BPS MATHS CURRICULUM AT A GLANCE

Your aims and ambitions for the curriculum

We believe a high-quality Maths Curriculum will ensure that pupils are passionate and inquisitive about Maths through high quality lessons, teachers build on prior knowledge and use manipulatives during lessons to support their learning.
Our broad Maths curriculum allows pupils to feel good about. The profile of Maths is high within school and is taught for 4 hours Maths week where possible, in addition to this all children have 10-15 minutes daily Maths starters whereby they're revisiting previously taught concepts (excluding FS). Class 2 children also have a time-tabled weekly TTRS session.
We regularly assess pupils' mathematical knowledge and skills using NFER tests, these provide teachers with valuable insights into individual pupil needs. This enables teachers to tailor their teaching and intervention strategies to address any gaps in understanding and support pupils' progress effectively. The class teachers will be able to show are share these with you upon request.

Scope and breadth of the curriculum

The disciplinary knowledge of our Maths curriculum begins in FS2 and the learning is focussed heavily on expanding their own knowledge and experiences. This knowledge builds from FS2 right up to UKS2.

Our curriculum is aspirational as it leads pupils to achieve and fulfil the requirements of the National Curriculum.

We have a detailed and structured plan of objectives (taken from White Rose) of what concepts are being taught, in which year group and when to ensure appropriate coverage. This plan is important as it allows all staff to know when and where pupils are beginning taught about different concepts and what children should already know and what they're going to need to know to move forwards with their learning. These include addition, subtraction, multiplication and division facts, alongside other facts such as; conversions m/cm/mm, ¼ = 25% = 0.25 etc.

What to teach and when

The substantive knowledge in Maths is organised around key units each half-term. These are progressive and the mixed-year sequencing from White Rose's long-term planning is followed – this is highlighted with the school's curriculum policy document.

As professionals who work with children within mixed age groups, we have an awareness of not only where children have come from, but where they're moving to in terms of calculation. Using this knowledge allows teachers to move children swiftly onto more formal methods of calculation, reducing the risk of pupils being held back and stops them using inefficient methods. Please refer to our calculation policy.

One of our strengths are our Teachers and their knowledge of the children. They are strong and confident in their roles and have high expectations of pupils. They utilise TA's and resources to ensure the children receive the best education we can offer them. They are well organised and plan from the White Rose long term overview, enhance and adapt this to suit the children within their classes. In turn, this means we have a large number of confident mathematicians in school and good data to back this up.

Know more, do more and remember more

Our curriculum and teaching has substantive knowledge planned across class groups into each unit, providing opportunities for retrieval practice of prior knowledge and vocabulary at the start of each lesson.
In line with EEF guidance, maths homework is set for all KS2 pupils to help with long-term memory and enable pupils to familiarise themselves with previously taught concepts. LKS2 also do weekly TTRS both in and out of school to improve their accuracy and fluency of all times-tables. All classes in BPS have a working wall for Maths, which links the current concept of learning. (e.g. area).
All classes have aide memoires in the form of: number lines, posters, table mats and resources readily available for all children to use. KS1 daily use the group room and split the class into year 1 and 2, meaning they're working in small classes. The group room is also set up to support their learning with a number of visual aids and resources available. Mathematical vocabulary and notation is used on whiteboards during lessons to aid and support their learning.

Sequencing of learning, particularly through concepts, vocabulary and skills

Our BPS curriculum ensure success through its sequencing beginning with simple mathematical concepts in FS and building on this knowledge as the mathematical concepts progress throughout school using the White Rose long term planning. Pupils are taught about concepts such as; subsiding and number sense from FS.

As a school to ensure non-specialist Mathematical practitioners and ECT are supported with their subject knowledge and delivery we use a number of reputable resources to enhance a logical sequence of the White Rose long term plan (mixed year group). Which identifies the core knowledge/mathematical concepts.
Our curriculum is planned to ensure that all mathematical facts, methods and strategies are identified through the declarative, procedural and conditional content categories.

Our long term plan (following White Rose) identifies the most important facts, formulae and knowledge for pupils to learn in order to promote automaticity. The whole school undertake daily Maths starters (10-15mins) for recall and retrieval to embed their knowledge 'sticky'.

We have a carefully sequenced curriculum where children regularly revisit concepts throughout their journey – interleaving curriculum. This ensures their acquisition is ordered so that there are opportunities to both learn and use all knowledge (both prior and new), until both pace and accuracy are achieved. Our lower attaining children work with teachers and teaching assistants every lesson to ensure they get the support they need.
The reputable scheme ensures that there is opportunity for pupils to develop a pre-requisite knowledge to solve word problems through a mixture of not just fluency, but varied fluency and reasoning and problem-solving activities through Classroom Secrets resources.

Mathematical vocabulary is displayed within the learning environment of each classroom on the working wall, IWB and on the learning objective – pertinent to each unit. The rationale for BPS's teaching approaches include; assessment for learning, adaptation, reasoning, visual displays, teaching (auditory) and kinesthetic (hands on, using apparatus) approaches are used during every lesson. We use a systematic and progressive approach during lessons that builds up over time. Adults model language, shown in our classroom environments and these representations of how to access a mathematical concept are carefully mapped out within the BPS calculation policy. Pupil are actively encouraged to provide 'noisy thinking' or 'think out loud' to discuss and explain their reasoning when undertaking work, work may also contain deliberate misconceptions to promote discussion.

We ensure that further challenge for pupils involves facts, methods and strategies they already know to add breadth and depth to their learning to ensure that it is not superficial, but known and remembered. This is done to ensure that we do not risk 'dysfluency: and/or the accumulation of misconceptions over time, particularly for DP/B20% pupils. Staff ensure, by using their professional judgement, that automaticity is practised (particularly for aspects of fluency) to empower subsequent learning. Further enhanced through guided practice and children working with adults, bridges the gap between receiving new knowledge and using the new information independently.

Curriculum adaptation; Access for all.

For the B20% of pupils, DP pupils and pupils with SEND, work is adapted prior to the lessons to meet the needs if a child requires a simplified alternative. Pupils who require additional support with their learning are supported through bespoke/adapted 1:1 and/or in small groups. At the beginning of the lesson, there is explicit teaching of the most important mathematical concept and vocabulary. An area of strength within the delivery of our curriculum is the adaptation to ensure that the learning is practical so that all learners can access the full curriculum. Learning is shared with the support staff prior to the lesson taking place to ensure they are aware of the lesson intent. Every interaction is an intervention, however further intervention is done through the '5 minute box'.

CPD

23.05.23: White Rose: On Demand Training (Teaching team)*
20.06.23: What subject leaders know and do - East Mids. Education Support Service (ED/KP/EH)
04.09.23: Effective use of spacing and retrieval practice to boost classroom learning – National College (ALL)
05.09.23: A Practical guide to scaffolding to support Disadvantaged pupils – National College (ALL)
14.09.23 – Subject Leader Action Planning Twilight
09.11.23: Phil Abbott – What subject need to know – INSET training. (ALL)
23.11.23: Maths Monitoring (PP with Governor)
01.12.23: LA Subject Leader QA (CG and Mark Aske)
20.12.23: Maths Subject Leadership transition CPD (PP/CG)
22.02.24: Maths Team Monitoring Day (PP/CG)
26.02.24: Maths Deep Dive Day (CG/PP)
26.02.24: Maths Whole school Staff Meeting (All Teachers)
*all teaching staff have an individual login to White Rose: On Demand to be proactive in developing their own professional development.

Deliberate enhancements to the curriculum

We enhance the curriculum through educational visits e.g. Maths at Queen Elizabethan High School (STEM day, more able maths mornings, Maths challenge across schools).

Evidence of this is available via the school website, Class Dojo, class floor books and the school Facebook page.

BPS MATHS CURRICULUM AT A GLANCE

What checks have you completed? What have they told you? What did you do about it? What is the impact of this?

Checks:

- Maths Book Look – 07.03.23 (NS/EH)
- Maths Book Look – 23.05.23 (NS/EH)
- Maths Pupil Interview – 15.06.23 (NS/EH)
- Maths Book Look – 15.09.23 (PP/EH)
- Maths Pupil Interview – 15.09.23 (EH)
- Maths Book Look – 23.11.23 (PP with Governor)
- Maths Pupil Interview – 20.12.23 (CG)
- Maths Book Look – 08.01.24 (CG)
- Deep Dive/QA time: Maths at a Glance – 22.02.24 (PP/CG)
- Deep Dive/QA time – 26.02.24 (CG/PP)

Findings:

- Children feel confident in using manipulatives from within the learning environment to support their learning of mathematical concepts. **(15.6.23)**
- Focussed work to ensure consolidation of mental strategies, calculations and arithmetic (in UKS2) is taking place daily from Class 1 to Class 3. **(23.11.23)**
- There is a consistency in the whole-school approach to following the White Rose LTP, enhanced and developed through resources from Classroom Secrets. **(23.11.23)**
- Equity in mathematics is evident for all groups of pupils, with pupils being supported by adults to achieve the same as non-DP pupils. **(23.11.23)**
- Pupils are able to independently access the maths table within provision to consolidate their learning of the mathematical concepts that have been previously taught. **(26.2.24)**
- Coverage in FS2 matches that outlined on the school's long term plan, taken from White Rose. **(26.2.24)**
- Coverage in C1, C2 and C3 are broadly in line with the school's long term plan, given that some classes have consolidated some mathematical concepts for a week longer in some cases. **(26.2.24)**
- FS2 learning environment displays the most up-to-date mathematical language and images (linked to the word) to build pupil's tier 3 vocabulary in maths. **(26.2.24)**
- Children across school are able to articulate their learning in maths and actively engage in their learning. **(26.2.24)**
- KS1 pupils receive focussed, small group work to access their maths sessions. This is scaffolded through adult support, manipulatives and through hierarchal adaptations to the resources. **(26.2.24)**
- Challenge for the most able is prevalent in KS1 **(23.11.23)** and UKS2. **(26.2.24)**
- Presentation across the pupil's books is appropriate standard (in line with school policy) across the whole school. **(26.2.24)**
- Homework in maths is actively taking place to consolidate pupil's knowledge of mathematical concepts.

Next steps:

- Plan in time for further White Rose: On Demand training – with a focus on training for the ECT
- Plan in opportunities for further subject leader training for CG
- Ensure consistency across school with regard to updating the working walls, linked to the topic at the time.
- Allow pupils the opportunity to revisit misconceptions in their learning, in order to ensure pupils can learn from their mistakes.

Actions taken:

- Delivered staff training for White Rose on 26.2.24 to update/remind around 'On Demand' training and how pupils need to progress across their learning within a lesson
- CG (Subject lead) is facilitated with 1 hour of non-contact time for mathematics each week.

Impact of actions taken:

- Subject leader (CG) feels more confident of whole school knowledge of the children's mathematical journey/learning across school
- Informal monitoring shows that pupils are progressing correctly (and consistently across school) when following the Classroom Secrets resources (D➔E➔GD etc.).