

NCF 2005 – MATHEMATICS

The National Curriculum Framework 2005 is the fourth National Curriculum Framework published in 2005 by the National Council of Educational Research and Training in India. Its predecessors were published in 1975, 1988, 2000.

The NCF 2005 has based its policies on previous government reports on education, such as Learning Without Burden and National Policy of Education 1986–1992 and focus group discussion.

NCF focused on:

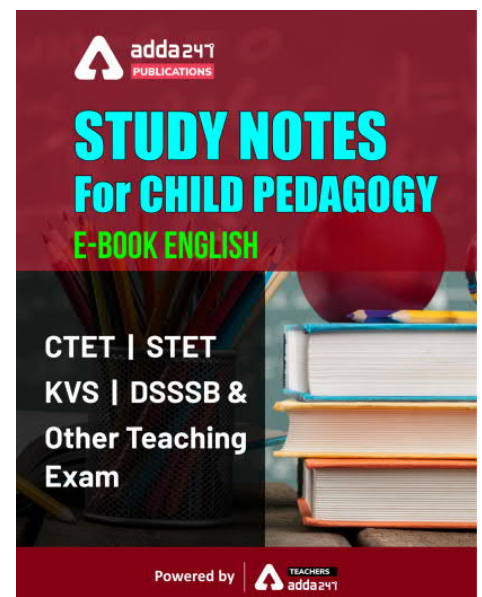
- Learning without burden to make learning a joyful experience and move away from textbooks to be a basis for examination and to remove stress from children. It recommended major changes in the design of syllabus.
- To develop a sense of self-reliance and dignity of the individual which would form the basis of social relationship and would develop a sense of nonviolence and oneness across the society.
- To develop a child centered approach and to promote universal enrollment and retention up to the age of 14.
- To inculcate the feeling of oneness, democracy and unity in the students the curriculum is enabled to strengthen our national identity and to enable the new generation to reevaluate.

Mathematics

The emphasis for learning mathematics is that all students can learn the need to learn mathematics. Pedagogy and learning environment have to be made favorable for students to develop interest by going far beyond basic skills and include variety of mathematics loving models by pedagogy which devotes a greater percentage of instructional time to problem solving and active learning. Mathematics makes learner systematic, confident, self-evaluated, self-esteem, self-reliable etc.

The NCF envisions school Mathematics as taking place in a situation where:

- Children learn to enjoy Mathematics rather than fear it.
- Children learn “important” Mathematics which is more than formulas and mechanical procedures.
- Children see Mathematics as something to talk about, to communicate through, to discuss among themselves, to work together on.
- Children pose and solve meaningful problems.



- 5. Children use abstractions to perceive relationships, to see structures, to reason out things, to argue the truth or falsity of statements.
- Children understand the basic structure of Mathematics: arithmetic, algebra, geometry and trigonometry, the basic content areas of school Mathematics, all of which offer a methodology for abstraction, structuration and generalization.
- 7. Teachers are expected to engage every child in class with the conviction that everyone can learn Mathematics.

The NCF, therefore, recommends:

- Shifting the focus of Mathematics education from achieving 'narrow' goals of mathematical content to 'higher' goals of creating mathematical learning environments, where processes like formal problem solving, use of heuristics, estimation and approximation, optimisation, use of patterns, visualisation, representation, reasoning and proof, making connections and mathematical communication take precedence.
- Engaging every student with a sense of success, while at the same time offering conceptual challenges to the emerging Mathematician
- Changing modes of assessment to examine students' mathematisation abilities rather than procedural knowledge
- Enriching teachers with a variety of mathematical resources.

NCF-2005 says that the tall shape of mathematics can be de-emphasised in favour of a broad-based curriculum with more topics that start from the basics. Revisiting the basics of mathematics at secondary and higher secondary stages will help children make better use of their time at school.

