BLACK HORSE HILL
INFANT SCHOOL

MATHEMATICS

POLICY

4th June 2024

Approved by Committee _____

26th June 2024

Approved by Full Governing Body _____

C Brierley

Signed _____**(Chair)**

J Morris

Signed _____**(Headteacher)**

Contents:

1. Vision, Aims and Values

Learning for Life

School Vision

Together, our schools will: -

Nurture and empower our children to become creative, compassionate and confident citizens, in a diverse and ever-changing world.

School Aims

Our school community will: -

- **Have high expectations for all**
- **Inspire a passion for learning**
- **Provide an enjoyable, ambitious, coherent curriculum**
- **Develop positive relationships through collaboration**
- **Create a safe and happy environment**

School Values

All our children, staff and parents will share the same core principles of: -

- **Respect**
- **Honesty**
- **Kindness**
- **Excellence**
- **Resilience**
- **Friendship**
- **Courtesy**

2. Legal framework

This policy has due regard to statutory guidance including, but not limited to, the following:

- DfE (2013) 'National curriculum in England: Mathematics programmes of study'
- DfE (2017) 'Statutory framework for the early years foundation stage'

3. Curriculum Intent

As Mathematicians at Black Horse Hill Infant School, children will develop the fluency, knowledge and understanding to use mathematics as a tool for everyday life. Practical experiences and a growth mind-set will ensure a solid understanding is gained, which will foster a life-long love of maths. As a school, we believe that all children can succeed in Mathematics.

Using the expected outcomes from the National Curriculum and the Foundation Stage Curriculum Framework it is our intent to develop:

- Fluency and a secure knowledge of number facts and a secure understanding of the four operations and how they are inter-related
- An ability to solve problems, to reason, to think logically and to work systematically and accurately
- An ability to communicate understanding
- An ability to make connections that are needed to enjoy a greater depth in learning
- Challenge all children
- Confident, resilient and curious learners who happily make mistakes and know that they learn from them
- Independent learners with inquisitive minds who have secure mathematical foundations and an interest in self-improvement

4. Implementation

Using the Programmes of Study from the New National Curriculum and the Early Years Framework we aim to develop

- An enjoyment and curiosity of mathematics and for children to feel confident to become successful;
- Children's abilities to use and apply mathematics to solve problems in both the classroom and in 'real life' contexts;

- A confidence to communicate ideas in written form and orally;
- Independent and collaborative ways of working, encouraging children to share ideas and solve problems together;
- A wide range of mathematical vocabulary to be modelled and used in the classroom environment;
- The children's ability to recall mental facts accurately and quickly and using effective written calculation methods;
- Children's logical thinking, reasoning and ability to problem solve as transferable life skills.

EYFS

Learning and experiences for early years pupils will be based on the seven areas of learning and development as outlined in the DFE's Statutory Framework for the early years foundation stage.

For Mathematics the areas of learning will be Number and Numerical Patterns. Mathematics Learning is carefully planned to provide the children with the experiences, knowledge, vocabulary and skills needed to be successful in their future learning.

KS1

The National Curriculum is followed and provides a full breakdown of the statutory content to be taught within each unit. All pupils within KS1 are taught Mathematics in line with the requirements of the national curriculum.

5. Teaching and Learning

A maths mastery approach is taken to the curriculum, in which fluency comes from deep knowledge and practice. This means that structured questioning is used to ensure that pupils develop fluent technical proficiency and think deeply about the underpinning mathematical concepts.

Focus is put on the development of deep structural knowledge and the ability to make connections, with the aim of ensuring that what is learnt is sustained over time.

- In the Foundation stage, the format of the lesson will be that promoted by White Rose and NCETM mastering number. A daily maths adult led input will then be followed up by a rage of related maths activities during continuous provision as well as focussed group activities.

- In Key Stage 1 the format of the lesson will be that promoted by White Rose and NCETM mastering number.

- Each lesson should have a clear focus linked to the Key Learning Intentions for that Year Group. The timing of the lesson should be 45 minutes with 15 minutes daily for fluency sessions
- Depending on the session. Some will have a hook question to get the children thinking, talking and reasoning about maths using CPA. There will also be range of learning opportunities including whole class, group, paired and individual work.
- There will be a strong emphasis on oral work with many opportunities for children to express their mathematical thinking both to the teacher and to each other.
- Teachers will ensure the inclusion of all children in all parts of the lesson through high quality differentiated questioning and targeting of select children. Questioning will be at times targeted and closed for assessment purposes. It will also be open-ended and will promote a variety of responses and possible correct answers.
- Practical apparatus will be clearly labelled and accessible on a helpdesk. Working walls within the classroom will reflect the mathematics taking place.
- Teachers will plan the lesson to maintain a brisk pace. There will be, in the short-term plans, flexibility so that teachers can re-visit, extend or reinforce work, as they feel necessary.
- Pupils will be involved in self assessment, reflecting on their own progress and understanding during the lesson
- Lessons will be regularly monitored by the Headteacher and by the Subject leader.

6. Planning

All relevant staff members are briefed on the school's planning procedures as part of their staff training.

Maths is taught as a discrete lesson and as part of cross-curricular themes when appropriate.

Teachers will use the key learning content in the DfE's statutory guidance 'National curriculum in England: mathematics programmes of study', published in 2014 and the Early Years Foundation Stage guidance.

Lesson plans will demonstrate a balance of interactive and independent elements used in teaching, ensuring that all pupils engage with their learning.

There will be a clear focus on direct, instructional teaching and interactive oral work with the whole class and targeted groups.

Long-term planning will be used to outline the units to be taught within each year group following the White Rose scheme of learning

Medium-term planning will be used to outline the vocabulary and skills that will be taught in each unit of work, as well as highlight the opportunities for assessment.

Medium-term plans will be shared with the subject leader to ensure there is progression between years.

Short-term planning will be used flexibly to reflect the objectives of the lesson, the success criteria and the aims of the next lesson.

Short-term planning is the responsibility of the teacher. This is achieved by building on their medium-term planning, taking into account pupils' needs and identifying the method in which topics could be taught.

All lessons will have clear learning objectives, which are shared and reviewed with pupils.

All Year groups will use the calculations policy when planning to ensure there is continuity and consistency through the school. Our aim is that children leave Blackhorse Hill Infants equipped with mental, written and calculator methods they understand and can use correctly and that when faced with a calculation, they are able to decide which method is most appropriate and have strategies to give an approximate answer and to check their solutions.

Homework will be set on a weekly basis and will build on that week's lesson objectives.

The school recognises the role that parents have to play in their children's mathematical learning. We also realise that some parents lack confidence in their ability to fulfil this role. Through the setting of weekly homework activities we aim to inform the parents of the type of games and activities that will complement the work being undertaken in the classroom. These are not often written tasks but are oral games and investigations that reinforce the current work. Some work may be recorded but the aim of the activities is fun!

Mathletics is used as an online support for Maths in school and at home. Each child in Year One and Year Two has a login and password to access at home. We encourage children to practise their skills and will also use the website as part of homework.

7. Impact, Assessment and Reporting

Reference should also be made to the school's Assessment and Marking Policies.

- A variety of methods will be used to assess mathematical understanding. These will include questioning, listening to explanations, formal tests, observation of investigations and games. Written work only forms a small part of the assessment process in the early stages of maths.

- Informal assessment is part of the ongoing process and occurs each day. This will not necessarily be recorded but can be used to inform future and immediate planning. Individual children may be monitored in this informal way if the teacher has any concerns about their progress. Teachers also track progress by completing lesson evaluations daily and weekly.

- Periodic assessment will take place usually at the end of a topic or at the end of each half term. Assessments will usually be based on the key objectives of that year group. Numeracy levels will be recorded in Update files. The Update Files are monitored by the Headteacher each term. These will be passed on to the next teacher and will show how individual children have achieved against the key objectives covered that year. Year 2 children will also have SAT's results to be used in conjunction with the class grids. These results will be analysed to inform pupil

progress and inform future planning and target setting. They will also be used to report individual progress to parents.

Target Setting.

At the end of Foundation 2, foundation profile scores will be used to set numeracy targets for children to achieve at the end of Year 1 and Year 2. These targets are reviewed throughout the year and intervention is planned for individuals who are not expected to achieve their targets. Individual and class targets are also set by each class teacher using levelling criteria and Assessing Pupil progress Materials.

Evidence of Attainment and Recording Achievement

Evidence of attainment in mathematics can take a variety of forms. These may include:-

- Samples of children's written work.
- Models or photographs.
- Observation of the children at work.
- Questioning and discussion with individuals and groups of children.
- Use of tests.
- Lesson Evaluations

8. Monitoring and Review

- This policy will be reviewed on an annual basis by the subject leader.
- The subject leader will monitor teaching and learning in the subject at Black Horse Hill Infant School, ensuring that the content of the national curriculum is covered across all phases of pupils' education.
- A named member of the governing body is briefed to oversee the teaching of numeracy, and meets regularly with the subject leader to review progress.
- Any changes made to this policy will be communicated to all teaching staff.

9. Equal Opportunities/Promoting Diversity

- All pupils will have equal access to the maths curriculum.
- Gender, learning ability, physical ability, ethnicity, linguistic ability and/or cultural circumstances will not impede pupils from accessing all maths lessons.
- Where it is inappropriate for a pupil to participate in a lesson because of reasons related to any of the factors outlined above, the lessons will be adapted to meet the pupil's needs and alternative arrangements involving extra support will be provided where necessary.
- All efforts will be made to ensure that cultural and gender differences will be positively reflected in all lessons and teaching materials used.

10. Roles and responsibilities

The **subject leader** is responsible for:

Preparing policy documents, curriculum plans and schemes of work for the subject.

Reviewing changes to the national curriculum and advising on their implementation.

Monitoring the learning and teaching of maths, providing support for staff where necessary.

Ensuring the continuity and progression from year group to year group.

Encouraging staff to provide effective learning opportunities for pupils.

Helping to develop colleagues' expertise in the subject.

Communicating developments in the subject to all teaching staff.

Leading staff meetings and providing staff members with the appropriate training. Organising, providing and monitoring CPD opportunities in the subject.

Ensuring common standards are met for recording and assessing pupil performance.

Collating assessment data and setting new priorities for the development of maths in subsequent years.

The classroom teacher is responsible for:

- Acting in accordance with this policy.
- Ensuring progression of pupils' mathematical skills, with due regard to the national curriculum.
- Planning lessons effectively, ensuring a range of teaching methods are used to cover the content of the national curriculum.
- Liaising with the **subject leader** about key topics, resources and support for individual pupils.
- Monitoring the progress of pupils in their class and reporting this on an **annual** basis to parents.
- Reporting any concerns regarding the teaching of the subject to the **subject leader** or a member of the **senior leadership team (SLT)**.
- Undertaking any training that is necessary in order to effectively teach the subject.

The special educational needs coordinator (SENDCO) is responsible for:

- Liaising with the subject leader in order to implement and develop maths throughout the school.
- Organising and providing training for staff regarding the maths curriculum for pupils with special educational needs and disabilities (SEND).
- Advising staff how best to support pupils' needs.
- Advising staff on the inclusion of mathematical objectives in pupils' individual education plans.
- Advising staff on the use of teaching assistants in order to meet pupils' needs.

11. Cross-curricular links

Wherever possible, the maths curriculum will provide opportunities to establish links with other curriculum areas.

English

- Mathematical terminology is used, where appropriate.

Science

- Pupils' data collection and analysis skills are further developed through the conduction of physical experiments, using units of measurement, and interpreting results.
- Pupils record their finding using charts, tables and graphs.

Humanities

- Data analysis, pattern seeking and problem-solving skills are developed through the teaching of geography.
- Pupils' understanding of time and measurements of time are developed through discussions of historical events.

ICT

- Pupils are encouraged to use calculators and other electronical devices, gaining confidence throughout their school experience.
- ICT will be used to enhance pupils' maths skills through the use of online resources and the creation of spreadsheets.
- ICT will be used to record findings, using text, data and tables.
- Setting tasks of varying difficulty, depending on the ability group.
- Utilising teaching assistants to ensure that pupils are effectively supported.

12. Resources

Maths resources will be stored in each classroom.

Working walls will be utilised and updated regularly, in accordance with the area of maths being taught at the time.

Maths equipment and resources will be easily accessible to pupils during lessons.

Sally Bancroft
May 2024