

*"Learning Today, Leading Tomorrow"*



**Bishops Down Primary School**

[www.bishopsdownprimary.org](http://www.bishopsdownprimary.org)

# Mathematics 2017 - 2018 Policy

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Reviewed and updated by:

Simon Wyke Subject Lead  
Standards Committee

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## **Mathematics Policy Introduction**

Mathematics teaches children how to make sense of the world around them through developing their ability to use number, calculate, reason and solve problems. It helps children to understand relationships and patterns in both number and space in their everyday lives. The Mathematics curriculum should be bold, provide breadth and balance and be relevant and differentiated to suit the needs of all children in the modern world. It should be flexible, motivating all pupils, thus encouraging success at all levels.

## **Aims**

### **General**

To ensure all staff, children, parents/carers and Governors are aware of the aims for learning and teaching Mathematics at Bishops Down Primary School and that these are consistently applied.

### **School Staff**

- To promote a confident, positive attitude towards the learning and use of Mathematics making it an enjoyable experience;
- To promote confidence and competence with numbers and the number system;
- Encourage pupils by believing that every child, with hard work, can be good at Mathematics through promoting a **Growth Mindset**.
- To promote the ability to solve problems through connecting ideas, decision-making and applying their mathematical skills in a range of contexts, including other subjects such as Science and PE;
- To promote mathematical reasoning by following a line of enquiry, developing an argument and making justifications using mathematical language;
- To promote a practical understanding of the ways in which information is gathered, presented and used;
- To promote the exploration of features of shape and space and develop measuring skills in a range of contexts;
- To understand the importance of Mathematics in everyday use, especially in relation to essential life skills, such as telling the time and understanding money.

### **Children**

- To develop an enjoyment of learning through practical activity, investigation, exploration; mental exertion and discussion;
- To develop confidence and competence with numbers and the number system;
- To develop the ability to solve problems through connecting ideas, decision-making and applying their mathematical skills in a range of contexts, including other subjects such as Science and Geography;
- To develop the ability to reason mathematically by following a line of enquiry, developing an argument and making justifications using mathematical language;
- To develop a practical understanding of the ways in which information is gathered and presented;
- To explore features of shape and space, and develop measuring skills in a range of contexts;
- To understand the importance of Mathematics in everyday life, especially in relation to essential life skills such as telling the time and handling money; and
- To foster positive attitudes towards Mathematics by developing pupils confidence, independence, persistence and co-operation skills and understand Growth Mindset in a Mathematical context.

### **Parents and Carers**

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- To be understanding and supportive of our aims in learning and teaching Mathematics.
- To attend and contribute to Parent Consultation Meetings.
- To support their children with Mathematics homework activities (Big Maths Beat That) including the importance of learning their number bonds and times tables off by heart.
- To praise their children for the good things that they do in Mathematics.
- To communicate and work with School whenever further support is needed to develop their children’s mathematical skills and understanding.
- To make mathematics part of children’s everyday lives.

### **Governors**

To appoint a designated link governor who will:

- Meet with the Mathematics Subject Leader at least once a year to find out about;
- The school’s systems for planning work, supporting staff and monitoring progress;
- The allocation, use and adequacy of resources;
- How the standards of achievement are changing over time.
- Visit School and talk to pupils about their experiences of Mathematics;
- Promote and support the positive involvement of parents in Mathematics;
- Attend training and other events relating to the Mathematics curriculum;
- Report jointly with the Subject Leader, both for the School Prospectus and to the governing body with recommendations, if appropriate, once a year.
- To be understanding and supportive of our aims in the learning and teaching of Mathematics and to review this policy annually.

### **Implementation of the Mathematics Policy**

#### **Foundation Stage organisation**

- Our Foundation Stage teachers use the Early Years Foundation Stage Curriculum to support their teaching of Mathematics in the Foundation Stage.
- The children have the opportunity to talk and communicate in a widening range of situations and to practise and extend their range of vocabulary and mathematical skills.
- The children explore, enjoy, learn about, and use Mathematics in a range of personalised situations.
- Mathematics is planned on a weekly basis and assessed using the criteria from the Early Learning Goals.

#### **The National Curriculum for Mathematics (Programmes of Study)**

- Our teachers in Years 1, 2 and 3 follow the Inspire Maths series, which is based on the principles of how Mathematics is taught in Singapore and aligned with the National Curriculum 2014, to support their planning and delivery of Mathematics teaching.
- Inspire Maths is in its 3rd year and will be rolled out yearly to full implementation by 2020 across all key stages.
- As an interim measure our KS2 teachers in Years 4, 5 and 6 follow the White Rose Hub Mathematics scheme based on the same principles of mastery. Assessment of mastery within Mathematics will be supported by the NCETM Mastery Assessment documents for each year group and tracked by termly progress assessments and teacher judgement.
- The Inspire Maths textbooks and workbooks are arranged in chapters and over the course of the academic year, all units of the National Curriculum 2014 are covered.
- The White Rose Hub Mathematics scheme also has full coverage of the National Curriculum 2014 objectives for each year group.
- The short term planning is done weekly, listing the specific learning objectives that are to be covered in each year group class for each lesson that week.

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- Teaching and learning is differentiated to best match the needs of the class and the individuals within it using Concrete, Pictorial and Abstract representations.
- If the needs of the children are best met following an alternative plan, which deviates from the National Curriculum 2014, then the class teacher and the Phase Leader discuss this and decide on a way forward.
- Each pupil in KS1 and KS2 has a Maths Passport which they take with them through the school. The passport consists of 8 different sections (7 continents and the final section being ‘Globetrotters’). Each continent has between three to six different essential mental maths targets that we expect all pupils to be able to achieve using rapid recall of facts. Pupils practise targets regularly in class or at home and when ready are challenged to complete 10 questions within a set time.

### **Key Stage 1 organisation**

- Children in KS1 are taught Mathematics for approximately 1 hour daily in mixed ability class groups.
- At the beginning of each Mathematics lesson all children undertake an Oral/Mental Starter activity.
- Maths Meetings are used outside of the main lesson to handle misconceptions and refresh pupils on concepts already covered earlier in the year. These should be no more than 10 minutes and are for consolidation and not to teach new content.

### **Key Stage 2 organisation**

- Children in Years 3, 4, 5 and 6 are taught Mathematics in mixed ability class groups and are taught for approximately 1 hour daily.
- At the beginning of each Mathematics lesson all children undertake an Oral/Mental Starter activity.
- Maths Meetings are used outside of the main lesson to handle misconceptions and refresh pupils on concepts already covered earlier in the year. These should be no more than 10 minutes and are for consolidation and not to teach new content.

### **Planning formats**

- The School uses the Inspire Maths series in KS1 and White Rose Hub in KS2 for long and medium term planning and this informs our teachers’ weekly short term planning.

### **Calculation Policy**

- Please refer to our Calculation Policy which can be found on our website in the Curriculum/Maths area.

### **Cross curricular**

Opportunities are used to draw mathematical experiences out of a range of activities in other subjects, such as in PE (Maths of the Day), Science (Empirabox) and Geography, to enable children to apply and use Mathematics in both real life and academic contexts and make links.

### **Resources**

- The use of Mathematics resources is integral to the concrete – pictorial – abstract approach and thus planned into our learning and teaching.
- We have a wide variety of good quality equipment and resources, both tangible and ICT based, to support our learning and teaching.
- These resources are used by our teachers and children in a number of ways including:

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- Demonstrating or modelling an idea, an operation or method of calculation, e.g.: a number line; place value cards; dienes; money or coins; measuring equipment for capacity, mass and length; bead strings; the interactive whiteboards and related software; 3D shapes and/or nets; Numicon and related resources and software; multilink cubes; clocks; protractors; calculators; dice; number and fractions’ fans; individual whiteboards and pens; and 2D shapes and pattern blocks, amongst other things;
- Enabling children to use a calculation strategy or method that they couldn’t do without help, by using any of the above or other resources as required; and
- Providing a context, where possible and linking it to the application and practise of calculation strategies and number skills.
- Standard resources, such as number lines, multi-link cubes, dienes, hundred squares, shapes, etc. are located within individual classrooms.
- Resources within individual classes are accessible to all pupils who should be encouraged to be responsible for their use.
- Further resources (often larger items shared by the whole school) are located in the Mathematics cupboard.
- A range of Mathematics related software is also available and this is accessible via the shared server, which children can access when projected onto the Interactive Whiteboards in each classroom; by using individual Ipads; or by using the Computing suite as a whole class.
- Teachers are encouraged to use the school playgrounds as an outdoor classroom when possible, for example, when teaching length, area or perimeter.
- Each year group in the school has access to Numicon resources relevant to their class groups. The Numicon resources are tangible resources, which are used for individual interventions; intervention groups; or in-class focus groups in all year groups, but focused particularly on KS1 and Foundation Stage. Teachers also compliment the use of Numicon with use of the Numicon Interactive Whiteboard software.

### **Homework (please refer to the School’s Homework Policy)**

- Mathematics homework is set for children in Years 1 –6 in the form of Big Maths Beat That!
- Subsequent homework maybe be set at the discretion of the class teacher where it is felt the child could benefit from more practise and consolidate their skills and knowledge.

### **Parents/Carers**

- The School aims to involve parents/carers in their children’s learning as much as possible and to inform them regularly of their child’s progress in Mathematics.
- Parents/carers have the opportunity to meet with child’s class teacher at least twice a year at Parent Consultation Meetings and receive written reports during the year.
- Parents/carers are encouraged to speak to their child’s teacher at any point during the year, either informally or by making a specific appointment to discuss anything to further support them at home.
- Information about their child’s standards, achievements and future targets in Mathematics is shared with parents/carers at these times and also ways that parents/carers may be able to assist with their child’s learning.
- Parents/carers are encouraged to support their children with homework.
- School also provides a number of opportunities for parents/carers to learn about what their child is learning and the way their child is being taught through Parent Evenings.
- The Year 6 teachers annually hold a SATs Parent’s Evening to inform and discuss the SATs tests in Mathematics.

### **Subject Leader**

- The role of the Subject Leader is to provide professional leadership and management in Mathematics in order to secure high quality teaching, effective use of resources and high standards of learning and achievement for all pupils.

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- They will achieve this by affecting the following key areas: strategic direction and development; learning and teaching (including planning and marking and presentation); leading and managing staff; and efficient and effective deployment of staff and resources.
- The Subject Leader will train and coach staff on Mathematical pedagogy within the school and keep up to date with developments from a county and national level.
- The Subject Leader has regular discussions with the Head Teacher and other senior leaders about learning and teaching in Mathematics and provides data and a subject overview of the strengths and weaknesses of Mathematics within Bishops Down Primary School on a termly basis.
- During the academic year the Subject Leader has specific allocated time for subject self-evaluation activities.