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 informed 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