



## ALBOURNE C.E. PRIMARY SCHOOL Teaching and Learning Policy

'Growing together on our learning  
journey.'

### Introduction and Aims

At Albourne CE Primary School we follow the National Curriculum and agree that maths is a creative and highly interconnected discipline that is essential to everyday life. We want to inspire an appreciation of the beauty and power of maths and a sense of enjoyment and curiosity about the subject.

Our lessons are focussed towards the aims of the National Curriculum:

- Fluency
- Reasoning
- Problem solving

In addition we aim that our children gain:

- Deep and sustainable learning
- An ability to build on previous knowledge
- An ability to reason about a concept and make connections
- Sound procedural and conceptual understanding

### Teaching for Mastery

In 2015/2016 we joined the Maths Hub Teacher Research Group (TRG), led by the Maths Mastery Specialist Teachers, which is looking at the best ways to develop teaching Maths for Mastery in Primary Schools. As a result we have adopted a mastery approach across the whole school.

Teaching for mastery involves:

- The belief that all pupils can achieve
- Keeping the class working together so that all can access and master mathematics
- Development of **deep** mathematical understanding
- Development of both factual/procedural and conceptual fluency



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- Developing children's ability to build on something that has already been sufficiently mastered
- Developing children's ability to reason about a concept and make connections
- Longer time on key topics, providing time to go deeper and embed learning

### Planning and Resources

Our lesson plans follow a generally agreed format, although teachers are free to adapt these as best suits them. Lesson plans are saved on the staff drive at the beginning of each week, although lessons towards the end of the week may not be fully planned initially so that teachers can adapt to where the learning goes.

Medium Term planning is saved on the staff drive and has been adapted from the White Rose Maths Hub plans. When medium term planning teachers aim for pupils to spend longer on key mathematical concepts in number, those children who grasp the concepts more quickly are then given opportunities to deepen their knowledge and improve their reasoning skills rather than accelerating on to new curriculum content.

Other useful resources that support the planning and teaching of a Mastery approach are:

- Albourne Progression in Calculation document (copy in assessment folders and on staff drive)
- NCETM, National Curriculum Resource Tool  
<https://www.ncetm.org.uk/resources/41211>
- NCETM, Mastery microsite <https://www.ncetm.org.uk/resources/47230>
- NCETM, Teaching for Mastery, questions, task and activities (to be found in each Year Groups assessment file and saved on staff drive)  
<https://www.ncetm.org.uk/resources/46689>
- NCETM, Progression in Reasoning <https://www.ncetm.org.uk/resources/44672>
- Nrich, <http://nrich.maths.org/teacher-primary>
- Other problem solving and reasoning resources to be found in each class: BEAM, We can do it!, Talk it, Solve it.

### Maths Lessons

Maths lessons are split into two sessions from Year 1 - Year 6.

The first session is 40 minutes long. Teachers first give the children an opportunity to practise their fluency in topics previously covered (Magic 10) and then introduce the new learning. This section of the lesson will typically be led by the teacher initiating back and forth interaction, including questioning, short tasks, explanation, demonstration, and discussion.

The second session, after a break, is 20-30 minutes long and involves the teacher or teaching assistant leading an intervention session for any children who have been identified, or who have self-identified, as needing more support with that day's teaching. The rest of the class will be working on problems and reasoning to deepen their conceptual understanding.

What you will typically see in an Albourne Maths Lesson:

- The large majority of our pupils progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention. This includes challenging those to further their learning.
- Practise and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts in tandem.
- Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring intervention so that all pupils keep up.
- Teachers will use the concrete, pictorial and abstract approach (CPA) to ensure that procedural and conceptual understanding are developed simultaneously.

Teachers recap previous learning and then they introduce the next step to the children. They use concrete apparatus and visuals to enforce the concept. Children have the opportunity to practise the new skills using carefully crafted and varied questioning. The children will have the opportunity to feedback and explain how they solved the problems. The teacher will then explain and demonstrate the next stage of the learning.

As part of everyday maths lessons teachers should also try and make connections to maths through topic work, linking maths to everyday life and through stories.

### **Support Staff**

During the teacher input, teaching assistants should write assessment stickers about concepts individual children have a secure understanding of. They should also spot the children who do not grasp the concept as quickly as the others. The teacher then has the opportunity to work with those children while the others practise. During the practise activities teaching assistants will work with different children to support and assess learning. The children should, as far as possible, practise their skills independently and an over reliance on TA support should be avoided.

### **Interventions**

Any children who have not grasped the concept or who have misconceptions, using the evidence from the TA, practise activities and teacher questioning, will have a rapid intervention to ensure that they are ready for the next day's learning. This same day intervention will take place for 20-30 minutes each day. This could happen in the



second part of a maths session, or in the afternoon. The rest of the class will be working on problems and reasoning to deepen their conceptual understanding.

In addition to this, teachers will identify areas of need specific to their children. TAs will lead these groups in order to support children in meeting their individual targets.

### **Differentiation**

Differentiation will be seen by children working on differing complexities of problems within the same objective. This could be through targeted questioning, level of support or the type of work given. 'Rapid graspers' will have challenging problems to solve to ensure that they continue to make progress. There will be some children who are using practical equipment for longer in order to support learning. In some circumstances, children may have individualised work which is appropriate to their personal needs.

### **Assessment**

For each child, teachers have a copy of the West Sussex Mathematics Progression Grid for their year group. Children on the SEN register may be working at a lower year group. Teachers will highlight the statements on the document as the year goes on when this learning is embedded (colours for each half-term are shown in assessment folder). Embedded means when the children have shown they can use their learning in more than one context independently. Teachers will use this to inform their termly Windscreen Assessments. They will also complete a class overview so that they can quickly see any areas of development for the whole class.

Teachers use informal daily assessment based on a specific activity. It centres on the learning objectives and informs the teacher's future planning for individuals or groups. Outcomes are measured against the success criteria and may be recorded in teacher's or teaching assistant's notes/children's books or as targets for the pupils. The school Feedback and Marking Policy is integral to this process. Support staff are also involved in the assessment process through their observations, annotations, feedback to the teacher and feedback to the children. Children are encouraged to self-assess their work against their targets/ learning objectives/ chilli challenges and use peer assessment to support each other's learning. Verbal feedback during the lesson is particularly important to support children's progress.

At the end of each half-term the whole school takes part in a reflection week. During this week children will review and assess their learning so far (including any progress towards their targets), take part in assessment activities through questions and problems that require the pupils to remember, understand, apply, analyse and evaluate their knowledge and skills, and take part in any extra intervention work needed to help them make further progress towards their targets.



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The staff moderate maths in planned meetings to ensure consistency in practice as well as an understanding of whether the child is on track to meet/meeting the end of year expectations.

Formative and summative assessments are used to evaluate progress against school and national targets. Tracking of data informs planning for the new school year.

### **Number Facts**

To further support fluency with number facts and to help motivate the children to carry on their learning at home, the school use 'Mighty Multiples'. Starting in Year 1 children practise and take challenges in number bonds and multiplication and division facts. Certificates are awarded when children reach key milestones:

*Bronze:* Number bonds to 10 and 20, including word problems.

*Silver:* 2, 5, and 10 times tables, multiplication and division facts and word problems and well as the 'Mixed 1' challenge including all 3 times tables learnt so far.

*Gold:* 4, 3, and 8 times tables, 'Mixed 2' (2, 5, 10, 4, 3 and 8), all including multiplication and division facts and word problems.

*Platinum:* 6, 7, 9, 11 and 12 times tables, multiplication and division facts and word problems, finishing with 'Mixed 3' (all times tables 12 x 12).

In addition to this Times Tables Rocks Stars and Numbots is used as a way for children to practise their fluency at school and at home.

### **Learning Environment**

The following will be seen in all classrooms:

- A working wall that links to that week's learning
- Examples of children's work
- Questions and mathematical vocab
- Models and images
- Numberlines (as appropriate to the year group)
- Resources that are clearly labelled and easily accessible

### **Parental Involvement**

Parents support the teaching of Maths in school through homework activities. In Years 1-4 children will have ongoing maths to practise at home such as number bonds and times tables. In Years 5 and 6 they will have a weekly piece of homework related to that week's learning. The fortnightly Ask Me About newsletter also details what the children have been and will be learning about, giving parents key information to help them support their children with these concepts at home.

We hold open mornings, where parents come into school to see what their child is learning and how this is taught.

### **Early Years**



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We teach Maths in our Reception class as an integral part of the pupil's learning, relating the Number and Shape, Space and Measure aspects of the children's work to match the objectives set out in 'Development Matters'. The planning for Maths is based on the White Rose Reception Overview. We aim for the reception learning environment to be a number rich environment, inside and out, and for children to have the opportunity to explore, enjoy, learn about, and use maths in a wide range of situations.

### **Monitoring, evaluation and review**

Monitoring of the standards of the children's learning and of the quality of teaching in Maths is the responsibility of the Maths Subject Leader. The monitoring of Maths is fed back to teachers regularly and whole school development points are discussed and actioned in staff meetings. The work of the subject leader also involves supporting colleagues in the teaching of Maths. The subject leader meets regularly with the Headteacher and gives governors a termly report to update on developments in Maths and ways forward.

### **Equal Opportunities**

This policy is drawn up with due regard to and operates within the school's Equal Opportunities Policy.



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