



Getting personal with Maths

All the young children that I know are very interested in themselves. They are still evolving their likes and dislikes and learning about who they are; this makes 'All about me' a popular nursery theme. Try starting it off by reading *Things I like* by Anthony Browne (Walker Books), which will encourage children (those who need encouragement!) to offer their likes and dislikes. You could help children make a tally chart of these. It's always interesting to collect information on what they absolutely don't like as well as what they do.

Suggest that they each make their own passport with a photograph or drawing of themselves. Explain that they'll need to give the passport a number and include details about their hair and eye colour, where they were born and where they live etc. You could expand this to a class 'All about us' book.

To benefit the most from an 'All about me' theme you'll need to identify and link in your short-term plans specific content to particular children's interests and needs. Of course, children will want the space and time to carry out their own investigations, and to satisfy their own curiosity about what makes them and others tick, so it goes without saying they'll need the environment, the experiences and the appropriate resources to support and satisfy their findings. Make sure that the resources are really accessible to enable children to make a choice about what materials they're going to use.

Carole Skinner suggests activities to place children's interests at the heart of their exploration of counting and measuring...

Maths about me

It's a good idea to involve children in interactive maths displays that cover everyday routine happenings. Use charts, posters, notices and get them to provide information about what's going on during the day – this could be data about the fruit available at snack time or children's food preferences or visitors who are coming. Ask questions such as, "How many pips in your apple today? Is it more or fewer than Jack?" Display two storybooks and write a notice inviting children to put a bear on their favourite book. Together count how many bear votes each book has and decide which book has the most and is the favourite. Invite children to contribute a book to 'Our favourite stories' display.

Try to identify and take up the problem-solving opportunities that occur in the preparations children make when they're setting up an activity. Encourage them to estimate how many wheels they need to make their tractor, or how many pages they'll want for their book. Involve children in estimating the number of things they might need because this is all part of building their problem-solving skills.

A role-play area set up as a home corner is always popular with children because it's a scenario that they recognise. Their play will involve counting, sorting and making decisions, and by providing mathematical resources such as a telephone with a list of phone numbers, real money or kitchen equipment that stacks or is graduated by size, you can extend their experiences into even more mathematical situations. Asking questions such as "Are you going to use the largest saucepan?" or "What do you think is the best way to sort out the baby clothes?" or "I wonder how many plates we'll need?" will set off a chain of problem-solving scenarios.

Learning about number

Children learn about counting and the number system from their social experiences and begin to understand about numbers as they relate to themselves. They can often read simple numbers before they can read words because one symbol stands for one word – for example, the symbol '8' standing for the much longer word 'eight'. Children especially become familiar with their birthday number as they receive cards and badges with that number on and family and friends constantly repeat the number to them.

Playing games is a basic ingredient in every child's understanding of number and social development. Encourage children to play games such as 'hide-and-seek with teddy' where they have an opportunity to rehearse saying numbers in sequence. While one pair of children hides a



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teddy, the other pair count to 10, saying "One, two, three, four... coming, ready or not". You could provide support by whispering the numbers and pointing to the number line.

Enriching play environments with maths resources encourages children to integrate purposeful maths into their play, whatever the focus or theme. During play children will count money, measure, weigh, make price labels, sort out materials, count out wheels and use bricks to build houses, towers and bridges. Play alongside modelling mathematical language and encouraging discussion and extending children's knowledge with your commentary.

Learning about measures

Measuring is something everyone does all the time so there are lots of different maths words we can use to describe what we've measured. Children often use the general word 'big' to describe all their measuring whether it's to mean height, weight or size. We need to provide young children with measuring words such as narrow, wide, tall, short heavier and lighter so that they can compare things that they are measuring. They need to play at measuring in lots of different ways so that they can use as many different words as possible.

Although it takes a while for children to understand how to use measuring tools, playing with them helps them begin to learn. Provide real tape measures and metre sticks and rulers, and let them use them to find the length of their foot or height as well as using non-standard measuring equipment.



Number Experience

FUN WAYS TO COUNT AND MAKE SHAPES...

1. BIRTHDAY COUNT DOWN

Ten days before a child's birthday make a 10-link paper-chain or use 10 connecting elephants or dinosaurs. Each day ask the child to remove one of the pieces and count how many are left. You could encourage number recognition by displaying the appropriate numeral card next to the chain to indicate how many days there are left before the birthday.

Supporting questions

- Can you pick out the numeral that goes with your age?
- Can you draw your birthday number in the sand tray?

2. FASTENING TOGETHER

Draw children's attention to the zips, buttons, bows, laces and Velcro fastenings that they have on their clothes. Discuss getting dressed and what order they put their clothes on. Ask them to count how many buttons they have on today and compare with each other.

Supporting questions

- Do you have more or fewer than five buttons today?
- Do you know the last thing you put on when you get dressed?

3. HOW MANY CAN YOU HOLD IN YOUR HAND?

Put out a range of materials such as beads, shells, pebbles, small bricks and pennies, and challenge children to find out how many of each resource they can hold in their hand.

Supporting questions

- I wonder what can you hold most of?
- How many would you have if I gave you another bead?

4. BODY SCULPTURE

Encourage children to use different body parts to make shapes and to join with a partner to make more shapes. Suggest they try to make a square using their four hands or find how many ways they can make a rectangle using their arms and legs. Use a large mirror to reflect the shapes they're making and take photos to record them. Encourage them to describe to each other how they made a particular shape.

Supporting questions

- What did you notice about making circles?
- How did you know it was a square you'd made?



Measurement experiment

ENCOURAGE CHILDREN TO EXPLORE THE CONCEPTS OF DISTANCE AND WEIGHT...

1. WEIGHING MY SHOE

To make a spring balance to weigh their shoe children will need two large paperclips, an extra large elastic band, a plastic sandwich bag and a hole puncher. Demonstrate how to connect a paperclip to each end of the elastic band, then show the children how to pierce one of the corners of the bag opening using the hole punch. Slide one of the paper clips through the hole so that the bag is attached to the elastic band and use the other paper clip to hold it. Children can put one of their shoes in the bag and can see how far the elastic band stretches dependent on the weight of their shoe. Record how far the elastic has stretched by making marks against a piece of paper on the wall.

Supporting questions

- I wonder why your shoe bag is lower than Ela's?
- How much has your elastic band stretched?
- Is there a way we can measure how much your band has stretched?



2. HOW FAR CAN YOU REACH?

Pin a large piece of paper to the wall. Children take it in turns to put a blob of paint on their finger and stretch up to put a fingerprint of paint on the paper.

Supporting questions

- How did you manage to reach so far?
- Is there a way we could measure how far your reach is?
- Which spot do you think is furthest?

