

PART 1: “Learning Counting and Number Symbols 1 till 10”

Maria Montessori said “Math is a way of looking at the world. It is language you can think rather than memorize”.

As a precursor to learning ‘numeracy’, Montessori believed in refining the senses in order to ready the mind for numeracy concepts. Listed below are the underpinning principles.

UNDERPINNING PRINCIPLES OR VALUES

- Logic, order, sequencing (size, length, implied volume)
- Sorting, classifying, grouping (how many dogs vs. how many cats. Which is more?)
- One to one correspondence (first matching quantity to quantity; and later matching quantity to number)
- Concrete learning comes before abstract concepts (‘feeling’ a number of things and naming the quantity before learning the number symbol)
- CONCEPT OF COUNTING IS INTRODUCED BEFORE NUMBER SYMBOLS.

EARLY MATHS ACTIVITIES

1. A good way to introduce simple counting is to use nursery rhymes! Some of the favourite of our children at the nursery are:

- *Five Currant Buns in baker's shop....
- *Five Green, Speckled Frogs. ...
- *Five Little Ducks went swimming one day....
- *Five Green Dinosaurs sitting on a wall....
- *The Ants Go Marching. ...
- *5 Cheeky Monkeys Jumping on The Bed. ...
- *There Were Ten in The Bed.....

2. Counting can be introduced during everyday activities like climbing the stairs, laying the table, jumping on the trampoline, clapping hands.

3. Help children to see number symbols around in their environment: Telephone, microwave, clock, house number, car number

4. Logical quantification games or one to one matching. This does not require actual counting. This is for children who are still young to understand the concept of counting. We do not use number symbols with these activities. Here are some of them listed below:

Object to Object matching

- *5 candles and 5 candlesticks
- *5 cups and 5 plates
- *5 pens and 5 caps



Object to Cards matching

*10 of same objects for example 10 gold fish

*4 cards (jars in the picture): 1st card with one picture of fish in the jar, 2nd card with 2 pictures of fish, 3rd card with 3 pictures of fish, 4th card with 4 pictures of fish.

First show the activity to the child. Take first card and put 1 yellow fish on the picture. Then take second card and match 2 gold fish with 2 pictures of fish on the card.

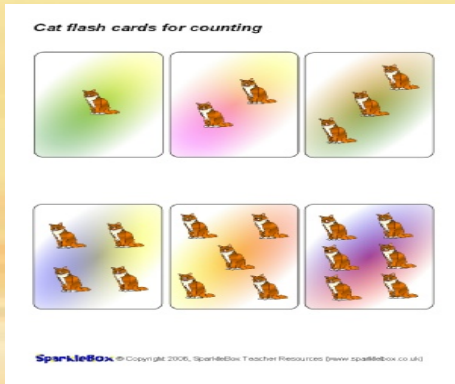


Card to card matching

(Concept is becoming more abstract as there are no objects)

*Two set of same cards.

First show the child to match the cards before asking them to do it themselves.



5. Pattern and Sequencing activities

*Pattern cards with object like beads, buttons, lego



ADVANCE MATHS ACTIVITIES

After child has firmed his learning about one to one correspondence, this skill is now used to count quantities.

COUNTING ACTIVITIES

For very young children, we introduce counting from 1 to 3 objects first, then extend counting from 1 to 5 objects and then adding two or three more objects till we reach 10.

There is gradual introduction to counting objects from 1 to 10 and can take up till a month.

Use different objects to count. For example: Count 3 cars, count 3 spoons, count 3 pens and so on and so forth. At each step we count from one. See the example above with short bead stair. This means: First show one car. Then show two cars in the second row. Then show three cars in third row. Then show four cars in fourth row. Then show five cars in fifth row. So, you would need 15 cars to count from 1 to 5.



INTRODUCING NUMBER SYMBOLS

Number symbols can be introduced as children master the concept of counting.

For example, after child has learnt counting one to three objects; number symbols 1, 2 and 3 can then be introduced one by one. You may use flash cards. Introduce not more than three symbols at one time. Help child to trace the number symbol with their first two fingers.

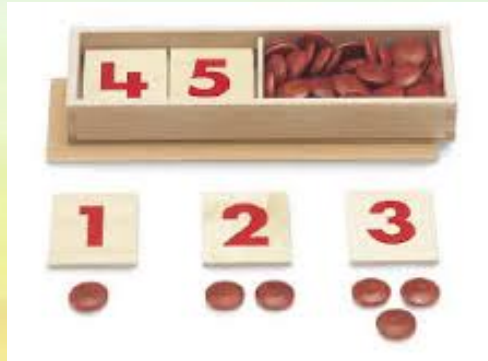
For some children it is more difficult to remember number symbols, so make it fun. Hunt for numbers around the house. Write numbers on a chalk board and ask them to erase the number you call out. Play Kim's memory game. Place the number cards with number symbols down and ask child to turn the card over and recall the number. Match number symbols with two set of same cards (1 to 1, 2 to 2, 3 to 3) like snap.



MATCH QUANTITIES TO SYMBOLS

After child knows simple counting (1 to 5) and number symbols (1 to 5); they can then be introduced to matching quantities to symbols.

It is similar to the activity as explained in object to card matching above. The change is that cards have number symbols instead of picture of fish in a jar.



- Concentrate on counting objects 1 to 10 and matching them to number symbols 1 to 10. Use different objects to add variety to this activity.
- Child would need to practice it over and over again to master it. So, do not fear repetition, thinking it might get boring. In fact, it has an opposite effect.
- More the child repeats the activity, they realise that they are getting good at it and can do it by themselves. The RESULT is positive self-image (“I can do it by myself” 😊) and confidence.

HAVE FUN WITH NUMBERS