

Making maths count



What the Early Years Foundation Stage (EYFS) says: *Mathematics* involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces, and measures.

It is important that maths is introduced to young children as something fun, accessible and part of our everyday lives. Encouraging parents to also get involved can help develop their own enjoyment in the subject which will, in turn, have a positive impact on their child's learning. Indeed, parental involvement plays a key role in introducing maths as an accessible everyday part of children's lives. It is important then that practitioners are creative in thinking of ways to encourage parents and carers to get involved in this part of children's learning, bearing in mind that they may have negative associations with the subject.

For example, stay-and-play sessions with parents are a great opportunity for practitioners to introduce the subject and provide fun practical activities. As part of the session, practitioners could prepare a booklet which includes simple counting action songs, basic mathematical language and ideas to explore maths in the environment which can be used out shopping, in the park and in the home. This can then link back and forth between what is being learnt in the setting and at home.

Activity idea for parents: bath-time maths

Many children have toys that they enjoy playing with in the bath such as rubber ducks. Why not encourage parents to use them to introduce the basic concepts and language of maths?

Bathing their children can become a learning experience as well as fun, with parents counting the number of bath toys with their children to encourage the development of basic counting skills.

Plastic storage containers can also be used in the water in conjunction with words like 'full', 'empty', 'more', 'less', 'pour', 'quickly', 'slowly', 'in' and 'out', to introduce the concepts of volume and time. Activities and language can then be developed as children's interests grow.

Treasure hunt at Footsteps Nursery

The children at Footsteps enjoy counting stones, sorting leaves and comparing the size and shape of them. During exploring activities, they use shape and space language – for example, saying whether a bucket is 'full' or 'empty' and so forth. The children play a wide variety of games which can relate to number order, adding and subtraction, such as hopscotch and hide-and- seek.

During a recent activity, a small group of children were asked to go on a treasure hunt in the nursery garden to see what they could find.

The practitioner told the children that she would count down from ten to one and then when she shouted 'one', the children had to return with whatever they had found. On 'one', the children

all returned excitedly with what they had discovered.

At a 'treasure station' that had been constructed by the practitioner were bowls and boxes of all different shapes and sizes. The children were asked to sort their treasure into the relevant bowls. They spoke excitedly about what they had found and one little boy picked up a stone that he had found and said: "I found a very small one; I think it goes in the small bowl".

All children sorted through their treasure and the practitioner used lots of mathematical language to enhance this learning opportunity.

Becky Rutter, Manager, and Maria Caird, Deputy Manager

Top tips

- Start by reviewing and reflecting on how maths is currently being delivered and identify ways to improve.
- Keep maths play-based – there is no need for worksheets. Provide varied, fun and exciting experiences both indoors and outdoors to develop and stimulate interest in all things maths.
- The key person and other staff should demonstrate positive messages that maths is useful and enjoyable – make it fun and interactive.

Mathematical environment at Elton Pre-school

We know from baseline assessments that children have been starting reception with low levels of understanding in maths. This has

made us focus on our practice and how we promote this area of learning.

1. *Create a mathematical environment*

To support number recognition, we have a wide variety of numbers all over our pre-school, such as number squares for lining up for snacks, numbers on displays, numbers hanging on a washing line and numbers in our outside area too.

We created a maths box with everyday objects such as tape measures, rulers, dice and calculators (although the children think they're mobile phones!).

The team take every opportunity to use mathematical language: words like 'same', 'more' and 'less', and shapes, sizes and prepositions are all regularly used to support children's learning. Children have daily opportunities to play and build with shapes, and match shapes to objects in the environment.

Computer software has also been carefully selected to promote all areas of maths, including calculating.

2. *Delegate*

A named team member, who received additional training, takes responsibility for leading on maths. She manages a focus group every day and plans activities for each group. She uses the National Numeracy Strategy for settings; which, although obsolete, still has some great activity ideas. This means that, as a setting, we are able to track progress in maths more effectively.

3. *Be inventive*

Outdoor learning always seems to present more of a challenge, especially in the winter, but we have addressed this by adding number cards, walkie-talkies and tills to our outdoor play. As always, staff model good use of maths: counting how many jumps it takes to cross the path, running through the tunnel, discussing the shapes of balls and hoops, and so on. We're eagerly awaiting a number snake to be added to our playground.

4. *Get parents involved*

Every half-term, we send out a 'Home Links' page linked to our topic which gives practical ideas to support learning at home. We also email parents a weekly blog which contains a *Maths Challenge of the Week*. Sharing fun activities parents can do at home promotes learning through play and the children love it!

Adapted from *Making Maths Count (Under 5, May 2013)*



Useful publications

Numbers Shapes and Problem Solving (Pre-school Learning Alliance, 2008) examines how children, through exploration and discovery, find out about objects, what they do, how they work and the problems they pose for solving in logical and imaginative ways. For further details please visit www.pre-school.org.uk/shop.

The Pre-school Learning Alliance is the largest and most representative early years membership organisation in England. An educational charity, the Alliance represents the interests of over 14,000 member settings who deliver care and learning to over 800,000 families every year. We offer information and advice, produce specialist publications, run acclaimed training and accreditation schemes and campaign to influence early years policy and practice.

T. 020 7697 2595

E. info@pre-school.org.uk

W. www.pre-school.org.uk