

Specific Features Of The Fourth Grade Mathematics Textbook

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Abstract

This article highlights the specific features of the fourth-grade mathematics textbook. The importance of mathematics in primary education, especially its role in developing students' knowledge, skills and competencies at the fourth grade level, is substantiated.

Keywords: mathematics textbook, didactics, method, class, student, modern lesson.

The resolution of the President of the Republic of Uzbekistan Shavkat Mirziyoyev No. PQ-4708 dated May 7, 2020 is entitled "On measures to improve the quality of education and develop scientific research in the field of mathematics". This document includes a wide range of measures aimed at developing mathematical education and science in our country.

The role of mathematics in the primary education system is incomparable. Especially in the fourth grade, this subject further strengthens students' logical thinking, problem-solving skills, and ability to work with numbers. In this regard, the fourth grade mathematics textbook has its own didactic, methodological, and content-specific characteristics, and serves as an important tool in the formation of students as independent thinkers at the next stage.

The main features of the fourth grade mathematics textbook can be considered in the following areas:

1. Systematicity and consistency of content: In the textbook, students acquire new knowledge based on previously learned knowledge. Each topic is given in an inextricable link with previous topics. This forms a holistic picture of mathematical concepts in students.
2. Practical orientation: The tasks in the textbook are based on real-life examples. Through topics such as market prices, time, distance, and units of measurement, students acquire knowledge close to life.
3. Problematic and logical tasks: In order to expand the scope of students' thinking, the textbook also includes problematic tasks, logical problems, and interesting questions. This helps students develop the skills of consistent thinking, understanding cause-and-effect relationships, and drawing conclusions.
4. Variety of didactic materials: Topics are covered in a more understandable and interesting way through pictures, diagrams, tables, and visual aids. This allows for interactive teaching.
5. Differential approach: The textbook provides tasks of different levels, which helps to take into account the individual capabilities of students. There are separate tasks for strong and weak learners.
6. Integration with new technologies: In some subjects, the use of information technologies in the lesson is recommended. This allows the lesson to be modern and interesting.

1. Development of mathematical knowledge

In the fourth grade, students enter the main stage of learning mathematics. During this period, they perfect simple arithmetic operations (addition, subtraction, multiplication, division). By solving logical problems, students understand the basic laws of mathematics. For example:

- Strengthening addition and subtraction: Students learn to apply addition and subtraction operations in practice through various problems.
- Developing multiplication and division: They master multiplication and division well with the help of logical questions.

Example: "If we divide 7 pencils equally between 3 children, how many pencils will each child have?" - such questions help students strengthen their division operations.

2. Developing logical thinking and reasoning

Students develop logical thinking when solving mathematical problems. Each problem or task encourages the student to imagine and think. At this stage, students learn to look for ways to solve problems and consider different options, while consolidating their knowledge.

- Problem analysis: Students learn different approaches to solving mathematical problems. For example, solving a problem in two different ways, seeing the difference, and thinking.

- Imagining: For example, "If there are 6 apples, and each child gets 2 apples, how many children will get apples in total?" - such questions encourage students to imagine the content.

3. Strengthening skills and improving qualifications

In the fourth grade, students not only acquire knowledge, but also have the opportunity to strengthen their skills and improve their qualifications.

Solving mathematical problems and tasks develops not only intellectual, but also practical skills for them. For example:

- Quick and accurate problem solving: Students learn to find timely and accurate solutions. This will help them make quick and effective decisions in other areas in the future.

- Independent work: Students develop independent work skills when solving problems. This, in turn, will help them develop independent learning skills in other areas of education.

Example: "If 5 candies are distributed among 3 children, how many candies will each child get and how many candies will remain?" - these types of problems help students develop division, remainders, and imagination.

4. Developing creative and critical thinking

Mathematics tasks develop students' creative and critical thinking skills. When solving problems, students look for not just one solution, but different solutions. This, in turn, strengthens their creative approaches.

- Creative Thinking: Students develop new methods and seek new approaches to solving problems.

- Critical Thinking: Students learn to identify errors and check the correctness of the solution when solving a problem correctly.

Problematic Tasks

Task 1: Books in a Box

There are 15 books in a box. If 8 more books are added to this box, how many books will there be in total? Find the number of books.

Task 2: Apples and Bananas

There are 12 apples and 9 bananas in a store. If 4 more apples and 6 bananas are added, how many fruits will there be in total?

Task 3: Letters and Numbers

There are 3 letters "A" and 5 letters "B" written on a piece of paper. If 2 more "A" letters and 4 "B" letters are added, how many letters will there be in total? Why do you think these letters are written together?

Logical tasks

Task 1: Books and students

There are 20 students in a class. Each student needs to be given 2 books. How many books are needed in total to give books to all students?

Task 2: Tables in the house

There are 5 tables in a house. Each table has 4 books. Calculate the total number of books.

Task 3: Girls and boys

There are 24 students in a class. 14 of them are girls, the rest are boys. Find the number of boys.

Working and Imagination

Task 1: Number Sequence

Continue the following number sequence:

3, 6, 9, 12, __, __, __

Task 2: Ordinal Numbers

2, 4, 8, 16, __, __, __

Task 3: Small and Large Numbers

Find the smallest and largest of the following numbers:

45, 62, 31, 89, 79

In conclusion, the fourth-grade mathematics textbook, due to its systematic content, practical orientation, variety of didactic materials, and enrichment with problem tasks, plays an important role in the in-depth and effective teaching of mathematics in primary education.

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