



Teaching Pre Number Concepts to Young Children

Teaching pre number concepts help children develop a firm foundation for understanding more complex mathematical concepts later in life. In this presentation, we'll explore a variety of fun and effective ways of teaching these concepts to young children.

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What do NIPUN Bharat, NCERT, and state documents, say about pre number concepts?

- As per NIPUN Bharat Numeracy have been put into 7 major themes:
 - i. Pre- Number concepts
 - ii. Numbers and operations on numbers
 - iii. Shapes and Spatial Understanding
 - iv. Measurement
 - v. Patterns
 - vi. Data Handling
 - vii. Mathematical Communication.

Pre-Number concepts-

- Mathematicians and psychologists agree that before children start counting or develop an understanding of number concepts, they need to be able to classify, order and set up one-to-one correspondences.
- Since these skills are preliminary to the understanding of numbers, they are called as pre-number concept.

Basic foundations that are required for children to be 'master in maths'-

1. **Classification** – the process of grouping or sorting objects into classes or categories according to a systematic characteristic, criteria or principle.
2. **Patterning** – the process of creating repetitions of symbols or objects.
3. **One-to-one correspondence** – the process of pairing or matching items or objects, for example, one napkin for each person.
4. **Ordering and sequencing** – the process of ordering relationships, for example, smallest to largest or lightest to heaviest or least to most.
5. **Numeration** – the ability to recognize numerals and place a correct numeral with a given number of objects. Three is a number, 3 is a numeral.
6. **Measurement** – the comparison of items by a standard unit.
7. **Addition** – the joining of sets.
8. **Subtraction** – the separation of sets.
9. **Graphing** – the process of classifying data.
10. **Fractions** – a method of dividing items fairly.

What Are Pre Number Concepts?



Counting

Teaching children to count is one of the most basic pre number concepts. It helps them understand that numbers represent quantities, and is the foundation for more advanced mathematical concepts later on.



Matching and Sorting

Matching and sorting activities help children understand how objects are similar and different from each other. This helps develop analytical skills and lays the groundwork for more complex concepts like classifying and comparing.



Grouping

Grouping activities help children learn how to organize objects based on shared characteristics. This is an important precursor to understanding algebraic concepts like variables and equations.



One to One Correspondence

This concept involves matching one item with another item in a group. It's a great way to teach children basic addition and helps develop logical reasoning.

The Importance of Teaching Pre Number Concepts

Early Math Skills Predict Future Success

Research has shown that early exposure to math concepts is closely linked with future academic success. By teaching pre number concepts, we're setting children up for future success in more complex mathematical areas.

Math is Everywhere

Math is a fundamental part of our day-to-day lives. By understanding basic math concepts, children will be better equipped to navigate the world around them and solve a wide variety of problems.

Boosts Confidence and Competence

Understanding math concepts can be a great confidence boost for young children. It helps them feel more competent and capable, and they'll be more likely to approach more complex math problems with a positive attitude.

Effective Methods for Teaching Pre Number Concepts

Hands-on Activities

Hands-on activities like puzzles, sorting games and counting games can help children learn pre number concepts kinesthetically. It's a fun way to learn that helps children retain information more easily.

1

Visual Aids

Visual aids like number charts, colourful blocks and counting toys are a great way to help children understand pre number concepts. They can see the numbers and objects clearly and understand the relationships between them.

2

Songs and Rhymes

Songs and rhymes are a fun and engaging way to teach pre number concepts. Children enjoy the rhythm and repetition, which can help them remember the concepts more easily.

3

Incorporating Pre Number Concepts Into Playtime and Everyday Activities



Cooking and Baking

Cooking and baking activities are a fantastic way to teach pre number concepts like measurement, counting and quantity. Children can help measure ingredients and count out items needed for a recipe.



Building Blocks

Building blocks are a great way to teach pre number concepts like matching and sorting, quantity and numerical order. Kids can build towers using blocks of different shapes and sizes and practice counting them as they go.



Everyday Play

Everyday play activities like playing with dolls or toy cars can be used to teach pre number concepts like one to one correspondence and matching. Kids can match dolls or cars with similar colours or sizes.