

ASTON ALL SAINTS C OF E PRIMARY SCHOOL
A school in the Diocese of Sheffield Academy Trust

MATHEMATICS POLICY

Date: November 2018

Review Date: 2020

The School aims to:

- Raise standards in mathematics using the National Curriculum.
- Develop mental and written calculation skills which allow children to navigate a range of possible strategies and select the most effective method for the task.
- Develop problem solving and reasoning skills which enable pupils to use and apply number, measures, shape and space and data handling with competence and confidence in a range of contexts.

1. WHY WE TEACH MATHEMATICS

- To facilitate understanding, inspire discovery and encourage the ability to reason, the relationships and patterns in number and space in their everyday lives.
- To encourage children use their acquired mathematics skills in other areas of learning of the National Curriculum.
- To provide a programme of work which is geared towards perseverance, logical thoughts and reasoning through:
 - i. developing of skills eg. Counting, partitioning numbers, using number lines, jottings and practical activities
 - ii. building awareness eg. number relationships and patterns
 - iii. developing recall of facts eg. bonds, doubles, times tables

2. THE AIMS OF OUR MATHEMATICS TEACHING

- To make mathematics both exciting and fun, hence ensuring that the pupils' attitude towards learning is enthusiastic.
- To provide a variety of opportunities where pupils demonstrate, explain, practise and problem solve.
- To introduce new facts and consolidate on previous work through the using and applying of concepts and skills.
- To highlight new vocabulary, notation or terms and allow pupils the opportunity to use them in oral and written work.
- To give focused teaching time to pupils within a small group situation and work with specific groups of children in guided group work.
- To provide pupils with a repertoire of mental strategies to do calculations, with some thinking time.
- To enable the pupils to understand and use relationships between the four operations to find answers and check results.

3. THE HEADTEACHER WILL:

- Set high expectations and monitor planning, teaching and progress.
- Be aware of “Teacher Appraisal” targets related to subject.
- Encourage a whole school approach, keeping parents, governors and all support staff well informed.
- Support the co-ordinator, as well as individual staff.
- Monitor parts of or whole lessons with the co-ordinator and as part of the school programme of monitoring, teaching and learning.
- Monitor and review progress on the Numeracy priorities in the School Improvement Plan.

4. THE GOVERNORS WILL:

- Be well informed through the leadership of the headteacher, discussion with the leadership team and attendance at school improvement committee meetings.
- Support the staff in implementing the school’s policy for mathematics.
- Monitor and review progress on the mathematics action plan.
- Work with the school to inform parents about and involve them in their children’s mathematics.

5. THE CO-ORDINATOR WILL:

- Lead by example showing good understanding of the subject.
- Offer support where necessary to colleagues in planning, teaching and assessment.
- Work alongside the leadership team to monitor and evaluate planning, teaching and good classroom practice and scrutinise samples of children’s work.
- Monitor the continuity and progress of classes and year groups through school or key stage.
- Identify INSET needs, plan and deliver.
- Carry out an Audit and agree an action plan linked to the school’s targets for mathematics in the School Improvement Plan.
- Analyse all Key Stage SATS results, give feedback and agree an action plan for area(s) of improvement.
- Keep up to date, attend courses and relay relevant information.

6. TEACHERS WILL:

- Have high expectation of their pupils - awareness of what they can do
- and what they need to know next.
- Implement a daily Numeracy lesson
 - an oral/mental starter
 - a main teaching activity
- Implement an age appropriate high value target session each morning – timed from Year 2 upwards.
- Share clear learning objectives with the pupils, through a range of teaching strategies
 - direct teaching
 - practical demonstration + modelling

instructing
explaining + illustrating
questioning + consolidating
evaluating pupil's response
summarising key facts and ideas

- Use the above teaching styles to incorporate
 - a high proportion of whole class oral/mental sessions
 - direct teaching sessions
 - a high proportion of plenary sessions
 - whole class activity – differentiated
 - group/paired work
 - individual work
- Use the National Curriculum and Abacus to aid planning.
- Give homework activities in line with the school policy.
- Give pupils personal targets and inform parents of these on Open Evenings.
- Use ICT in maths lessons e.g. abacus, internet, ipads and other available maths software.
- Have interactive displays which challenge mathematical thinking in all classrooms, models of calculation strategies and mathematical language.

7. IN THE DAILY MATHEMATICS LESSON TEACHERS WILL:

The effective lessons will have clear objectives, an appropriate structure for the teaching and thoughtful use of resources and any support staff.

- Share clear learning objectives with the pupils.
- Provide daily practice of mental skills including counting, rapid recall, newly learned facts and calculation strategies based on high value targets for each year group.
- Revisit prior learning.
- Maintain good pace and use effective questioning.
- Use accurate mathematical vocabulary.
- Use effective questioning to raise standards.
- Provide opportunities for the pupils to discuss their finding.
- Engage pupils in challenging differentiated activities using a range of resources, including ICT and the use of IAW.
- Use support staff appropriately having planned/discussed their role.

8. THE SENCO WILL:

- Work with the mathematics co-ordinator and teachers in supporting pupils with special needs.
- Use the detailed objectives in the National Curriculum when preparing IEPs.
- Defer introduction of standard written calculations building on secure mental strategies.

- Use of resources to model methods and ideas eg. visual, aural, tactile.
 - Provide copy of IEP for parents and emphasis their involvement.
9. THE PUPILS WILL BE ENCOURAGED TO:
- Enjoy mathematics and see its relevance in 'real life'.
 - Understand exactly what is expected of them on a day-to-day basis.
 - Develop mental calculation strategies so that their first reaction to a question is "Can I do that in my head?" "What do I already know?"
 - Use mathematical vocabulary with confidence, accuracy and understanding
 - Use their knowledge to solve problems, see patterns, make predictions, present information clearly as well as interpret data.
 - Give good oral explanations of their own methods.
 - Use own criteria to pose their questions, show their method and share their result.
 - Use 'Open-ended' problems to illustrate varying degrees of understanding.
10. SUPPORT STAFF WILL:
- Be included in staff training for mathematics where appropriate.
 - Have a clear understanding of their role (in each part of the lesson)
 - Share the learning objectives for the lesson and know the key vocabulary to be developed.
 - Support groups of children and individuals.
 - Deliver intervention groups where necessary.
11. PARENTS WILL:
- Be encouraged to develop positive attitudes to mathematics and actively support their children when homework is given.
 - Be well informed of their child's progress through annual reports, parents evening and open days and their child's current maths target.
 - Support with homework – written and Abacus games.
12. RESOURCES AND CLASSROOM MANAGEMENT TO IMPLEMENT MATHEMATICS:
- The pupils will be encouraged to exercise judgement in selecting the materials and equipment appropriate to their task.
- Resources are provided (and renewed where necessary) to support maths.
 - Regular auditing of resources ensures quantities and condition is known.
 - All everyday resources are kept in each classroom.
 - Shared resources are also available for class use.
 - The class teacher is responsible for the appropriate use of resources.

13. ASSESSMENT

- As agreed by staff – see Assessment Policy.
- Half termly Abacus assessments carried out to inform future planning.
- Tracking system – in place through school. (Otrack)
- Audit of SATs results from both Key Stages.
- Audit times tables outcomes for Y4
- Senco co-ordinator – targets and progress of individual pupils.
- Other record keeping/monitoring of individual/group by staff.

14. MARKING AND THE COLLECTION OF EVIDENCE

- The school has a separate 'Marking and Feedback Policy'.
- Work which needs correction is not rubbed out. It is re-done, so that progression is obvious.
- Work done is marked promptly to avoid misconceptions.
- Children are encouraged to show their 'workings out'.

Signed.....

Date.....

Linked policies –

- Calculation Policy
- Marking and Feedback Policy
- Teaching and Learning Policy