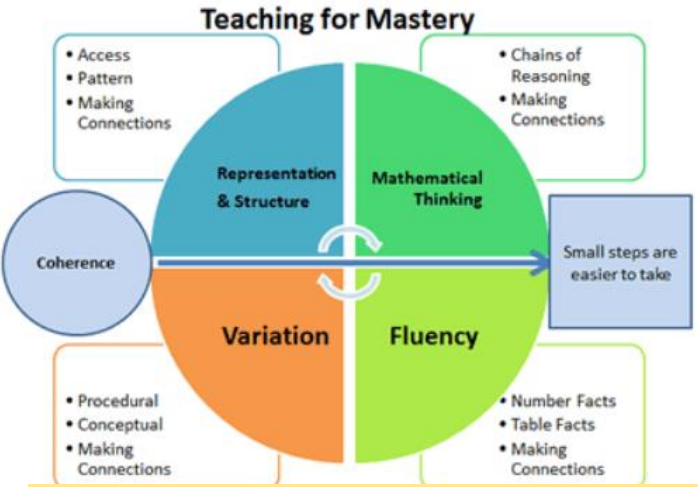
Maths at Bolton-on-Swale St Mary's C of E Primary School

Pedagogy:

At Bolton-on-Swale we teach Maths using a 'teaching for mastery' approach.

This approach to teaching maths means that instead of learning mathematical procedures by rote, pupils develop a deeper understanding of mathematical concepts. This will enable them to make connections and apply their learning in different situations.



Different approaches have different benefits, different challenges and require additional strategies to be used to ensure they are successful. (Babcock 2016).

Planning:

- **Our planning follows the three main aims of the national curriculum:**

1. become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
2. reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
3. can solve problems by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

- **White Rose Maths is used to guide our planning and teaching. One step is not a lesson.**

*Whilst some teachers preferred to provide a separate input on a regular basis, **many teachers preferred to start with the whole class together whenever possible**.., Babcock (2016).*

- **Be flexible and adaptable to change.**

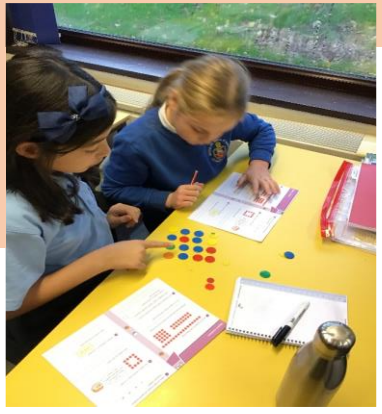
Flexibility is crucial; decisions about how to structure the lessons can depend on the different age groups in the class, the structure of the school, the mathematical learning behaviours and current attainment of children in the class and the maths being taught.' Babcock (2016).

- **Mixed aged classroom setting**

Younger children benefit from mixed aged classes. They are able to mix with older students who can act as role models and facilitators. Encourage peer to peer collaboration, this can help positive social effects too (Berry, C).

- **Block sequence planning**

Block scheduling allows children to focus on one subject in more depth, rather than skipping from one to the next in quick succession.



In lessons we:

- **Encourage mathematical talk.**
- **Maximise the use of models, images and equipment.**

Use manipulatives and representations to encourage discussions, create opportunities for extended discussion of mathematical ideas with children. Carefully listen to children's responses (EEF, 2017).

- **Faded scaffolding to build mathematical independence.**
- **Teach strategies for problem solving.**
- **Key vocabulary is identified, taught and discussed regularly.**
- **Live marking provides children with on the spot feedback.**

•Feedback should focus on moving learning forward, targeting the specific learning gaps that pupils exhibit. High quality feedback may focus on the task, subject, and self-regulation strategies (EEF,2017).

The White Rose Scheme is used as a guide; we link tasks and resources to our Learning Objective.

White Rose Videos support home learning only. In Class we maximise active teaching and a love of maths. We promote classroom 'buzz'.'

- **Teachers use a range of questioning to deepen understanding.**
- **Each class has a working wall display.**

EYFS:

- **Children have opportunities to develop a deep understanding of numbers to 10, including addition and subtraction number bonds; recognise doubles to 10 and count verbally beyond 20. Children will enjoy number rhymes and games. They will use language of greater than, less than, odd and even and share out quantities evenly.**
- **Learning journeys celebrate achievements in Maths.**
- **Rich mathematical language is used.**
- **Concrete and pictorial representations.**
- **Resources, equipment and provision areas promote independent learning.**

Low attainers:

- **Track and monitor progress with assessment and live marking in class.**
- **High quality targeted support can provide effective extra support for children.**
- **Small-group support is more likely to be effective when: sessions are brief and regular, explicit connections are made between targeted support and everyday activities or teaching.**

Assessment:

- **White Rose Topic Assessments.**

This tool is used to track any underlying misconceptions, teachers be proactive and use a fast approach to go back and re-cover key skills and knowledge. Aiming for a deep understanding is our priority.

- **White Rose Termly Assessments.**

Data analysed by class teacher- GAP analysis and RAG scores to view.

- **Data recorded termly on Sonar Pupil Progress Tracking.**

SLT and Subject leaders can monitor the progress of each class.

SEND:

- **In order to be inclusive our SEND children follow the same blocks as their class. Adaptative teaching and planning will be utilised.**
- **Children will be supported through additional adults, different resources, collaborative peer to peer learning.**
- **Children may complete additional pre and post teaching outside of maths lessons.**
- **SLT, Maths Lead, Class Teacher and SEND coordinator to liaise with each other.**