

Jill Schools International

Mental sum policy

Jill Schools International

Box 31161

Blantyre, Malawi

Last reviewed: February 2023

Next review: February 2025

# Rationale

‘The only way to learn mathematics is to do mathematics,’ Paul Halmos. In order to be fluent with number, children must be both procedurally and conceptually fluent – understand how and why. Without this, they are more likely to have difficulties remembering and using strategies in the future. To support children during this process, we need to make connections between learning and make them at the right time in the child’s learning. It is our aim that they become effective mathematicians.

# Aims and Objectives

We will work with a consistent approach of teaching mental mathematics. The children should feel confident when facing mathematical problems. In doing so we aim to:

* Ensure that a consistent and progressive approach exists within the school to secure good progress in mental calculation.
* Ensure that mental calculation is an integral part of our mathematical lessons.
* Written recordings are used to clarify pupil’s thinking and support/extend the development of more fluent and sophisticated mental strategies.
* Help children to use their mental skills to check the steps involved in a written calculation and decide if their answer makes sense.
* Share progress on mental calculation with parents/guardians so that they have the confidence and knowledge to support their children at home with their mathematical development.

# Approaches to Teaching and learning

**Pre-Nursery**

In Pre-Nursery, it is all about introduction to numbers. They will work on this by singing mathematical songs. Every day for at least 30 minutes the students will be busy with mathematics.

At the end of the academic year students should be able to:

* Count numbers from one to ten.
* Make a start with identifying numbers.

**Nursery**

In Nursery, there has to be continuation in counting. Furthermore, the focus will be on counting objects and identifying the numbers. The students will work on Mathematics for at least 30 minutes per day.

By the end of the academic year, students should be able to:

* Count numbers from one to twenty
* Identify numbers from one to twenty
* Counting objects up to ten.

**Reception**

In Reception, the students will be introduced to mathematical terms like: addition (plus) and subtraction (minus). They will also continue with the number line. Students will work with the foundation stage from Hodder in combination with EYFS matters. Mathematics will be taught on daily basis for at least 30 minutes.

By the end of the academic year students should be able to:

* Count numbers up to 50.
* Memorise addition sums up to 5.
* Memorise subtracting sums up to 5.

**Grade 1**

Grade one works with Hodder Cambridge for Mathematics. On daily basis, they will have one hour of Mathematics on the time table. At least 10 minutes from the lesson will be about mental sums. The students will continue with the number line, addition and subtraction. They will again start to work with doubling and counting in steps.

By the end of the academic year the students should be able to:

* Count numbers up to 100 (forwards and backwards)
* Memorise addition sums up to 20
* Memorise subtraction sums up to 20
* Memorise doubles up to 10
* Memorise counting in steps of 2, 5 and 10 up to 100.

**Grade 2**

In Grade 2, the students will be introduced to the multiplication tables. Apart from that, they will continue with addition, subtraction and doubles. Per day, the students will practice mental sums for at least 15 minutes.

By the end of the academic year, the students should be able to memorise:

* Addition sums up to 50
* Subtraction sums up to 50
* Doubles up to 20.
* The multiplication tables of 1, 2, 5 and 10.

**Grade 3**

Grade 3 will be introduced to division as they progress with the multiplication tables. They will be practicing mental sums at least 15 minutes per day.

By the end of the academic year the students should be able to memorise:

* Addition sums up to 100
* Subtraction sums up to 100
* Doubles up to 50
* Multiplication tables of 1,2,3,4,5,6 and 10
* Division tables of 1, 2, 3, 4, 5 and 10.

**Grade 4**

Grade 4 will provide an upgrade on the skills practiced in grade 3. They will also start with fractions and decimals. On daily basis, they will practice mental sums for at least 15 minutes per day.

By the end of the academic year the students should be able to memorise:

* Addition sums up to 1000
* Subtraction sums up to 1000
* Doubles up to 100
* Multiplication tables up to 10.
* Division tables up to 10.
* Converting simple fractions into decimals and vice versa for: ¼ = 0,25. ½ = 0,5 etc.

**Grade 5**

In Grade 5 all students should have mastered the multiplication and division tables. They will continue with converting fractions into decimals and vice versa. As it is mainly repetition of what they learned before, they will spend at least 10 minutes per day on mental sums.

By the end of the academic year the students should be able to memorise:

* Addition sums up to10,000
* Subtraction sums up to 10,000
* Doubles up to 1000
* Multiplication tables up to 12
* Division tables up to 12.
* Converting fractions into decimals and vice versa.
* Adding simple fractions (¼ + ¼)
* Adding decimal numbers with one decimal (0,3 + 0,4)

**Grade 6**

Grade 6 will continue to demonstrate mastery of all the skills practiced in the previous classes. Additionally, they will learn about square numbers and the cube of a number. Per day, they will practice mental sums for at least 10 minutes.

By the end of the academic year the students should be able to memorise:

* Addition sums up to 10,000
* Subtraction sums up to 10,000
* Doubles up to 10,000
* Multiplication tables up to 12
* Division tables up to 12
* Converting fractions into decimals and vice versa.
* Adding fractions
* Adding decimals numbers with two decimals.
* Square numbers up to 20
* The cube up to 10

# Monitoring progress

The students will be assessed on mental sums twice per term. The week before mid-term holiday and during the last week of the term. The teacher will keep record of the progress of every student. Additionally, we have speed drill competition at the end of every term to encourage students to keep practicing and be more equipped and be acquainted with basic mathematical skills and work out mental sums with speed and accuracy.

# Home/ School links

Jill Schools International believes that parents have an active role in the learning of their children. We expect all parents to motivate their children to do their homework on daily basis. The students will be working in a special workbook for mental sums.