

ORGANIZING A MENTAL ARITHMETIC COURSE AND ASSISTING STUDENTS WORKING IN GROUPS

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Abstract

Mental arithmetic is a complex system for developing a child's cognitive functions: attention, memory, thinking, speed of perception and information processing, speech. The lesson consists of verified stages, each of which comes with its own goals and objectives.

Key words

abacus , big, friend, family, simple, calculations, unit, numbers.

Dividing students into different age groups is one of the most important organizational issues before starting the training. Because it is natural that the difference between the youth of the students creates diversity in reaching the ultimate goal of education. Students in one group have different abilities and skills according to different parameters. This creates difficulties in organizing the lesson process, such as creating a very complex plan, working with a large workload. Uneven distribution of results can be observed even when classes are held in groups of the same age group. Therefore, different factors prevent students of the same age from learning in the same way. These mainly include:

- Physiological condition
- Psychological condition
- Mental capacity

Pupils differ from each other according to their physiological condition; illness, feeling of fatigue, few hours of sleep, excess of daily physical exertion had a negative effect on the physiological state. From the physiological point of view, a student with a deficiency also has problems in learning.

The psychological state, the level of the student's outlook, the ability to distinguish between colors and signs, communication, and speech development are taken into account. If the student lags behind in psychological development or faces psychological obstacles, the quality of training will be affected. As a result, the

student's performance decreases. Or stressful situations in the student's family prevent him from studying well.

Mental ability is also considered the main differentiating factor between students. Some children are smart and some children are slower. This situation also leads to uneven results in the group. So, we considered that even in groups with the same age, different factors cause different results. The difference in age between the students makes this difference even more acute. In addition, the difference in the age of students affects their motivation. A six-year-old child and a twelve-year-old child do not have the same motivation. Therefore, the fate of having two such students in the same group requires a different approach to motivate them.

How to group students? When grouping students, the following distribution is appropriate:

- Preschool (small) group
- Junior school age (middle) group
- High school-age (senior) group

Preschool children are 4 to 6 years old. When admitting children of this age to the group, it is necessary to take into account their anthropometric indicators. It is necessary to monitor how long he can sit at the desk and how long he can work. It is best to work with up to 10 children in a group. If the number of children in the group exceeds 10, it becomes more difficult to attend classes, and the intensity of results decreases. It is advisable to accept a maximum of 10-12 students in the group of children of junior school age. Also, when working with children of this age, it will be useful to pay more attention to didactic tasks. When organizing a group of students of secondary school age, it is better to increase the maximum number of students to 10-15 people. Students in this group are students over 10 years old.

Acquaintance with educational tools. Basic and additional tools are used in mental arithmetic training. Basic tools include an abacus, and additional tools include mental cards, flash cards, floor abacus, online trainers, graphic dictations, and puzzle materials. Each class should have a large trainer abacus and trainer abacus for each student. In addition, mental cards are also used during the lessons. The practical importance of the mental card is that you can work imaginatively with the help of the card when embodying the abacus in the imagination. In addition, with the help of flash cards, you can perform various flash card games and exercises such as flash card counting. (Fig. 116)



Figure 116: Flash cards

A floor abacus is an educational tool that can be placed on the floor, and the floor abacus can be used in the same way as an abacus. Only exercises can be performed with the help of legs. (Fig. 117) The floor abacus can be placed on the floor (or glued to the floor) in the training room. Different exercises can be performed in each session. Exercises are individual or group. The use of online simulators is also important in increasing the student's speed. Online trainers can be used on computers or mobile devices. Online trainers can also be used for free. Below we can find out some online trainer site:

1. Flash.iama.kz
2. Anzan.iama.kz
3. T.mentalnaya-arifmetika.club
4. Easy-numbers.net/form



Picture

117: A picture of a girl practicing on the floor abacus.

Mental arithmetic is an invaluable tool for primary school children when it comes to developing strong cognitive abilities such as memorization and recall skills, understanding and fluency with numbers, problem solving and critical thinking, etc. Parents play an important role here by introducing this type of activity into their child's life through everyday situations, educational games on tablets, etc. This will have a positive impact on their overall academic performance and will also encourage them to be creative in their approach to solving math problems!

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