THE MILFORD ACADEMY

MATHEMATICS POLICY

M - Motivated

I - Independent

L - Learning

F - Forward Thinking

O - Outstanding

R - Respect

D - Determined

General Statement

We believe that mathematics is uniquely powerful in helping us to make sense of and describe our world. It is a fascinating subject, dealing with the nature of number, space, pattern and relationships - it is useful and creative. At The Milford Academy, we understand that children not only need to learn the facts and skills of mathematics but also gain mathematical understanding through exploration, application and discussion.

In mathematics, we aim to develop lively, enquiring minds encouraging pupils to become self-motivated, confident and capable in order to solve problems that will become an integral part of their future.

Aims for Mathematics at Milford

At The Milford Academy, we believe the purpose of mathematics education is:

- to offer pupils intellectual excitement and challenge
- to provide pupils with a sense of delight and wonder
- to develop pupils who can confidently explain and articulate mathematical processes and strategies
- to equip pupils with the knowledge, skills, confidence and ability needed to meet the needs of present and future society.

We aim to ensure that all pupils, irrespective of gender, race and culture or Special Educational Needs (SEND) have access to a wide range of stimulating activities and problems which are differentiated accordingly.

Marking Aims

The school acknowledges the need for regular, high quality and effective feedback of pupils' work across all curriculum areas. This enables us to:

- assess how well an individual is doing and if the whole group have understood a concept
- feedback to pupils about the progress they are making

- address any errors and misconceptions as well as stretch with further challenge
- evaluate our teaching.

Teacher Marking

Where possible, the majority of work in the books should be acknowledged in some way using a range of methods as stated below. Marking must be efficient and effective as there is no need to 'over mark'. Staff must remember that the most effective marking takes place alongside the child and the most meaningful feedback, to improve the quality of work and pupil understanding, does not necessarily need to be written and evidenced. This rationale is supported by research carried out by the Department of Education (DfE) and the Education Endowment Foundation (EEF). For this reason, children will receive feedback that is meaningful, manageable and motivating, but at times may not be as visible in their books.

Teachers' marking should be diagnostic and corrective, in order for pupils to see where they have gone wrong. If an error is made consistently by many members of the class, this misconception should be discussed with the class in the form of a plenary and where necessary further lessons taught on the objective with reinforcement and consolidation activities provided.

Staff should use and apply the following policy:

- Where possible, staff will work alongside pupil/s to provide effective feedback which is specific, accurate and clear.
- Where consistent errors are made e.g. incorrectly formed or incorrect use of an operation, these are to be circled. In KS2, children should be expected to correct any numbers that are incorrectly formed.
- Correct answers are ticked
- Incorrect answers to have a dot at the side, which signifies a correction is needed.
- Staff to mark in red pen and children to mark in green
- When staff work closely with a pupil or group, it is suggested that they initial the books of those children that they have worked with.

- Teachers are to acknowledge each piece of work with a presentation mark. These presentation marks are out of 3, with 3 being the highest, and staff should rate each piece by carefully considering each child and their capabilities.
- Staff should award pupils with a diamond for their effort on a piece of work or throughout a lesson.
- 1 Dojo point is awarded for a presentation mark of 3 and to those children who receive a diamond.
- The member of staff who has taught the lesson, must complete a feedback form. This form details the lesson objective, strengths, areas for development/misconceptions and pupils who are to be praised as well as those in need of additional support or intervention.

Use of Peer assessment

Much of the classwork can be marked by the pupils themselves. This can be done by swapping books or pupils marking their own work, at the discretion of the teacher. However, this must be in green pen. When pupils have marked their own work, it is suggested that the teacher checks to see if any children need extra support or extra challenge in this area before the next session. Failing that, the teacher needs to look over this next time the books are collected in. It is also advised that this method will help to quickly look for common misconceptions that need to be addressed.

Use of self-assessment

Where appropriate from Year 3 onwards, the children can be encouraged to write comments about their learning in the sessions and use the traffic light system to represent their understanding. Self-assessments are not necessary in each lesson, yet when they are used, they can be utilised in the assessment for learning process. Children should colour one square red, yellow or green to signify how confident they felt about the lesson. Across school, every classroom should display STEM sentences and reasoning mats to help the pupils organise and structure their responses such as the scaffolded starters below:

I liked this method because . . .

I found this difficult because . . .

I think I need more practice, particularly with questions like . . .

When I checked my answer I realised that...

Non-Negotiables

Both staff and pupils need to have high expectations of the presentation and layout in the workbooks. Presentation expectations need to be consistent with all other curriculum areas.

- **Book covers:** The name of the pupil, their year group and subject needs to be detailed on a sticky label on the front of each maths book. On top of this there must be a plastic cover to protect the condition of the book. When a pupil starts a new book, the same process should be followed.
- **Margins:** They need to be 2 squares wide on squared paper. They need to be a ruler width in the plain paper maths books (Y1). In Year 5/6, children should put a margin in the centre of the page, where appropriate, to fit more work on the page and allow space for jottings. This can be achieved by folding the page in half. ***In Year 1, children are not expected to draw margins in their books as this begins in Year 2.***
- **Date:** This should be written first and be in ***short hand format*** e.g. 12.01.20. It should start next to the margin on the left-hand side of the page
- **Title:** Children should leave a line under the date and then write the lesson objective. Again, this should start on the left-hand side of the page next to the margin. This should be copied correctly from the IWB and teachers should insist on this, particularly in KS2.
- **One, two or three dot challenge:** the chosen challenge by the pupil should be marked next to the title and in the margin. e.g. a child choosing the three dot challenge, should clearly mark ... in the margin next to their title.
- **Handwriting:** On squared paper, children should put one number per square. However, when writing, children should use their normal handwriting (they should not put one letter per square). When using plain paper, this is not

relevant. Handwriting and number formation should be accurate and of a high quality.

Jottings

In KS2, to encourage children to use jottings in their maths work, children should fold the page vertically and draw a line down the faint fold (as detailed above). Children are to answer the questions on the left-hand side of their book and show their working out (or 'jottings') on the right-hand side. This is to encourage them to use methodical strategies and procedures whilst allowing the children to process their mathematical thoughts on paper. Though encouraging this method, children can check their working out and establish where errors have been made whilst discouraging anxiety about the 'neatness' of their working out. Jottings are to be praised and encouraged. This layout of work lends itself to number sense, fluency and calculating using written formal methods and therefore does not need to be present in the books for each lesson.

Planning Expectations

- Planning should be in line with the White Rose Maths curriculum and scheme of learning
- Problem solving and reasoning activities must be used from White Rose Maths in addition to National Centre for Excellence in the Teaching of Mathematics (NCETM) materials. This is to develop mathematical knowledge and understanding and expose pupils to questions of cognitive complexity
- Concrete apparatus must be used in each year group to support and embed understanding
- At least one morning work activities must be based on maths skills. In KS2 this should be a times table activity.
- In KS2 one timed mental maths/arithmetic test should be administered at least every other week
- Times Table Rock Stars (TTRS) must be used from Year 3 onwards with KS2 delivering TTRS sessions at least three times per week
- All classes must have a maths working wall with appropriate mathematical vocabulary displayed in line with the topics being taught. The working wall should also pose 'notice and wonder' questions to develop higher order thinking

- All classes must display mathematical STEM sentences and reasoning mats to help structure pupil responses and develop their articulacy and use of mathematical language
- Concrete resources should be accessible and visible to pupils at all times and they should know when and how to use these.

Maths Lead Expectations:

- Books will be monitored once per term with a monitoring report issued to staff
- OTrack data will be assessed on a termly basis and analysed with the assessment coordinator
- The coverage of mathematics will be monitored each term as part of the termly monitoring day
- Where possible, observations of teaching staff will be carried out with a member of SLT at least twice during an academic year, and feedback provided.
- Teaching staff will be provided with the appropriate and necessary training (CPD) to support the needs of a class or cohort
- Details regarding maths interventions across school will be shared with the Maths Lead and SENCO to ensure there is provision of appropriate and targeted interventions.

How marking works at The Milford Academy

Your answer is correct.

Your answer is incorrect and needs to be corrected.

1 2 3 Presentation mark provided by teacher.

A diamond awarded for effort.