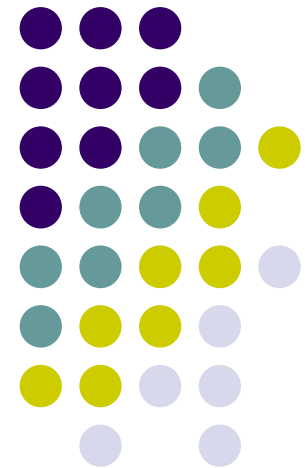


Supporting and Creating a 'Mathematical Rich' Home Learning Environment

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The Learning Process



□ Numbers

*Stable order Principle –

That number words have a correct order, understanding that counting sequence ALWAYS stays constant eg 1,2,3,4,5 and not 1,2,4,6,8

*One to One Correspondence –

That when we count objects or actions we count one number name to one thing, we don't miss any out or count any twice

*Cardinality –

That when someone asks 'how many?' the answer is 5 not 1,2,3,4,5. Children know to recall the final number and not recount

* Conservation -

If you count things carefully and then count them again, the number will be the same whether items are spread out (look more) or close together (look less)

Shapes and Space

Essential Vocabulary around shape and space –

*Solid shapes, hollow shapes, cube, cuboid, pyramid, cylinder, sphere, edge, corner, face, same, different

*Shape Names: - circle, triangle, square, rectangle, hexagon, side, corner

* Positional Words: - next to, on top of, behind, in front of, underneath

Progression –

*Interest in Shape

*Shapes of everyday objects

*Beginning to use mathematical Language for 'solid' 3D shapes and 'flat' 2D shapes

* Uses a range of positional words

*Identifies a particular named shape

* Talks about and creates patterns in a range of media



Early Learning Goals (40-60mths)



□ Numbers

Children count reliably with numbers 1-20, place them in order and say which number is one more than or less than a given number. Using quantities and objects, they add and subtract two single digit numbers and count on and back to find the answer. They solve problems, including doubling, halving and sharing.



□ Shape, Space and Measure

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.



The Maths Sack

- ❑ Books – Story and Non Fiction (shapes)
- ❑ Sorting - Animals or Pebbles
- ❑ Threading – Buttons
- ❑ Sizing – Russian Dolls
- ❑ Songs – Song Book and Number Mitt
- ❑ Puzzles – Numbers 1-10 and Shapes
- ❑ Activity Cards – One Potato, Two Potato and Jumping Beans
- ❑ Matching Game – Number or Animal Snap
- ❑ Information Sheets
- ❑ Diary



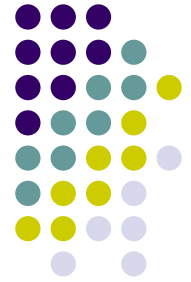
The Role of the Parent

- In Order to assist children in learning mathematical language, the adult needs to model the correct usage in everyday situations.

“What parents do with their children is more important than who parents are”

(EPPE Project 2004)

Mathematical Language



Altogether

Take Away

How Many

Less Than

Difference Between

Same as

Left Over

Most

More Than

Least

Number Names

Size

Too Many

Positional



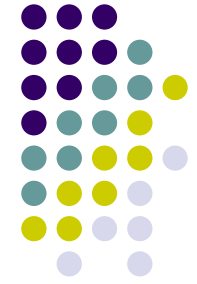
Focus on Counting

Keeping a Track of Counting

- ❑ Visual Counters – Eyes
- ❑ Digital Counters – Points
- ❑ Touch Counters – Touch but not displace
- ❑ Physical Partitioners – Move objects

Research shows physical partitioners make fewer errors, therefore children should be ***guided to point with their fingers*** and ***encouraged to touch and move objects*** as they count.

Supporting Children's Counting



- ❑ Counting groups of moveable objects
- ❑ Counting fingers and toes
- ❑ Counting objects that cannot be moved e.g in books
- ❑ Counting actions e.g “can you hop 5 times?”
- ❑ Sing Interactive number rhymes
- ❑ Provide activities for children to link numbers and quantities

Pause For Thought



- Do we count by rote or do we teach number concepts?

Changes our setting has made



- ❑ Interactive number lines
- ❑ Numbers on equipment e.g climbing frame, book corner, water, computer
- ❑ Numbers at snack and lunch time
- ❑ Number lines outside
- ❑ Miss Count at circle time



Final Thought

- The home learning environment for maths is not as strong as for literacy
- Mathematics is not just a collection of skills, it is a way of thinking