



## Broomwood Primary School



### Maths Policy

#### Philosophy Statement

At Broomwood Primary School we believe in developing the whole child and recognise mathematics as an important part of that picture. Together as a whole school, we strive to deliver an engaging maths curriculum which caters for all children's varying needs. We have a commitment to recognising the requirements of all learners in our care and welcome the diversity of skills we have in our classrooms. Our curriculum is designed to stretch all children from their starting points and nurture a reflective culture within our classrooms. All learning experiences strive to contain an application element ensuring that children understand why and where their knowledge can be used. Through our approach we aim to foster a love of mathematical learning as well as a respect for its importance in our everyday life.

#### Aims

- To develop confident learners who can work flexibly and independently
- To nurture inquisitive mathematical thought and encourage children to ask questions
- To foster a positive attitude towards maths and a respect for its importance in life
- To encourage children to apply mathematical skills and knowledge in other curriculum areas as well as through real life contexts
- To furnish children with the skills to work both independently and cooperatively to solve mathematical problems
- To develop personal qualities such as perseverance, independent thinking, cooperation and self-confidence

## Curriculum Design

Our mathematics curriculum uses the National Curriculum as its base and this is where it draws the core learning objectives from. Learning is mapped out across all key stages and year groups to ensure that curriculum coverage is met and all children have access to all of the curriculum units.

Each term includes a mixture of topics drawn from a variety of mathematical areas such as: number, geometry, measure, algebra and statistics. This ensures variety of learning and maintains interest across the whole term. Guidance is also given around the length of time that should be spent on each area of the curriculum. Once again this ensures that children will cover the necessary curriculum areas for their year group and spend an appropriate level of time on each unit. In addition to directed teaching, time is also provided within the curriculum for regular revision and assessment units. This ensures that children's progress can be regularly tracked and gives teachers some additional time to revisit and consolidate any areas of difficulty.

Our curriculum is designed so that subsequent year groups revisit and build on the learning that has gone before it. We have found that this mapping ensures continuity across the school and supports children's transitions across year groups.

## Lesson Design

At Broowmood Primary School we use an episodic approach to teaching mathematics within our classrooms. An episodic teaching approach breaks down learning into small episodes (tasks/activities). Each episode contributes towards the overall development of learning towards an intended goal. Each small section of the lesson moves on from the former and towards the latter and children can join the process at different episodes, dependent on their ability.

### **Why use an episodic approach?**

We use this approach as we feel it increases children's independence and resilience as much of the onus for progress is placed upon the child. This approach also allows activities to be accurately differentiated and really focus on the specific issues that children need to develop. In addition, it gives children more focused time with teachers in smaller groups ensuring greater impact of teaching time. Finally, we believe it supports and stretches learning, leading to accelerated development.

### **What does the episodic process look like?**

- Pre-learning task

- Detailed planning
- Accurate differentiation of episodes
- Active group and independent work
- Regular assessment for learning
- Marking, feedback and re-grouping
- Post-learning task

### Pre-learning

This activity is used to assess children's previous knowledge and highlight any gaps in their understanding. The questions set within a pre-learning exercise should assess children's starting points in relation to the unit they are about to begin. Once pre-learning has been completed this forms the basis of our planning and also allows us to initially group our children effectively.

### Detailed Planning

When planning we think about our overall objective for a session/sessions and break this down into smaller episodes of learning. Each episode contributes towards the overall development of learning towards our intended goal.

### Active Group Work

As highlighted within planning the teacher will always be implementing an episode with a small group throughout the whole session. This small teaching packet will introduce a new concept to the group or build on a concept learnt in previous work. Each episode should move through concrete, pictorial and abstract representations of the concepts being taught. These representations should be added to the working wall within the classroom so children can access these whilst completing independent consolidation.

Whilst the teacher is with a group, the remainder of the class will be working independently on consolidation work. Once one episode has been completed the teacher will begin to work on a different episode with another group. Groups will be encouraged to move through as many different episodes and consolidations as possible within the session, increasing the progress groups make.

### Accurately Differentiated Episodes

After each episode children will be expected to complete some independent practice. These should be short tasks testing the application of a skill in different ways. The colour of the activity being tackled should be

used a sub-heading within children's books. Activities should be differentiated from lower to higher using the colour system red, orange, yellow, green, blue and purple. The green activities are the expected level therefore the vast majority of children should see this at some point during the session. Each colour group may not be a completely different activity however learners may be supported in a different way. Every activity provided should have some form of problem solving, puzzle or application attached.

### **Regular Assessment for Learning**

Before, within and after each episode teachers assess the progress of the individuals within their group and from around the classroom. The pace at which a child moves through the episodes is dictated by their ability and application of this through consolidation. With accurate assessment for learning the speed of progress increases and allows greater support and stretch within the same session. As mentioned previously children will not always start at the same level or end at the same level, this is always dictated through assessment.

### **Marking, Feedback and Re-grouping**

For this approach to be successful marking, feedback and re-grouping needs to be completed after every session. Assessment will inform teachers of re-groupings and give them their starting points for the following day. Feedback given to children will be in-line with that set down in the schools **Marking and Feedback Policy** and always builds towards future learning. Any extension tasks that are set for children should test the same skill they have been learning in a different way, it is about applying the same knowledge in a variety of ways. Any corrections that have been highlighted should give children the opportunity to practice this skill again but in a supported way. Finally, all targets set should relate to any corrections highlighted and support them to move their learning forward.

### **Post-learning**

Post learning is the final activity implemented within a unit of work and gives the children within the class the opportunity to highlight all the learning that has taken place. This final assessment is the evidence that teachers use to complete formal assessment records which are updated after each unit of work. It also shows the children the progress they have made over a short period of time and increases confidence and sense of achievement. Post-learning also highlights areas of the curriculum that need greater focus in the future or skills that should be worked on through targeted intervention.

## **EYFS**

We believe that maths learning within the EYFS should be child led, investigative and without boundaries. Concrete resources form the basis of all learning opportunities with children being the driving

force behind maths discovery. Maths is immersed within our EYFS learning spaces, ensuring that learning opportunities can be maximised and developed when and where they present themselves.

The basis of maths learning within the EYFS comes from The Early Years Foundation Stage Curriculum. The objectives from this document have been developed into a long term plan ensuring coverage, consistency and smooth transitions across the unit.

All objectives from the long term plan are taught through a 'big question' which is set on a half termly basis. These questions are then broken down into smaller weekly questions and objectives. Class teachers, although working in parallel, adapt these objectives to suit their cohorts and based on previous teaching.

To target the specific objectives set down in planning, teachers will implement a daily maths carpet session, lasting between 15 to 20 minutes. During the day children will then have the opportunity to take part in an adult lead guided maths session which will revise, develop and consolidate the learning from the carpet. In addition to this, children also have free access to continuous provision enhancements which are planned to support the weekly focus and are added to and changed throughout the week.

## Classroom Environment

At Broomwood Primary School we pride ourselves on having bright, interactive and useful working spaces. As innovative practitioners we strive to create an environment that children can access independently and that has real impact on the learning that takes place. To ensure that this is the case there are several features you will see present in every classroom at our school.

### **Working Walls**

Working walls are, by definition, a working document and are added to on a daily basis as a unit progresses. The purpose of a working wall is to support the children with their current learning and enable them to become more independent. Maths working walls should contain the title of the unit that is being covered as well as the learning objective of the lesson being taught. In addition to this, there should be concrete, pictorial and abstract examples of the work that the children are carrying out. This can be accessed by the class throughout the session supporting their ability to be independent learners.

### **Lightbulb Books**

Lightbulb books are created alongside the children and should develop as the year progresses. Support documents and information sheets should be added to the lightbulb books to support the learning within the classroom at that time. These should then be available for the children to access independently throughout the year.

## **Celebrated Good Work**

Within the classroom there should be somewhere where good maths work is shared and celebrated with the rest of the class. This work should be clearly labelled with each child's name and should be updated on a regular basis.

## **Common Resources Labelled and Accessible**

All maths resources around the room should be clearly visible and accessible to children throughout lessons. These resources should be clearly labelled using the schools chosen handwriting script as well as having a visual representation attached. Over the year teachers should encourage children to access support materials independently developing self-sufficient learners within the classroom.

## **Assessment**

Assessment plays a vital role in providing a high quality curriculum that develops children's mathematical knowledge from their starting points. Through the good use of accurate assessment methods and the confident application of the information gathered we can ensure that all children make good progress within maths.

### **Formative Assessment**

As previously mentioned each maths unit begins with a pre-learning task. This activity is used to assess children's previous knowledge and highlight any gaps in their understanding. The questions set within a pre-learning exercise should assess children's starting points in relation to the unit they are about to begin. Once pre-learning has been completed this forms the basis of our planning and also allows us to initially group our children effectively.

Through adopting the episodic approach within teaching it is important that before, during and after each episode teachers assess the progress of the individuals within their group and from around the classroom. This formative assessment guides the speed and direction of progress for each individual within the classroom. It also increases and allows greater support and stretch within the same session.

For this approach to have maximum impact successful assessment, feedback and re-grouping needs to be completed after every session. Assessment from previous sessions will inform teachers of re-groupings that may be necessary and give them their starting points for each individual for the following day.

Finally, the post learning activity is used at the end of a unit of work and gives the children within the class the opportunity to highlight all the learning that has taken place. This final assessment is the

evidence that teachers use to complete formal assessment records which are updated after each unit of work. It also highlights any curriculum areas that may need to be revisited in the future as well as earmarking any potential individuals or groups that may need further support.

### **Summative Assessment**

The results of summative assessments are shared with the Senior Leadership Team on a half termly basis in two different ways. Teacher assessments, which should be evidenced through classroom work and post learning tasks, should be regularly updated on Target Tracker. From these regular assessments, teachers make a judgement about the attainment of each child within their class at the end of each half term and input this into Target Tracker.

In addition to this and to support judgements, children sit a formal test at the end of each half term. Once these have been marked and results collated this information is shared with the Senior Leadership Team on a half termly basis.

The Senior Leadership Team use this assessment data to track the progress of cohorts, individuals and vulnerable groups across the school. It is also used to highlight areas where specific support may need to be provided in the form of intervention programmes and booster classes, ensuring that all children are provided with an equal opportunity to succeed.

### **Homework**

Maths homework should be set, completed and marked on a weekly basis. Homework should be set on a Tuesday and is due back in for assessment by the following Monday. All homework set should be a consolidation and/or application of a skill that the children have been learning within the classroom. Homework should also be differentiated to ensure that all children are being challenged and supported at the correct level of ability.

### **Accountability**

#### **Role of Class Teacher**

- To plan individual lessons on a weekly basis for themselves and their parallel teacher
- To generate a half termly plan based on the Long Term plan provided by the subject lead
- To follow the policy structures when planning lessons
- To mark work on a daily basis
- To adapt planning to suit the needs of the class/group/individual
- To provide resources to support independent learning
- To carry out half termly tests and report data to SLT

- To click statements on Target Tracker, at least every half term.
- To assign a step, each half term, using test data, performance in class and statements to inform judgements
- To attend moderation meetings to re-affirm judgements
- To carry out gap analysis to identify next steps of learning
- To provide evidence of judgements at pupil progress meetings
- To provide evidence of adhering to the policy in performance management
- To respond to feedback from lesson observations, book scrutinise and learning walks

### Role of Subject Lead

- To write and review the policy on an annual basis
- To write an action plan and review it each year
- To keep an up to date checklist of resources
- To order appropriate resources
- To keep up to date on developments within the subject nationally
- To provide support and guidance for staff in relation to the teaching and assessment of the subject
- To produce a scheme of work/long term plan showing what needs to be covered when, for each year group
- To ensure that there is curriculum coverage and appropriate pitch and progression across the school
- To monitor teaching and learning annually, through formal observation and book scrutiny
- To collect data on a half termly basis in order to track standards
- To lead staff meetings to in order to help raise standards within the school
- To meet with the link governor and keep them up to date with standards in the subject
- To write an annual report, for governors, on achievements and standards within the subject
- To demonstrate good/outstanding teaching in your subject in order to lead by example

### Role of SLT

- To monitor whole school data on a half termly basis and discuss with the SLT
- To identify areas of need across the school and make suggestions with regards to intervention and support programmes for staff
- To provide materials/advice for intervention groups
- To hold staff accountable for performance data during performance management and pupil progress meetings



- To track the progress of pupil premium children, identifying any gaps in learning and finding ways to address it
- To track the progress of Rec, Year 2 and Year 6 children from their starting points
- To monitor teaching and learning termly – book scrutiny, planning scrutiny, lesson observation, learning walk, discussion with children
- Support subject leads through performance management targets and by giving them opportunities to discuss any issues and give advice
- Lead by example in all areas of the curriculum

### **Role of Governors**

- Meet with co-ordinators to gain a thorough knowledge of the subject; standards, strengths and areas for development
- To have a good understanding of the policy
- To hold subject leads to account by asking challenging questions
- To be involved in some monitoring of teaching and learning each year
- To hold SLT to account in the governors a meetings
- Approve all relevant policies
- Have an understanding about progress and standards across the school

### **E-safety**

E-safety is the 'Safe and responsible use of technology'. Children will learn about the benefits and risks of using technology. They will be taught what internet use is acceptable and what is not. They will learn how to use the internet safely and what to do if they see something that upsets them. This is important as the internet is an essential elements in 21<sup>st</sup> century life for education, business and social.

Broomwood Primary School is keen to ensure that children always use technology safely and that all children are aware of how to do this. This is taught through lessons, assemblies and E-safety days. Infringements relating to E-safety are taken very seriously and are always investigated (see Computing Policy).

### **Equality**

The School welcomes and values disabled people taking an active part of school life. Broomwood Primary School is keen to make sure that we do not make it difficult for disabled children, young people and adults to be involved in every part of school life. We have a legal duty not to discriminate against disabled people and to comply with the Equalities Act 2010.

Broomwood Primary School recognises that disabled people are very diverse and include people with a physical impairment, visual impairment, hearing impairment, learning difficulty, specific learning difficulty (e.g. dyslexia), mental health issues, people who are deaf, British sign language users and people with long term health conditions.