Learning at Home

Learning can happen everywhere. There are many ways that you can build learning activities into everyday routines to support your child's numeracy skills. Children have a keen interest in the world around them, but to have the confidence to explore it they need the support from adults around them. Here are a few activities you could try at home with attached some common misconceptions children might make.

Look out for numbers you see around the house. Estimate or count objects in your environment.

- Children may think that if objects are larger or spread out more, there are more of them.

Practise using a number line to count on and back. Cover up a number and let your child identify what is missing.

- Children may find countng backwards trickier and mistakenly count forwards instead.

Play games where you encourage your child to count objects and then correspond objects to specific numbers. (eg. counters or beads).

- Children may count too many or too few. Counting the same object more than once is common.
- They may also repeat a number or miss one out. Ask: "Can you touch each one as you count it?" "Can you count again to check your counting?"

Give opportuities to measure and describe objects around the house. Use terms such as longer or shorter, taller or shorter, heavier or lighter, more or less, full or empty.

- Children might not align the starting points of objects when comparing lengths.
- Children may think that larger objects always weigh more or taller containers hold more.

Point out the time on the clock, particulalry at breakfast, dinner or bedtime.

- Children might not understand the vocabulary related to time.

Investigate different coins and talk about their value.

- Children might be confused with the concept of having a 2p or 10p coin after learning 1-1 correspondence. Show them how awakward carrying so many 1p coins wouold be.

Develop a positive culture related to numeracy and mathematics and use mistakes as learning opportunities.

- Children might say "I can't do it". Try to encourage them to say "I can't do it **yet**" if they are feeling disheartened or self-doubting.

Encourage learners to ask questions to deepen their understanding and use or try different strategies.

Maidenhill Primary School

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Developing Numeracy and Mathematics at Early Level

Number and Number Processes

How children learn about numbers and develop mathematical understanding in the early years is vitally important to develop numeracy skills and confidence later on in life. For learners to experience success they need to be encouraged to ask questions, try new things, solve problems, explore alternative approaches and explain their thinking.
Number in the early years:

Number Sequences – Explore number and use them to count, create sequences and descibe order. Say a number before and after a given number.

Numerals – Recognise and name numerals and order numerals forwards and backwards.

Subitising – Identify numbers in a group without counting or estimate a number of objects in a group.

Counting – Use 1-1 correspondence to count objects in a row or in regular and irregular groups. Use and understand ordinal numbers. Work towards skip counting in 2's, 5's and 10's.

Place Value – To partition numbers into 2 or more parts and identify number bonds.

Add & Subtract – To find the total number of items or how many are left when some are taken away. To find one more than or one less than a given number. To combine quantities, count on or back to add or subtract and to solve problems. Use language such as: Add: total, sum, plus. Subtract: take away, minus, difference between.

Fractions – Share and group items to make smaller groups. Solve problems involving fractions like doubling, halving and sharing. Correct use of language: share, divide, one half or a half.

Other areas of Mathematics

Developing mathematics in the early years helps with the understanding of problem solving and reasoning in a broad range of contexts. Encouraging children to problem solve and think critically can inspire their curiosity and creativity and support their independence. These are some areas that learners will develop in numeracy and mathematics:

Money

How or when to use money and recognise a range of coins.

Time

How routines and events link with times and seasons.

Language: day, night, morning, afternoon, before, after, o'clock.

Measurement

How to experiment with units of measure and compare sizes and amount in the environment. Use mathematical language to talk about size, weight, capacity.

Patterns and Relationships

How to recognise and explore patterns in the environment and copy, continue and create their own patterns.

Properties of 2D Shapes and 3D Objects

How to explore and investigate characteristics of everyday objects and shapes and to sort, describe and be creative with them.

Angle, Symmetry and Transformation

How to create a range of symmetrical pictures and patterns. And how to use simple directions and describe positions. Language: forward, backward, up, down, left, right.

Data and Analysis

How to gather information to use, organise and analyse and to show understanding and make choices with this infromation.

Problem Solving

To think through a problem, to recognise there is more than one path to the answer and to use past knowledge and logical thinking skills to find the answer.