



**Esher Church School**

**Supporting Your Child with Mental Maths**

**September 2015**

The key thing to remember when supporting your child at home with their mental maths is to make the learning as much fun as you possibly can, whilst focusing on the repetition of facts.

In this booklet, we give some suggested activities to support your child's learning in some key areas of number: counting; place value and rounding; addition and subtraction; multiplication and division and fractions, decimals and percentages. This is by no means an exhaustive list but is a starting point.

There are several websites that you may find useful too.

<http://www.mad4maths.com/parents/>

[http://www.bbc.co.uk/schools/parents/primary\\_support/](http://www.bbc.co.uk/schools/parents/primary_support/)

<http://www.amathsdictionaryforkids.com/> - this is excellent as it explains all the relevant mathematical vocabulary and gives examples of its use

**Great websites for children to practice their maths skills:**

[www.mymaths.co.uk](http://www.mymaths.co.uk)

Username: eshercs

Current Password: symmetry (note that this password changes annually)

<http://www.coolmath4kids.com/>

<http://www.mathplayground.com/games.html>

<http://www.maths-games.org/>

<http://uk.ixl.com/math/topics>



# Counting:

## Early counting skills:

- Practise chanting the number names. Encourage your child to join in with you. When they are confident, try starting from different numbers eg. 4, 5, 6 . . .
- Sing number rhymes together - there are lots of commercial tapes and CDs available
- Give your child the opportunity to count a range of interesting objects (coins, pasta shapes, buttons etc.). Encourage them to touch and move each object as they count
- Count things you cannot touch or see (this is more difficult!). Try lights on the ceiling, window panes, jumps, claps or oranges in a bag, dropping coins into a jar
- Play games that involve counting (e.g. snakes and ladders, dice games, games that involve collecting objects)
- Go on a 'number hunt' - look for numerals in the environment. You can spot numerals at home, in the street or when out shopping
- Cut out numerals from newspapers, magazines or birthday cards. Then help your child to put the numbers in order
- Make deliberate mistakes when chanting, counting or ordering numbers. Can your child spot what you have done wrong?
- Choose a number of the week eg. 5. Practise counting to 5 and on from 5. Count out groups of 5 objects (5 dolls, 5 bricks, 5 pens). See how many places you can spot the numeral 5.
- Use number lines and or bead strings to count along.

## Later counting skills:

**However mathematically able or old your child is, you can always challenge them through a counting activity.**

**Use the same strategies as above but for more advanced concepts.**

- Count in odd and even numbers, tens and other multiples e.g. fives, threes etc
- Count from negative numbers, eg. count in 3s starting from -20
- Count in fractions. Use pieces of fruit, pizza or cake to support understanding
- Count in decimals. Use money to support this e.g. count in 5 pence pieces and recording it in pounds and pence. Also use number lines to support counting in a visual context.
- Give your child a starting number; ask them to count increasing the count interval by 1 (or 2, or 5...) each time eg. 27, 28, 30, 33, 37



## Number Bonds:

- Play 'ping pong' to practise complements with your child. You say a number. They reply with how much more is needed to make 10. You can also play this game with numbers totalling 20, 100 or 1000 as well as fractions, decimals and percentages. Encourage your child to answer quickly, without counting or using fingers – and try to do it in a rhythm as if you were playing ping pong
- Have a 'fact of the day'. Pin this fact up around the house. Practise reading it in a quiet, loud, squeaky voice. Ask your child over the day if they can recall the fact
- Make a treasure hunt around the house. Place complements in different areas. Give your child a starting number, perhaps a magnetic number or simply written on a piece of paper and place it in a bag to make it more exciting. Ask them to find its mate/pair. Challenge them to find all the answers in a set time.
- Make up or learn rhymes e.g. one and nine are always fun, two and eight love to skate, three and seven – a match in heaven, four and six know the tricks, five and five are stayin' alive
- Play a memory game on cards. Write the bonds your child is learning on cards and arrange them in a grid. Challenge your child to find the pairs. If they find the pairs, they keep them. If you find them, you do. Whoever has the greater number of pairs at the end wins
- Use Numicon or other resources e.g. blueberries in dishes to support your child's understanding that number bonds are addition and subtraction facts.

## Place Value:

- Counting really supports children's understanding of number so continue to use the counting strategies
- Challenge your child to find one more and one less than a target number. How many can they do in a minute?
- Use door numbers to spot patterns. What will the next house's number be? We will reach 50 on this road?
- Use door numbers and or number plates to round to the nearest ten or hundred
- Play 'guess my number'. Choose a number and ask your child to ask questions to help them guess what it is e.g. is it a two digit number? Does it have more than three tens? Is your number even? Is it more than 50? Swap over when they guess
- Have a daily target number and pin it on the fridge/noticeboard. How many facts can you collect about the number as a family? eg. it is a multiple of 2; its digit sum is 6, if you round it to the nearest ten it will be 20 etc.



# Addition and Subtraction:

- Have a 'fact of the day'. Pin this fact up around the house. Practise reading it in a quiet, loud, squeaky voice. Ask your child over the day if they can recall the fact.
- Throw 2 dice. Ask your child to find the total of the numbers (+), the difference between them (-). Can they do this without counting? Use 10 sided dice or place value dice.
- Use a set of playing cards (take out the picture cards) or number cards you have written on paper with higher numbers to make it more challenging. Turn over two cards and ask your child to add the numbers. If they answer correctly, they keep the cards. How many cards can they collect in 2 minutes?
- Play Bingo. Each player chooses five answers e.g. numbers to 10 to practise simple addition. Ask a question and if a player has the answer, they can cross it off. The winner is the first player to cross off all their answers.
- Give your child an answer. Ask them to write as many addition sentences as they can with this answer (e.g.  $10 = \square + \square$ ). Try with subtraction. This can also work with decimal numbers.
- Give your child a number fact (e.g.  $5+3=8$ ). Ask them what else they can find out from this fact (e.g.  $3+5=8$ ,  $8-5=3$ ,  $8-3=5$ ,  $50+30=80$ ,  $500+300=800$ ,  $5+4=9$ ,  $15+3=18$ ). Add to the list over the next few days.
- Play a memory game (pairs). Lay pairs of facts out on the table. Take turns to turn over the two cards. If they have the same answer, e.g.  $9 - 3$  and  $11 - 5$  then they keep them if not they return and wait until their next turn. The person who gets the most cards wins the game.
- Play board games such as Snakes and Ladders or print some simple dice and counter games from the internet.
- Make your own board games together and make up some questions to answer.



# Multiplication and Division:

- Use Mrs Bell's helpful strategy to learn times tables. Write out a times table with your child and chant it through both forward and backwards. Rub off a fact your child thinks they can remember without seeing it. Repeat the chanting again and rub off another fact. Continue this until they can chant the times table without a visual clue. This works best if you encourage your child to tap a rhythm as they chant
- Count with the same quantities of objects eg. fruit or sweets to help support the understanding of repeated addition. Find everyday items that come in groups eg. pairs of socks, eggs etc. and use these to count in groups. Label the items with sticky notes to support counting and understanding. Numicon also helps to support this understanding.
- Give your child a pile of objects to share out into sets or groups e.g. when making packed lunches. Can you share these strawberries into the snack pots please? How many does each person get? Are there any left over?
- Have a 'fact of the day' particularly if this is one your child is struggling to remember. Pin this fact up around the house. Practise reading it in a quiet, loud, squeaky voice, or sing it!. Ask your child over the day if they can recall the fact
- Throw 2 dice. Ask your child to find the product of the numbers (x). Can they do this without counting up? Use a 10 sided dice.
- Use a set of playing cards (take out the picture cards) or number cards you have written higher numbers on to make it more challenging. Turn over two cards and ask your child to multiply the numbers. If they answer correctly, they keep the cards. How many cards can they collect in 2 minutes?
- Play Bingo. Each player chooses five answers e.g. five times table facts. Ask a question and if a player has the answer, they can cross it off. The winner is the first player to cross off all their answers.
- Make your own or print off loop card games to play as a family.
- Use flashcards with a question on one side and the answer on the other. Challenge your child to see how quickly they can answer a set (out of order).
- Make a treasure hunt for your child. Hide multiplication facts around the house and challenge your child to find them as quickly as possible when you give them a question.
- Print off dot to dots counting in multiples.
- Play Fizz Buzz. Count up in 1s and when you get to a multiple of 5 for example, say Fizz and when you get to a multiple of 8 for example say Buzz. If you have a number that is a multiple of both (eg. 40) say 'FizzBuzz'. You can adapt this activity for whichever times tables you are focusing on.
- Multiplication and division wheels. Print them off the internet and see how quickly your child can complete them.



## Fractions, Decimals and Percentages:

- Use as many real life examples as possible eg. using sales in shops such as 20% off
- Offer your children a pocket money increase of, say, 15% each week – if they can correctly work out how much it is
- Count in decimal intervals eg. in steps of 0.2. To make it harder, start at 5.3.
- Count in fraction intervals – quarters, halves, three quarters (this is a really useful one)
- Count in fractions but converting to mixed numbers as you count – eg. counting in  $\frac{5}{6}$ ths would go  $\frac{5}{6}$ ths, 1 and  $\frac{4}{6}$ ths, 2 and  $\frac{3}{6}$ ths – this is quite a challenge, especially if you ask more able/older children to cancel the fractions to their lowest terms as you go
- Encourage your child to divide whole items of food into fractions eg. cakes and pizza
- Ask your child to find fractions of amounts eg. fruit and sweets
- Use number lines to count up in fractions or decimals
- Use loop cards printed off the internet to play as a family

