



CHIVIRIKANI PRIMARY SCHOOL

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SCHOOL POLICY

Mental Mathematics

EFFECTIVE DATE: _____

REVISION HISTORY:

As amended on:

11 October 2016

WHAT IS MENTAL MATHS (MM)?

A Process in Which a Learner Is Taught To Calculate In Their Mind by Using Various Strategies.

Repetition and Communication With Friends Help Improve Strategies and to Develop Sound Comprehension of Figures.

WHAT WE CAN ACCOMPLISH WITH MENTAL MATHEMATICS

- That the learner thinks about the method when he or she calculates a sum.
- That the learner develops the ability to see an image of what figures look like and how they function.
- Through verbal explanations and repetition the child should gradually develop good strategies to do calculations in his or her mind, as well as to have an improved understanding of figures.
- To assist the child to develop a mathematical language. This can only happen if he or she gets the opportunity to explain his or her calculations.
- We want to develop a feeling of wellbeing in the learners. It should be fun to do sums.

PLANNING

- Should be done every morning:
 - Foundation Phase: first ten minutes of the Mathematics lesson.
 - Intermediary Phase: first fifteen minutes of Mathematics lesson.

Level of Learners

- Determine the levels of MM that majority of learners are on.
- Make use of outcomes in “The National Numeracy Strategy”.

Contents

- Submit planning for the year ahead for each grade.
- Plan for two weeks in which at least one of the strategies is covered.

Mental Mathematics Presentation

- Write down everything you want to ask and do.
- Technique – whole group / down the line / individual.
- Ensure that learners understand the ground rules.
- Outline of lesson:
 - **Foundation Phase**
 - 4 minutes rapid / fast
 - 3 minutes reflecting / mental concentration
 - 2 minutes application from real life
 - 1 minute reflection
 - **Intermediary Phase**
 - 5 minutes rapid / fast
 - 5 minutes reflecting / mental concentration
 - 4 minutes application from real life
 - 1 minute reflection
- All strategies should be discussed at the annual planning meeting.

Guidelines/Tips

- Maintain eye contact with your learners.
- Stay calm at all times – be friendly – body language should be right.
- **Do Not Explain** – the child should explore by himself or herself.
- Give very clear instructions, e.g. “I am going to say this once. Everyone should start with yellow.”

- Always start with your **Beads**:
 - Learners place strings of beads around their necks.
- Use techniques – whole group / along the line / individual. **Everyone** should get a turn.
- Let them stand in a semi-circle; sit in a row, or learners in front sit down and those in the back stand.
- Support learners who need more time to think.
- Good strategies:
 - Nobody raises a hand – the teacher gives the sign when hands may be put up.
 - Give each learner a set of number cards, so that everyone can show the answer simultaneously.
 - Show with your thumb or place your hand on your head if your answer is right or if you know the answer.
- After each activity enough time should be spent to discuss:
 - To determine which strategies learners used to reach the answer.
 - Also to point out all the possible strategies to the learners.
 - And to highlight the best strategies.
- Each of the 12 strategies should first be explained and discussed in a full class presentation. It should be explained on the classroom wall.
- Occasionally there should be an opportunity to work out a sum in writing.
- Reflection – summarise the main theme for the day at the end of the lesson. Again place emphasis on the most important strategies for the day.

Evaluation

- **Baseline**: The teacher uses the outcomes for each grade to determine the level the learners are on. **Year Planning** is done accordingly.
- **Continuous**: Learners correct errors themselves by means of clarification. The teacher guides them by asking open ended questions. Learners make use of the beads to show friends how they think. Before the class tests are done, the learners get the opportunity to check the sums. He or she marks those that can be answered immediately and then those that present problems may be discussed with other learners. After that, the test is handed out again and answered.
- **Recording**: The teacher makes use of class tests. The teacher records the learners' progress concerning the results on the class list.
- **Reporting**: The teacher informs the learners of the results, of what and how they will proceed and how it is going to be determined whether there is progress. At the end of the term the parents get a report on the learners' progress.

Classroom Observation

- Teachers visit one another's classrooms to give advice and to see whether colleagues are on the right track.
- This is done as often as required depending on problems. Colleagues from neighbouring schools can be invited to attend the presentation of the lesson if deemed necessary

