

Badgerbrook Primary School Maths Policy

Vision and Aims- Our Intent

Vision

At Badgerbrook, we see the acquisition of mathematical skills as being vital for the life opportunities of our children. Through providing a rich, wholesome mathematics curriculum, rooted in problem solving and reasoning, we strive to ensure that every child is able to achieve excellence in mathematics. Our concrete, pictorial and abstract approach to the subject will enable a deep, mastery-level understanding. Provided with regular opportunities to make links with maths in the real world and other curriculum areas, children will leave Badgerbrook knowing how interconnected and fundamental maths is to the world around us.

Aims

Using a holistic approach to the teaching of mathematics, here at Badgerbrook we aim for our students to:

- develop a positive, enthusiastic and inquisitive attitude towards mathematics
- develop competence and confidence in mathematical knowledge, concepts, procedures and skills
- be able to use, apply and make links with mathematics across the curriculum and in the real world
- apply mathematical knowledge and understanding to problems (both routine and non-routine), including breaking down more complex problems into a series of simpler steps
- be able to reason about mathematics through explaining, justifying and proving
- be fluent with numerical facts including number bonds and times and divide facts
- see, show and understand that maths can be represented in a variety of different ways including through the use of concrete manipulatives, pictorial methods and abstract calculations
- make rich connections across mathematical domains
- be challenged with rich tasks that deepen understanding
- be supported by their peers, adults, resources or via differentiated work when necessary

Teaching and Learning- Implementation

Power Maths

Power Maths is a whole school mastery teaching programme that we use as the foundation for our daily maths teaching. The scheme was introduced (Spring 2019) to develop consistency amongst teaching and learning in our school and to nurture confidence in maths. Power Maths has problem solving at its core which equips our teachers with opportunities to advance engagement and stretch our greater depth learners. The scheme provides an enriched approach that combines interactive teaching tools and quality text and practice books that we feel provide our children with a robust and rigorous curriculum alongside daily opportunities to recognise how maths relates to real-life contexts. The mastery element ensures that each lesson moves in small, progressive steps that keep the class together with no child being left behind (where possible). The curriculum is taught in blocks, with each year groups content building upon the last, ensuring that progression is consistent across the school.

Pupils are provided with a variety of opportunities to develop and extend their mathematical skills including via group work, paired work, whole class teaching and individual working.

-Problem Solving

In addition to their 5-hourly Power Maths sessions, at Badgerbrook, all children have further opportunities to access routine and non-routine problem-solving tasks that develop their mathematical resilience and understanding, this is delivered through targeted weekly sessions. These sessions will include the teaching of problem-solving strategies by the class teacher to help children to tackle progressively more complex problems, develop creativity and imagination, experience procedural variation and to learn how to communicate results clearly and systematically.

-Recap and Revisiting

We are aware that teaching a block curriculum can result in fewer opportunities to embed learning through regular revisiting of concepts, with this in mind, we have incorporated into our timetable regular slots that enable teachers to recap previously taught concepts to keep things fresh in our learner's minds and provide consolidation opportunities for those who require it.

-Times Tables Rock Stars (TTRS)

We have chosen to incorporate TTRS into our regular maths teaching to ensure our children are constantly provided with opportunities to develop a rapid and accurate recall of their times and divide facts via an interactive and engaging medium. Children practice in school using the TTRS worksheet programme. In addition, they each have a personalised login that will enable them to access TTRS online where they can compete in a variety of challenging game modes. Children are incentivised to engage with TTRS through a whole school competition which sees children compete for title of Most Rapid, Most Accurate and Rock Hero Status.

- Resources

Concrete resources are used across the school to help children to learn through concrete experiences and physical manipulation. In addition, we use resources to develop and build upon children's understanding of conceptual variation, enabling them to see how maths can be represented in a variety of different ways. Resources are available to the children in every maths lesson, and may be presented in the form of a resource bag (1:2) or loose on tables- this is at the discretion of the teacher. Resources can be added to by the teachers as they see fit, but as a starting point each class has readily available:

- Dienes
- Place Value Counters
- Dice (1-6, 6-12)
- Number Lines
- Place Value Charts
- Multiplication Squares
- Part-Whole-Model templates
- Bar Model templates

- Working Walls

Working walls are used across the school as purposeful reminders of previously taught concepts or procedures, as well as for displaying valuable stem sentences and subject-specific (sticky words) vocabulary that will help to recap and embed learning.

-Homework

We provide children with weekly arithmetic homework across all year groups to develop speed and efficiency in arithmetic and help children to recap and revisit previously taught concepts.

- Greater Depth

Children will be encouraged to deepen their learning in each maths lesson with challenges sourced from Nrich, TestBase, White rose, I see reasoning (or any other reputable source chosen by the class teacher). In addition, during teacher input there will be opportunities for deeper learning via: intelligent, open ended teacher questioning; the use of the Diving Deeper mastery tasks; and differentiated starting points in practice books. It is up to the teacher to decide who she/he feels is able to accelerate through lessons in order to spend more time on deepening activities.

- Intervention

Where possible, same day interventions will take place for children who have been identified as needing consolidation or support, in addition teachers and support staff will provide in class interventions.

-Whole Class Teaching

Generally, children will work in mixed ability groups however, this can change at the teacher's discretion, who may choose to put similar ability children together to work on specific tasks.

-Journals and Jotters

Children will document their working out in daily maths lessons in their maths jotters, children will make jottings in a way that best suits their mode of working and will be personal to them. During problem solving sessions, children will evidence their working out in this same book but it will also function as a journal, enabling them to document their thinking, learning and progress.

Parental/ Community Involvement

We value parent involvement in children's development of maths and promote a home-school partnership in the following ways:

- Sharing information- curriculum workshops / evenings, progression documents and calculation policies accessible to parents
- Homework- in line with our homework policy and home school agreement.
- Times Tables Rockstars (TTRS)- students all have a login to access TTRS from home

Where appropriate, parents are invited in to school to engage in lessons/work-shops or to peruse work produced.

<h3>Assessment and Monitoring- Impact</h3>

- Assessment

Children will complete end of block formative assessments, these will inform the teacher of any children who, after immediately completing the unit, are still struggling to grasp concepts and therefore in need of consolidation. Regular revisiting of work will ensure concepts are embedded. Summative assessments will happen termly. Both Arithmetic and Reasoning & Problem-Solving papers will be analysed by both the class teacher and maths lead to help identify vulnerable individuals and to ensure children and classes are on track and progressing effectively.

-Staff Development

Teachers are expected to keep up-to-date with subject knowledge and to use current materials that are available in school or on the government website. Training needs are identified as a result of whole school monitoring and evaluation, performance management and through self-analysis. The subject leader is keen to share best practice and disseminate up-to-date initiatives to staff via inset training to ensure the subject is constantly evolving to meet the demands of curriculum expectations. In addition, external courses and work groups are made readily

available to all staff, who may have perceived areas of need. Available courses are disseminated by the maths Subject Leader and the Senior Leadership Team (SLT) and are usually organised by (but not restricted to) The East Midlands Maths Hub or Thomas Estley Learning Academy (TELA).

-Monitoring

The subject leader, SLT and Governors all play a role in the monitoring of Mathematics at Badgerbrook Primary School. Regular monitoring via learning walks, book trawls and pupil / staff voice feedback ensures the subject is constantly being reviewed and regulated to ensure the best learning opportunities for all. The Maths Governor has a strategic role in the monitoring process and reports to the Governing body on aspects of Mathematics in the school.

Review

This policy was reviewed and adopted in March 2020. It will be reviewed at least 3 yearly in line with the school's policy review schedule.

Mathematics Subject Leader: Miss K Whitmore

Signed: 
Headteacher

Date: March 2020