

FORMATION AT CHILDREN OF IDEAS OF SIZE OF OBJECTS, THEIR MEASUREMENT

THE CONCEPT ABOUT SIZE

- ❑ 1. Main properties of sizes. Features of perception of size of objects at early and preschool age.**
- ❑ 2. Training of children in ways of inspection and comparison of objects of length, width, height, thickness, methods of streamlining of objects of size.**
- ❑ 3. Development of an eye estimation. Training in way of equalizing and extension of objects.**
- ❑ 4. Development of ability to see in space and measurement irrespective of the provision of a subject in space.**
- ❑ 5. Express poll presentation slides interactive methods of training stages of the solution of tasks at the advanced preschool age**

-
- For the correct and complete characterization of any subject, the estimate of magnitude is no less important than the evaluation of its other characteristics. The ability to allocate a value as a property of an object and give it a name is necessary not only for knowing each subject individually, but also for understanding the relationship between them. This has a significant impact on the formation of children more complete knowledge of the surrounding reality.**

-
- Awareness of the magnitude of objects positively influences the mental development of the child, since it is associated with the development of the ability to identify, recognize, compare, generalize, lead to an understanding of magnitude as a mathematical concept and prepares to assimilate the corresponding section of mathematics in the school.**

-
- **The magnitude of an object is its relative characteristic, emphasizing the extent of individual parts and determining its place among objects of homogeneous. Value is the property of the object.**
 -
 - **Reflection of magnitude as a spatial feature of the object is associated with perception - the most important sensory process, which is aimed at identifying and exploring the object, revealing its features. In this process, various analyzers participate: visual, auditory, tactile-motor, and the motor analyzer plays a leading role in their mutual work, providing an adequate perception of the magnitude of objects.**

-
- - **The problem of reflection of magnitude can not be considered only as a problem of perception. Equally, it should be considered as a problem of thinking.**
 -
 - **Cognition of the magnitude is carried out, on the one hand, on a sensory basis, and on the other - mediated by thinking and speech. Adequate perception of the value depends on the experience of practical operation of objects, the development of the eye, the inclusion in the process of perception of the word, the participation of thought processes: comparison, analysis and synthesis.**

□

TO FORM THE MOST ELEMENTARY KNOWLEDGE OF THE MAGNITUDE, IT IS NECESSARY TO FORMULATE CONCRETE IDEAS ABOUT OBJECTS AND PHENOMENA OF THE SURROUNDING WORLD.

- Orientation of children in the value of objects is largely determined by the eye measure - the most important sensory ability. Development of the eye is directly related to the mastery of special methods of comparing objects. First, the comparison of objects along the length, width, height of the children is done by practical application and application, and then based on the measurement. The eye, as it were, generalizes the practical actions of the hand.**

-
- - **The very word magnitude is not clear to children, since they rarely hear it. When the attention of the children is drawn to the size of the subject, the educators prefer to use the same words, the same ones that are multivalued, so they should be supplemented with the word denoting the feature by which objects are compared (find the same in size: length, width, height,).**

-
- ❑ **Selecting this or that particular dimension, the child seeks to show it (runs a finger along the length, divorced hands shows the width, etc.). These survey actions are very important for a more differentiated perception of the magnitude of the subject.**
 - ❑
 - ❑ **Inability to differentially perceive the value of objects significantly affects the designation of words of objects of different sizes. Most often, children use words "big - small" with respect to any subjects. This is due to the fact that the adults surrounding the children often use inaccurate words to indicate the size of objects (a large ruler instead of a long one).**

-
- The value of perception in the life of a preschool child is very great, since it creates a foundation for the development of thinking, promotes the development of speech, memory, attention, imagination. A well-developed perception can be manifested in the form of a child's observation, his ability to notice features of objects and phenomena, details that an adult will not notice. In the senior preschool age the child learns to distinguish between the parameters of quantities, their properties, learns the verbal description, the use of properties of objects in different types of activity. At this time, he mastered the receptions of perception of more complex phenomena**

-
- - **The magnitude of the object, that is, the size of the object, is determined only on the basis of comparison. It can not be said whether it is a large or a small object, it can only be compared with others. The perception of magnitude is curved from the distance from which the object is perceived, and also from the magnitude of the object with which it is compared. The farther the object from the one who perceives it, the less it seems to him, and vice versa, the closer - the more it seems.**
 -
 - **The characteristic of the size of the object also depends on the location in space. One and the same thing can be characterized as high (low), then as long (short). It depends on whether it is in the horizontal or vertical position.**

□

-
- ❑ **The magnitude of a particular object is characterized by such properties: comparability, variability and relativity.**
 - ❑ **The determination of the value is possible only on the basis of comparison, since comparability is the main property of a quantity. Thanks to the comparison, one can come to an understanding of relations and to new concepts: "more", "less", "equal", which define different qualities, including length, width, height, volume, and many others.**

-
- **The magnitude is also characterized by variability and relativity. One and the same object can be defined by us as greater or lesser depending on the size with which it is compared.**
 -
 - **Comparability, variability, relativity - basic properties values can be understood preschool children in very specific form in, with various objects by isolating and comparing their length, width, height and volume.**
 -
 - **Children of three years of age perceive the magnitude of objects undifferentiated, that is, they are guided by the total volume of the object, without distinguishing its length, width, height.**

-
- - **Children of four years already differentiated approach to the choice of objects in length or width, but provided that the length of the object exceeds the width. For children of senior preschool age, an insignificant period is required to master all three dimensions.**
 -
 - **The measurement includes two logical operations: the first is the process of separation, which allows the child to understand that the whole can be broken up into parts; the second is a substitution operation, consisting of joining separate parts.**
 -
 - **The essence of measurement is the quantitative fragmentation of the measured objects and the establishment of the magnitude of the given object with respect to the measure adopted. Through the measurement operation, a numerical relationship is established between the measured quantity and the preselected unit of measure, scale or standard.**

-
- The measurement activity is rather complicated. It requires specific skills, familiarity with the system of measures, the use of measuring instruments. The use of conditional measures makes the measurement available to children. The term "measurement by conventional measures" means the possibility of using measuring instruments.**

-
- In the kindergarten, children learn several types of measurement by a conventional measure. The first type is a linear measurement, when children learn to measure the length, width, height of various objects using a strip of paper, rods, ropes, steps and other conditional measures. The second type of measurement is the determination by means of a conventional measuring of the volume of bulk substances: children learn by the mug, a glass, a spoon and other containers to measure the amount of cereal, sugar in the package. The third kind is the measurement of conventional liquids to find out how many glasses of water in the decanter, etc.**

-
- - **The application of measures gives the accuracy of the relations "equality-inequality" established during the measurement, "part-whole", allows to reveal their properties more fully and deeper.**
 -
 - **Thus, in a pre-school educational institution, measuring activity is elementary, propaedeutical. The child first learns to measure objects by conditional measures, and only as a result of this are the prerequisites created for mastering the "real" dimension.**