Maths Pyramid for Babies and Young Children

Starting at the bottom, each type of activity gives rise to and sustains, not only the next one, but all the others above.

- •Activities at the bottom level begin in babyhood and the activities above are added one by one.
- The top of the pyramid (number) emerges at around four or five years of age in most children.
- •The broader the base of the pyramid, the sturdier the activity at the top of the pyramid will be.

Explanation of Maths Pyramid

Implications

Number is all around children, but they don't engage in quantity problems until they are quite old. When they begin to engage with quantity, the previous experiences (below) support their thinking.

NUMBER

Children should be exposed to a rich learning environment where there are plenty of opportunities to explore quantity. Adults should look out for emergent use of number knowledge as a problems solving tool.

Children will begin to use counting words to talk about the world around them.

Early counting and number helps children define themselves socially.

Children use counting words for a range of purposes, but they are quiet old before they use them to solve number problems

COUNTING

A child may produce counting words without understanding them.

Children will develop their use and understanding of counting words when they need them to talk about the world around them.

Counting games and songs can develop their understanding of counting words.

Children talk about what they are doing, their experiences and their world around them. This is closely linked to movement, problem solving and space experiences (below). Opportunities for confident movement, balanced use of space, and engagement with problems all relate to a healthy self in early years.

LANGUAGE

Children need lots of opportunities to talk and to be listened to.

Movement play helps children define space. It causes them to encounter limits and boundaries.

Children adopt their own spaces. This helps them to think about surrounding spaces and shapes in a connected way

SPATIAL UNDERSTANDING

Children need plenty of opportunities to

- move up/down, left/right and front/back.
- negotiate obstacles e.g. exploring outdoor environments, climbing frames, jigsaws
- □ create and define their own spaces e.g. hiding, making a den

Movement produces problems to be solved.

Solving a problem produces a feeling of mastery.

Thinking about how the problem was solved can produce a schema for future problems.

PROBLEM SOLVING

Babies and children need time, space and encouragement to develop effective problem solving strategies.

Whilst playing young children may display repetitive behaviour. This should not be discouraged.

Movement can be voluntary or involuntary bringing babies and children into contact with the world.

It increasingly comes under the control of their intention. Eves and hands lead in development of intention. **MOVEMENT**

Babies and children need plenty of opportunities and encouragement to engage in movement play.

Some play and toys will encourage big moments and other small movements. Babies and children need time to develop both.

Adapted from:

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