

Pedagogical Approach of Türkiye's Math Curriculumⁱⁱⁱ

“In the process of learning and teaching, many factors that are effective in the learning process also influence the implementation process of the curriculum. Teachers are given flexibility, provided they adhere to the curriculum's recommendations and achievements, in determining the teaching approach and organizing the learning environments. The main principles to be considered in the implementation of the curriculum are listed below:

- Students' individual differences should not be neglected. Therefore, priority and importance should be given to practices that highlight students' learning styles and strategies in math teaching activities.
- Students' prior learning should be identified, and opportunities should be provided for students to build new mathematical concepts on their previous ones using effective activities that support active learning. Students should be encouraged and empowered in this process.
- Concrete materials should be used as much as possible in the teaching of new concepts and assessments. Examples of these materials include number cards, base-ten blocks, fraction sets, various models derived from simple everyday materials, etc.
- Verbal expression of students' thoughts plays an important role in internalizing, understanding, and constructing mathematical concepts during the mathematics learning and teaching process. Students should be encouraged to express their thoughts verbally and engage in individual and interpersonal communication while demonstrating how they construct concepts during the teaching process.
- Teachers' guidance is necessary and important for students to express their thoughts in learning mathematical concepts. In this context, students should be given the opportunity to demonstrate and strengthen their thinking process by asking questions such as "Have you encountered a similar problem before? If you have, do you remember the approach you used? Do you know a method that will work for solving this problem?"
- The impact of developing a positive attitude towards mathematics on mathematical achievement should not be overlooked. Mathematics games should be included in relevant sections associated with the unit content.
- It should be remembered that mathematics is a part of life, and every opportunity should be evaluated for the development of mathematical thinking. In this regard, connections should be made between Mathematics lessons and other subjects whenever possible. For example, topics

such as bread waste, recycling, healthy and planned living, tax consciousness, social security rights and obligations, which are encountered in daily life as well as in Life Skills and Social Studies, should be emphasized, and examples should be given in these areas.

- Individual and cultural differences among students should be taken into account in the implementation of the curriculum. In this context, appropriate methods and approaches should be preferred in mathematics teaching.
- The algebra learning domain included in the curriculum has been prepared by considering the studies conducted in the field of algebraic thinking, which is an important sub-dimension of mathematical thinking, in mathematics education, and by examining national and international studies. When teaching algebra-related achievements, attention should be paid to the order of the achievements, and when necessary, they should be related to the achievements in other learning domains.
- The arrangement of learning domains, sub-learning domains, and achievements in the curriculum is not the order of implementation. The suggested unit sequence for each grade is separately indicated under the heading "Units and Time Distribution" in the curriculum. These recommendations should be taken into account in the implementation sequence.
- In textbooks, while the general sequence of units remains unchanged, the order of achievements within the unit can be modified. Achievements can be combined and taught according to the class level. In necessary cases, an achievement can be addressed under another unit as well.
- The duration of teaching an achievement depends on various variables, including students' level. Therefore, the teaching durations and percentages given for the achievements in the curriculum are not exact, but represent approximate values.
- The Mathematics Curriculum prioritizes a student-centered approach and emphasizes conceptual understanding. It also highlights values such as flexibility, aesthetics, equality, justice, and sharing, in addition to the 8 key competencies determined within the Turkish Qualifications Framework.”

ⁱ This text is translated from Math (Gr. 1-8) curriculum of the Turkish Ministry of National Education (2023, p. 14-15): <http://mufredat.meb.gov.tr/Programlar.aspx>

ⁱⁱ ChatGPT was used for translation and then the text was edited: OpenAI. (2023). ChatGPT (May 24 version). <https://chat.openai.com>