 The Academy at St. James

This policy aims to outline the teaching, organisation and management of Mathematics at The Academy at St. James.

Background

Mathematics is a core National Curriculum subject that prepares children with the vital skills that they will need to use throughout their everyday lives. It is therefore important to encourage children to develop and nurture a range of strategies to help them solve problems, make links with other subjects and grow in confidence in the understanding of numbers.

Through the teaching of Mathematics at The Academy at St.James, we aim for all children to develop:

* A positive and enthusiastic attitude towards maths.
* A sound understanding of calculation, number, shape, space and measures, and handling and interpreting data.
* A broad range of skills, which can be applied both within school and within their everyday lives.
* A wide range of written and mental methods that they can use to answer questions and solve problems.
* A deep and lasting interest in mathematics.

Weekly Structure – KS2

At the start of every school day, the children will do morning maths for 15-20 minutes. Morning maths will be arithmetic based and will focus on gaps identified in a Monday morning assessment. There are to be five SDI (Same Day Intervention) maths lessons a week in all KS2 classes. These will begin with a ten-minute mental maths session, which will teach the children key mental arithmetic stills. A 10-15 minute teacher input, before the children work independently on a pre-assembly task, will follow this. After assembly, the teacher will lead an SDI group to address any misconceptions identified during assembly time marking. A challenge (problem solving/ reasoning/ investigation) will then be set for children to deepen their understanding. A whole class plenary will then consolidate learning and prepare children for their next day’s learning.

Weekly Structure – KS1

In KS1, the children take part in a whole class mental arithmetic session for 10 minutes, before a whole class input. Any children who need provision are then able to develop the skills from this input through provision in the areas outside the classroom. Other children will work independently or with an adult on fluency, reasoning and problem solving tasks related to the input. 1:1 feedback will be provided in the lesson and any child with a misconception, will receive support to address it as quickly as possible.

Mental Maths

The children will be taught mental maths skills daily, which will be embedded throughout all maths lessons. Teachers will have a mental maths progression document that will indicate what mental maths is taught in each term. Children will learn their times tables in lessons and at home. Mental maths skills will be tested weekly using the “Beat That” tests.

Planning and Teaching

Each class teacher is responsible for the planning of weekly lessons in Mathematics for their class (using the provided planning format); ensuring written methods for calculations (following the calculation policy) are regularly practised in order for the children to become secure and confident in this.

Delivery of the Mathematics curriculum should provide children the opportunity to engage in practical activities, mathematics games and problem solving investigations. These activities can be done individually, in small groups or as a whole class if appropriate for all children. Opportunities to use ICT as a mathematics tool should be provided.

Lessons should be interactive and take into account the children’s different learning styles. Learning in the lessons should be clearly differentiated to meet the needs of the children.

In the Foundation Stage, a range of Mathematics activities should be provided for the children to access independently. All children should have access to daily adult led Mathematics Activity, in order to develop and strengthen their understanding of Mathematics. It is important for the children to see and use Mathematics in as many practical contexts as possible.

Throughout the whole school Curriculum, teachers should take advantage of cross-curricular links to Mathematics wherever possible.

Working Walls

Each classroom will display a working wall for Mathematics to support the children with their learning. The display will include key vocabulary, children’s work, calculation posters and modelled examples of the current topic work. The purpose of the working wall is to support the children’s learning and to be a reminder of previous learning. It develops independent learning and it is not a traditional display.

Skills

In addition to a secure understanding of number, calculation and mental maths, there are other essential skills for high quality Mathematics learning, which include:

* Problem solving – developing strategies to solve a problem.
* Communicating – being able to explain their results verbally and in written form.
* Reasoning – being able to think logically and justify their ideas.

Regular opportunities to practise these outside the Mathematics lessons should be built in to other areas of the curriculum, as well as in the lessons themselves.

Assessment

Maths arithmetic tests (Ray Maher’s assessment materials) will take place every Monday for years 1 to 6 and Beat That mental maths tests will be completed every Friday by all year children. Teachers will analyse data from these tests and will use this to inform their planning for intervention groups and arithmetic lessons.

NFER termly assessments will be carried out in years 3, 4 and 5 (see assessment non-negotiables). Year 1 will be assessed using The West Yorkshire Maths hub materials and Year 2 and 6 will complete past SATS papers. Data from the assessments will be tracked on Eazmag.

Teachers are also expected to track pupil’s progress again their Year Group Expectations. Targets that are stuck in books will be dated when a child independently shows that they have met the expectations.

Pupil progress is discussed with teachers in a meeting with SLT and progress is shared with parents/carers at Parents’ Evenings throughout the year. End of Year reports inform parents of progress in July.

Year 2 and Year 6 SATS results will be analysed and appropriate measures will be taken to address any issues, which may have arisen.

Marking

Teacher/ TA marking will take place in the lesson or during the SDI assembly time. It will also take into account the required learning intentions and will inform future planning. Children will be given clear next steps feedback through whole class feedback or 1:1 verbal feedback and will be expected to complete these in purple pen in response. Teachers will ensure that the pupils get feedback promptly on the work they have done – misconceptions will be addressed as quickly as possible – in SDI groups. Children should be encouraged to be actively involved in marking, either through self or peer marking too.

Homework

Opportunities should be provided for all children to practise their Mathematics skills at home with the support of their parents/ carers. Homework should be sent home weekly and should include a variety of practical activities, challenges and number games.

Presentation

Children must be set high expectations for the presentation of their work. The page should be folded in half and margins must be drawn. The date should be written numerically, making sure there is one digit per square. The date is to be written on the top left hand side of the page and underlined with a ruler (unless it is pre-written by the teacher). The Learning Intention and Success Criteria should be pre-printed and stuck into the books at the top of the page under the date. When the children answer questions, they should leave a blank line between each one to ensure presentation is clear. Question numbers should be written clearly in the margin. Presentation errors should be picked up in marking.

Resources

Throughout the school, we have a variety of resources in the Mathematics cupboard as well as in each classroom. Resources are added to regularly. Resource shortages should be notified to the subject leader, who has responsibility for ordering equipment as required.

Monitoring

SLT and the subject leader will monitor mathematics regularly throughout school. Monitoring will be carried out through:

* Learning walks
* Lesson drop ins
* Lesson observations
* Book scrutiny – in conversation with teachers
* Planning scrutiny – in conversation with teachers
* Assessment and analysis of data

Equal Opportunities

Mathematics at The Academy at St. James is taught with equal opportunities for all children throughout the school. It is important that:

* Our expectations do not limit pupil achievement.
* We set targets to meet the individual needs of each child and for them to be aware of their next steps in their learning.
* We aim to challenge and extend children to help them increase the need for independent thinking.
* We use a full range of teaching and learning styles to ensure that all our children have the opportunity to gain Mathematics knowledge and understanding regardless to their gender, race, class, physical or intellectual ability.

Date: 3.04.20

Signed: D.Langley

**Reviewed and Approved by:- Liz Lawley**

**Date of meeting:- 19.5.20**

**Signature:- Mr C Tolson**

**Date:-**

**Next review date:- 19/05/21**