



**DUBAI
BRITISH
SCHOOL**
EMIRATES HILLS

Maths Policy (Primary)

This procedure is reviewed annually to ensure compliance with current regulations

Approved/reviewed by	
Head of Primary	
Date of review	June 2023
Date of next review	June 2024

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AIMS AND OBJECTIVES

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can solve problems by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

TEACHING AND LEARNING

AIMS AND OBJECTIVES

Through our teaching we ensure that:

- We develop **Creative, Courageous** and **Critical thinkers**. We expect our students to be **Cooperative** and **Caring** with excellent **Communication** skills – these are known at DBS as the 6 Cs
- We develop independent, confident learners who take increasing responsibility for their own learning
- Our students are reflective, effective participators
- Our students acquire the necessary skills for learning, now and in the future, by developing lively, enquiring minds and the ability to question, share ideas and work cooperatively
- Our students access a rich and balanced curriculum in a variety of ways, including through creativity and self-expression
- We recognise and develop pupils' personal skills and interests
- We meet the needs and aspirations of all our learners

EFFECTIVE TEACHING AND LEARNING

Personalised learning is at the heart of effective teaching and learning. At Dubai British School, we recognise the need to develop strategies that will allow all students to learn in ways that best suit them so that they will fulfil their potential. This includes flexible lesson structures, allowing all students to progress at a pace that suits them – both students who need support and those who need challenge. Where possible Mathematics is integrated into the WOW topics across the school. The school follows the objectives set out in the British National Curriculum.

CURRICULUM DESIGN

Maths lessons are planned for and taught following the White Rose Maths schemes of learning. The White Rose Maths curriculum is designed to provide students with a solid foundation in mathematics. Students will gain a deep understanding of mathematics and enjoy solving mathematical problems. The White Rose program is not just about teaching maths, it is about developing deeper mathematical thinking skills. The aim is to ensure that students are able to think mathematically and solve problems with lots of confidence. The mastery method is built on the idea that learning mathematics should be exciting and enjoyable. It focuses on developing understanding rather than memorisation. This means that it helps students to develop self-belief, persistence and resilience.

White Rose Maths offers a 'small steps' progression and yearly frameworks, which allow our students to learn at their own pace while still achieving high standards. White Rose Maths helps children develop their conceptual understanding of mathematics by using concrete objects, pictorial representations and abstract thinking. This inclusive approach is based on the principles of cognitive psychology and child development.

Maths objectives are mapped out throughout the year on Long Term and Medium Term Plans. These are working documents that are amended in response to formative and summative assessments and the needs and interests of the students. They also enable the coverage of objectives to be tracked in each year group.

EARLY YEARS FOUNDATION STAGE

In Foundation Stage, Maths is taught in discrete lessons for 3 hours a week which include an adult led task for students to complete. Adult led tasks are designed for children to demonstrate that they have understood the concept that has been taught and that they can apply it. In continuous provision, a Maths themed activity will always be planned which allows children to be challenged even further. Number, shape space and measure activities are accessible both in indoor and outdoor provision which students access on a daily basis and this is observed and recorded by the teachers during observations of child initiated play. In both indoor and outdoor environments, numbers and shapes are displayed to promote a stimulus for children to think about and ask questions. Maths resources are used as a stimulus for children to make links from their learning to their play. Mathematical vocabulary is modelled clearly through teacher input and is displayed where necessary.

Planning

Planning begins from a thorough understanding of students' needs gleaned through effective and rigorous assessment and tracking, combined with high expectations and ambition for all students to achieve. Within short term planning, learning objectives demonstrate a clear progression following the White Rose schemes of learning. This will enable the class teacher to follow a clear and systematic teaching sequence, where input and activities are differentiated. Planning should involve real life contexts for Maths where possible and starters will be used to determine individual students starting points to determine quickly their next steps in their own learning journey. Teachers very much become facilitators of learning to ensure each individual students makes the maximum amount of progress against the learning outcomes for each specific lesson. Teachers may plan for mini plenaries throughout the lesson in order to systematically check for understanding. Teachers will plan lessons that are engaging and practical; worksheets will not be the main basis of all lessons for students to show understanding however teachers may need to use scaffolds to support learning.

Teaching

Maths will be taught daily across KS1 and KS2 for 1 hour. Teachers at DBS have high standards for all students and want them to be ambitious. Teachers use CAT4 data to cater lessons and target their own questioning. Students are continually given the opportunity to think critically and reason throughout the lesson due to open questioning. Learning skills are referred to and embedded in all lessons. The success criteria can often be built with the students (where appropriate) so they are clear on what they have to do to achieve the highest of standards. Mental Maths is incorporated daily in all lessons across both KS1 and KS2. Resources are readily available to all students to help them understand and acquire concepts that are being taught. Throughout all Maths lessons, teachers will encourage critical thinking through asking for explanations to answers. Students will constantly be encouraged to use the word 'because.'

Times Table Rock Stars is a fun and challenging programme designed to help pupils master the times tables. Times table Rock stars is used to develop students' knowledge of times tables and division facts for all pupils from Y2-Y6. Times tables are recognised as essential to access many mathematical concepts and an area of Maths that is essential in everyday life. We use this app at various points throughout the week and we monitor the data it produces in terms of progress in speed, accuracy and amount of correct answers when answering various calculations. Data from the app is used to generate certificates to celebrate 1st place in different skills in assemblies.

Differentiation

Differentiation in Maths is in the format of Bronze, Silver and Gold tasks which increase in difficulty. These tasks are self selected by the students following the teacher input, they assess themselves as critical thinkers to start at the right starting point that is individualised to them. Class teachers closely monitor students choosing the Bronze tasks. The skills of Fluency, Reasoning and Problem Solving are incorporated into each level of difficulty. 75% of students need to be attaining above curriculum standards which means Silver and Gold tasks are designed to meet above curriculum standards.

Calculation Guidance

The Calculation Guidance accompanies the White Rose Scheme.

Display

Each class will have a mathematical working wall in the classroom. This will change regularly to fit in with the Maths topic taught. The working wall will support the teaching and learning in the classroom and be referred to throughout the lesson. Every class will have age appropriate Maths language displayed and this will show the learning journey the students are currently on. Every class will have a RUCSAC sign displayed to

encourage the steps to success when problem solving; these are differentiated across the key stages. Photographs of learning, evidence of high quality work are encouraged to be displayed where appropriate.

A Times Table Rockstars display will be housed in the foyer and will be added to each month as students attain new status on the programme.

Examples of displays can be found in Appendix 1

ASSESSMENT

Ongoing formative assessment is used to mark objectives from the White Rose scheme on Classroom Monitor to determine if a child has 'Met' or 'Exceeded' the learning outcome from each lesson. Summative assessments, including Mental Arithmetic and Autumn, Spring and Summer papers from White Rose will take place 3 times a year to determine where a student is at after the first terms worth of lessons have been taught. From this, personalised targets will then be communicated to parents via termly reports. One target should be based on Mental Maths.

PRESENTATION OF WORK

These guidelines should help to always produce the highest standard of work.

Please ensure you have read the feedback section of this policy carefully and that you always follow the guidance.

- The short date to be written at the top left of maths book e.g. 25/11/02 and underlined (Year 2 upwards or teacher discretion in Year 1). Year 1 to start a new page.
- Write (Year 1 can stick) a 'WALT' statement which can then be used for student evaluation at the end of the lesson.
- A range of activities should be evident in maths books, practical activities can be evidenced through photographs.
- Work is to be started one square in from the margin.
- Students are to write one digit in each square.
- Dot or mark incorrect answers (as per marking policy). Students should not erase and correct answers should be written next to the mistake and acknowledged by teacher.
- Work down the page.
- No pen in maths books.
- Students should have opportunities to show their workings out at all times.
- Worksheets should be kept to a minimum and should only be used when absolutely necessary.
- Students should take pride in their books.

FEEDBACK

AIM

To ensure that all students have their work marked in such a way that it improves learning, challenges pupils, develops self-confidence, raises self-esteem and provides opportunities for self-assessment.

As a result of this policy there will be greater consistency in the way that children's work is marked in all Key Stages.

OBJECTIVES

- To enable written and verbal feedback to be an effective tool for promoting learning for all DBS students.
- To develop an interactive process that confirms when students are on the right track and then lets them know what needs to be done to improve and make progress.
- To prompt all students to respond to the written feedback given by the teacher.
- To enable students to reflect upon and take ownership over their own learning and progress.

RATIONALE

Dubai British School Emirates Hills recognises that teachers' marking of students' work and students' assessment of their own progress and attainment are central functions in the learning process. The focus of written and verbal feedback is on helping students obtain a clear understanding of how well they have gained knowledge, concepts and skills and then explaining what needs to be done to meet the learning objectives. It is then essential that the student is positively prompted to improve their learning. The marking of children's work can have different roles and purposes at different times and can involve both written and verbal feedback.

Marking is most effective when the student knows:

- the purpose of the task
- how far they have moved towards achieving this
- how to move closer towards the goal of their learning

Marking and the implementation of this policy is the responsibility of all teachers.

EXPECTATIONS

Teachers are expected to ensure that:

- The marking of children's work, either written or verbal, should be regular and frequent
- The marking criteria should be displayed in each classroom and in the front of pupils' books
- Whenever appropriate/possible, teachers should provide individual verbal feedback to students
- Teachers should look for strengths before giving areas for development when marking work
- Marking should be linked to WALTs/targets
- Teachers should look for opportunities to provide positive public feedback to children concerning work which is a high achievement for that particular child
- Marking should show differentiation between groups and/or pupils
- Marking should be written in the correct colour pens. See guidance below.

MONITORING AND EVALUATION

The Headteacher, Deputy Headteacher, Maths Leader and Year Leaders will review the quality of marking as part of their ongoing role when appraising books. Feedback will be given to teachers as appropriate.

The desired outcomes are improvements in children's learning and greater clarity amongst children and parents concerning children's achievements and progress.

The performance indicators will be:

- An improvement in children's attainment and progress
- Pupil voice
- Consistency in teacher's marking across the primary Key Stages
- Awareness on the part of the pupils of what is expected of them

TYPES OF MARKING:

At DBS we aim to provide marking which is relevant, purposeful and allows the pupil an opportunity to reflect and progress. This can be seen through the following styles of marking in English.



Green Pen – **Adult** marking



Blue Pen – **Child** response/ self-assessment



Red Pen – **Peer** marking

Examples of marking can be found in Appendix 2

Diagnostic marking

Diagnostic marking is focused on areas where children can demonstrate a quick and powerful improvement. Teachers may use a star where appropriate to acknowledge something that is positive if verbal praise has not been communicated in the lesson.

1. Diagnostic Marking



'Check' – for **misconceptions** and **errors**



'Consolidate' – for **consolidation** or **minimal** completion of task



'Challenge' – for those who have met the **WALT** and are **ready to fly!**

2. Self Assessment

In order that students become better learners it is important that they sit at the heart of the assessment process. To do so, they need to have the **skills** and **language** to be able to assess their own learning. **These can be scaffolded onto slides or WALTs.**



I have rounded to the nearest multiple of 10.



Challenge: Round 457 to the nearest hundred

3. Peer Assessment

Students will often develop their own knowledge and understanding from evaluating and commenting on the learning of their peers. In addition, receiving focused and task appropriate comments from their peers is a powerful way of creating a culture of reflection in the class.

★ **You can measure in mm**

→ **Challenge: Now record the same length in cm!**

N.B – Please note that all self and peers will need to be guided and scaffolded by the teacher at the beginning and throughout the year, depending on the activity.

4. Verbal Feedback

The code 'VF' is used to indicate when verbal feedback has been given individually. This is incredibly useful when boosting progress in lessons. This should relate to a specific aspect of the task, for example using the correct method. This is recorded in the book using the 'VF' code along with a key word to remind student of the conversation.

Example:

VF – column method

5. Seesaw

The same expectations for marking in books apply when work is completed on Seesaw where appropriate. When a child is attending lessons via distance learning, feedback may be given via voice note or a written example may be provided where necessary.

6. Home Learning

Acknowledgement marking is appropriate for home learning tasks, though self-assessment may also be used in conjunction with this, particularly when a task is completed via Seesaw. Mangahigh activities self corrects however teachers keep track of their students' successes and progress via medals achieved and number of times they are completed. Mangahigh should be allocated as home learning every other week.

Acknowledgement Marking

Acknowledgement marking allows pupils to understand if their work meets the WALT or not without the use of diagnostic marking. Where appropriate, acknowledgement marking can be completed as self-assessment or peer assessment.

Sensitive Marking

DBS is an inclusive school which provides equal opportunities for all pupils. This policy supports the use of 'sensitive marking' for our SEND pupils where teacher discretion will

be used to mark and feedback on pupils learning to ensure a positive and encouraging approach is maintained.

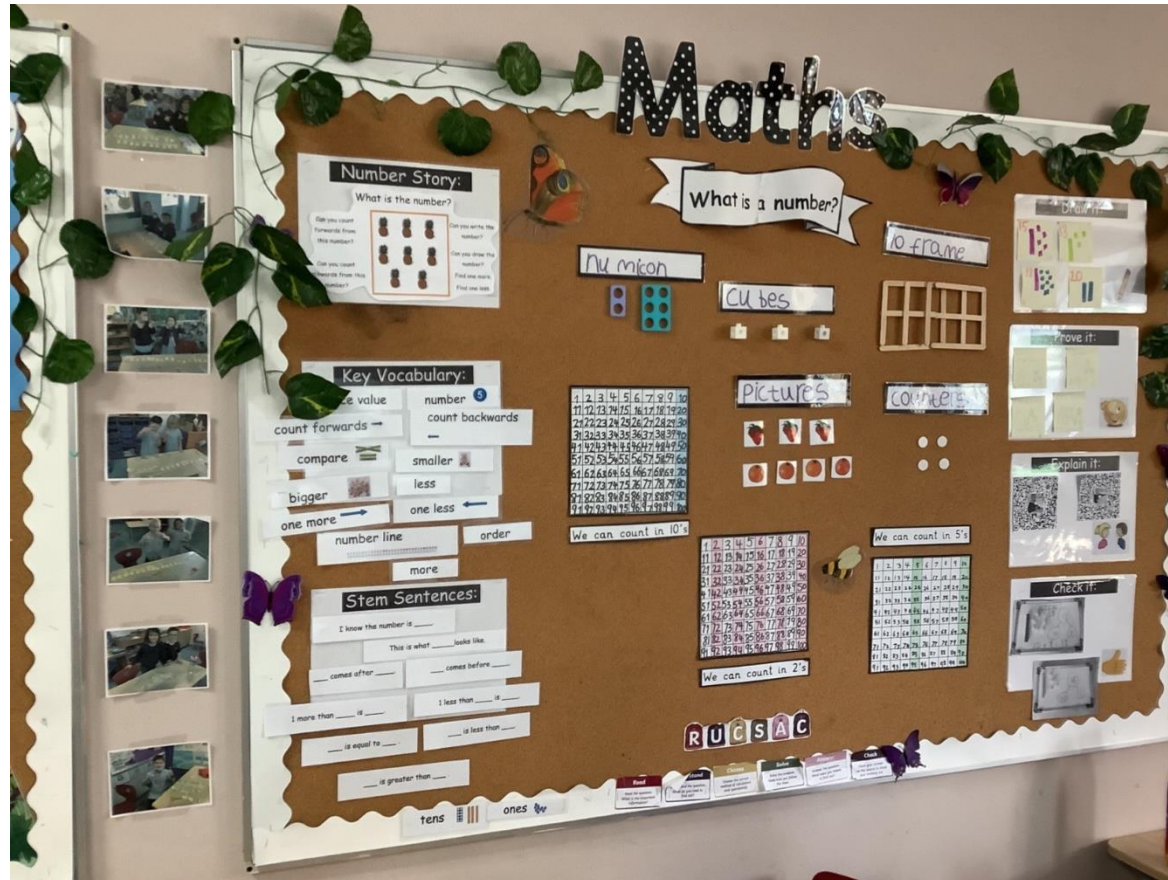
The below marking symbols is for teachers to print and use in class.

Maths Marking Symbols

☆	Positive comment
I	Independent (FS and KS1)
A	Aided (FS and KS1)
✓	Correct
.	Check
C	Consolidate
→	Challenge
VF	Verbal Feedback
supply	On all work marked by supply

APPENDIX 1 – DISPLAYS

Key Stage 1



APPENDIX 2 – EXAMPLES OF MARKING



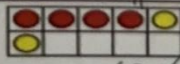
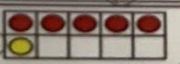



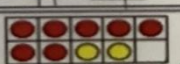
Key Stage 1




* Great work and understanding number sentences

w.b.21/02/22

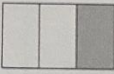
WALT: Compare number sentences
 equal to $=$
 more than $>$
 less than $<$

Compare the number sentences by writing more than, less than or equal to. Write the answer on the lines or in the boxes to help you.

<p>a</p>  <p>$5 + 2 = 7$</p>	<p>more than</p>  <p>$10 - 4 = 6$</p>
<p>b</p>  <p>$4 + 2 = 6$</p>	<p>equal to</p>  <p>$5 + 1 = 6$</p>
<p>c</p>  <p>$2 + 4 = 6$</p>	<p>less than</p>  <p>$7 + 2 = 9$</p>
<p>d</p>  <p>$4 + 6 = 10$</p>	<p></p>  <p>$7 + 2 = 9$</p>
<p>e</p> <p>$5 + 3 =$ <input type="text" value="8"/></p>	<p>$10 - 3 =$ <input type="text" value="7"/></p>
<p>f</p> <p>$1 + 3 =$ <input type="text" value="4"/></p>	<p>$9 - 1 =$ <input type="text" value="8"/></p>
<p>g</p> <p>$7 - 2 =$ <input type="text" value="5"/></p>	<p>$1 + 4 =$ <input type="text" value="5"/></p>
<p>h</p> <p>$8 + 2 =$ <input type="text" value="10"/></p>	<p>$4 + 5 =$ <input type="text" value="9"/></p>




 $<$ $>$ $=$

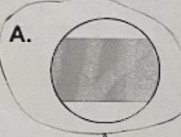

$\rightarrow 10 + 2 =$ ✓
 $12 + 1 =$ ✓


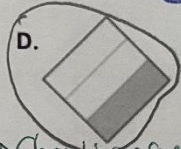
D. 

☆

VF

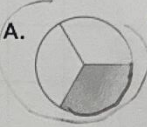

12a. Which image is the odd one out?

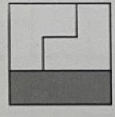
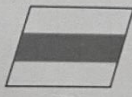
A.  B. 

C.  D. 

☆ → Challenge. VF

12b. Which image is the odd one out?

A.  B. 

C.  D. 

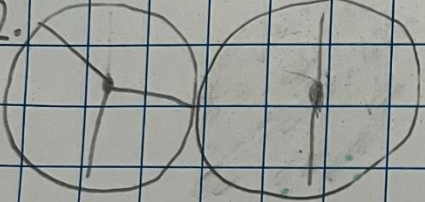
☆

☆ You were able to recognise a third of shapes.
 → Challenge - can you explain why 12a is the odd one out?
 It has 1 equal part shaded
 out of 3 but the others don't have
 equal parts shaded

Key Stage 2

WALT: add fractions

1. & 3 • 70 •

2. 

3.

1. a) $\frac{7}{8}$ b) $\frac{7}{9}$ c) $\frac{7}{29}$ d) $\frac{7}{103}$ e) $\frac{14}{31}$ f) $\frac{50}{111}$

2. $\frac{1}{4} + \frac{9}{10}$

* You knew not to add the denominators

→ $\frac{1}{10} + \frac{2}{20} + \frac{3}{10} = \frac{5}{10}$

Halve $\frac{2}{20} = \frac{1}{10}$

Amazing independent work today!

→ There are 21 children in a group.

$\frac{2}{3}$ are girls, the rest are boys.

What fraction are boys?

How many children are girls? 14, $\frac{7}{21}$

There are 2 girls and 1 boy.

21		
7	7	7
514		

