

# Parents as Partners

Dear Parents,

This leaflet aims to give you guidance on what your child is doing in Mental Mathematics at school and ways in which you can support their learning.

At TEMIS we focus on developing students' mental methods and understanding before teaching written algorithms. Written algorithms should be viewed simply as an efficient way to record processes of which students already have a thorough understanding, rather than a rote method. This approach is supported by research conducted in a range of countries. See [www.temis.iea.ac.pg](http://www.temis.iea.ac.pg) for more information.

The daily Mathematics lesson in all grades involves a short mental starter, giving students the opportunity to develop and practise mental skills. Often the mental starter will involve games and discussion, with recording done informally on mini-whiteboards.

The ideas within this leaflet will help support the work which is already occurring in school. We recommend that you try to keep the sessions short (no more than 10 minutes) and most importantly FUN!

Should you have any questions, please don't hesitate to contact your child's teacher.

The TEMIS Team

# Prep

- Match number to group of objects
- Count to at least 20 and back
- Recognise numerals 1-9, 0, 10, then beyond 10
- Use language such as more or less, greater or smaller to compare two numbers
- Count in 10's
- Find one more/one less than a given number
- Remove a smaller number by counting back from the larger number
- Doubles of numbers to 10
- Share a group of objects eg 10 lollies between 2 people
- Compare and order measures using language such as more or less, longer or shorter, heavier or lighter.
- Sequence events eg times of day
- Begin to read o'clock times
- Use language such as circle or bigger to describe size and shape of solids and flat objects
- Use everyday words to describe position and direction
- Talk about and recreate simple patterns
- Begin to use vocabulary related to money, use them in role play, using K1, K2 and \$1, \$2
- Addition facts for all pairs of numbers with a total of 5 and corresponding subtraction
- Doubles of all numbers to at least 5

# Grade 1

- Reinforce counting to at least 20 and back
- Count in 2's, 5's and 10's
- Partition numbers into 10's and units
- Say the number that is 1 or 10 more or less than any number within the range 1-30
- Use the terms take away and difference and other related vocabulary when performing subtraction
- Begin to use the + and - signs
- Use knowledge that addition can be done in any order to make calculations more efficient
- Identify near doubles using doubles already known eg 6+5
- Add 9 to single digit numbers by adding 10 and subtracting 1.
- Share objects to 20 between 2 people
- Recognise half and a quarter
- Read and discuss a range of pictograms and tables
- Read time to the half hour and hour on analogue clock.
- Sequence events eg days of week
- Use everyday language to describe features of 2D and 3D shapes eg cube, cuboid, sphere, cylinder, cone, circle, triangle, square and rectangle
- Recognise and predict simple patterns
- Choose and use appropriate number operations and mental strategies to solve problems
- Find totals and change from up to K20 (whole numbers)
- Know all pairs of numbers with a total of 10
- Doubles of all numbers to at least 10

# Grade 2

- Count to at least 100 and back to zero
- Count in hundreds from zero and back
- Recognise odd and even to 30
- Order numbers to 100, positioning on a number line and 100 square.
- Begin to add 3 single digit numbers mentally, totaling to 20
- Know subtraction is the inverse of addition; state the subtraction corresponding to the addition and vice versa
- Find a difference by counting up from the smaller to larger number.
- Identify near doubles Eg. 41+40
- Add and subtract 9 or 11 by adding 10 and adjusting
- Read and discuss simple tables, pictograms, block charts
- Order the months of the year
- Read time to the half hour and hour using digital and analogue clock
- Use everyday language to describe features of 2D and 3D shapes eg cube, cuboid, sphere, cylinder, cone, circle, triangle, square and rectangle
- Explain how a problem was solved
- Recognise all coins and notes, find totals and work out change.
- All pairs of numbers with a total of 20 eg. 1+19
- Doubles of multiples of 10 eg. 20+20
- Doubles of numbers to 10 and corresponding halves
- Multiplication facts for 2's, 4's, 5's, 10's

Remember ...

## ***Mathematical Talk***

Throughout all grades, students are encouraged to learn and use the language of mathematics. It should be remembered that many words have a different meaning in mathematics to every day situations; eg odd, take away. Asking children to explain their ideas and talk about maths has many benefits:

- Helps students to develop their understanding and clarify their thoughts
- Encourages reflection and recall
- Builds students' confidence
- Develops a sense of ownership
- Reveals how much children understand

## ***Attitude Counts***

Your feelings will have an impact on how your child thinks about mathematics and themselves as mathematicians. Positive attitudes about maths are important for your child's success.

## ***Problems can be solved in different ways***

Some problems may have only one answer but there are often many different ways to get to it. Your child may solve a problem differently to you. For example  $12 + 14$  can be solved by saying  $12 + 4 = 16$  and 10 more is 26 or by saying  $12 + 10 = 22$  and 4 more is 26. Both methods reach the correct answer. Ask your child to explain their method. Be prepared to share your method in a positive way.

## ***Wrong answers can help***

Wrong answers help show you which ideas your child is not sure of. Talking through these problems give you the opportunity to explain the ideas or practise the skill.

# Mental Maths



**A guide for  
Junior Primary  
Parents  
(Prep—Grade 2)**