



## PRACTICAL APPLICATION OF THE RULES OF PERSPECTIVE IN DRAWING

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Annotation: this article is devoted to the use of perspective elements in fine arts lessons in a secondary school.

**Keywords**: fine arts, painting, artist, teaching methods, artist-teacher, textbook, perspective, central projective, perspective contraction, geometric object, parallelepiped, object.

## **INTRODUCTION**

As Denis Diderot stated, "A nation that will teach its children to the same extent how to read, write and count will surpass all other nations in the field of cultures, sciences and crafts." Therefore, in many developed countries, fine arts are given special attention, teaching it in educational institutions as an independent discipline. Especially in this regard, Japan succeeds, one of the leading countries in the sphere of exaltation of its history and economic development. In our country, fine arts are taught in grades 1-7 of a comprehensive school.



The school textbook contains some theoretical information about the need to take into account perspective abbreviations for correct drawing. For example, in a textbook for the 4th grade, it says that perspective is an image of objects that are close, larger, and distant, smaller. This definition is appropriate from the point of view of the age and level of perception of students. Although in fact, perspective is the execution of an image by the method of central projection, taking into account the peculiarities of a person's vision.

## (Fig. 1).

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However, the textbooks do not provide the rules of perspective, which must be observed directly when drawing, visual and indicative materials for its practical application.

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For example, in the textbook for the 5th grade "Tasviriy sanat 5" ("Fine art 5"), a sequential process of making a still life consisting of geometric figures is given (Fig. 1). Where the need to comply with forward-looking reductions is emphasized. However, it does not say how to perform these reductions and geometric formations in this process. In our opinion, in fine art textbooks it is advisable to show students the rules of perspective when making a realistic drawing. After all, even the great artists of the past paid attention to the close relationship between fine art and perspective.

Thus, the outstanding figure of the Renaissance Leonardo da Vinci (1452-1519) mastered all the information in the field of perspective, developed them with his unique and completely new ideas. He argued, "Perspective is the rudder of fine art."

The Russian teacher-artist N.N.Ge (1831-1894) argued that it is impossible to separate drawing and perspective, which means that every artist must know it. He emphasized that it is impossible to do the reverse work - having first written a drawing, later correct it in accordance with the laws of perspective, since perspective is the guiding star of the artist.

Despite the presence of so many scientific foundations, educational literature, not only in school textbooks, but also in educational literature for professional and higher educational institutions in the visual arts, the rules and regularities of perspective, which are so necessary for drawing, are not sufficiently covered. That is, artists (or artist-teachers) in their textbooks and manuals do not pay enough attention to the practical significance of the methods of perspective image construction.

In this article, we would like to pay attention at least to the rules of perspective, which should be given in the textbooks "Fine Arts", and learned by students of a general secondary school.

First, students should be explained that parallel lines seem to intersect at infinity, if they are horizontal, they meet at the horizon. But if the point of this meeting (crossing) goes beyond the sheet of paper (canvas), you have to perform additional geometric constructions (Fig. 2, a). If these construction (rules of perspective) are once gradually and consistently brought to the student, they will be remembered for a lifetime.







Consider, for example, the order in which a box is drawn. First of all, the sides of the parallelepiped are vertical AB and horizontal AC and AD, taking them as straight (Fig. 2, b).



(Fig. 2, b).

To determine the face BE of the ray ABEC, we mark point 1 on the horizon line, and form straight lines A1, B1 (Fig. 2, c). From point C we draw a straight line parallel to the horizon line, we determine point 2 of its intersection with A1, from which we draw a vertical line that intersects with segment B1 at point 3 and from this point a parallel C2 parallel (horizontal) line is drawn. This line, intersecting with the vertical line from point C, gives the required point E and the perspective of side ABEC is formed.

The perspective of the ABFD side is built similarly to the ABEC side, and this process can be understood from the drawing (Fig. 2, e). thus, the perspective of the parallelepiped will be performed correctly (Fig. 2, e). That is, the mutual intersection of the horizontal faces of the parallelepiped AC and BE, as well as AD and BF, will be ensured. This method of making a perspective image is called the "triangle" method.

The method of "four squares" is also known. On fig. 3 shows the division of the rectangle ABEC in orthogonal projection into two quadrilaterals, and the fact that the line connecting the points of intersection of the diagonals is vertical.

On fig. Figure 4 shows the correct execution (perspective) of the parallelepiped by the "four-corner" method: the horizon line, vertical AB, is drawn, as in the previous case, and the horizontal AC and AD sides of the parallelepiped are taken as straight (Fig. 4, a).

Using the rule shown in Fig. 3, define the horizontal face BE of the box. To do this, we determine the points 1 and 2 of the intersection of the vertical lines from points A and C. Draw the diagonals A2 and C1, determine the point 3 of their intersection. The vertical line from point 3, crossing the diagonal B2, forms point 4. After that, we connect points 1 and 4, determine the point E of its intersection with the vertical line





C. The segment BE is the horizontal face of the parallelepiped (Fig. 4, a). The perspective of the ABED side of the parallelepiped is constructed similarly to the perspective of the ABEC side (4, b). As a result, the drawing (perspective) of the parallelepiped will be correct (Fig. 4, c).



Geometric formations (perspective rules) indicated in fig. 2 and 4 can be done without the use of drawing tools, and the teacher must demonstrate to students. In the examples we have considered, the upper base of the parallelepiped was not visible to the viewer (observer). If the upper base of the parallelepiped is located below the horizon line, it will be visible to the viewer. In this case, you will also have to build the perspective of the upper base of the parallelepiped. In this case, you can also use the "triangle" method.

On fig. 5 shows the sequence of execution of the drawing (perspective) of a parallelepiped, the upper base of which is visible. Acceptance AB, AC, AD of the faces of the parallelepiped as straight lines, the definition of the perspective of the faces of its upper base BE and BF is similar to Fig. 2 and 4 (Fig. 5, a and b).



If the upper base of the parallelepiped is close to the horizon, when applying the "triangles" method, it is convenient to use the diagonals of its sides. On fig. 6 shows





the implementation of the perspective of the upper base of the parallelepiped using its diagonals.



Of great importance is the perspective to ensure the uniformity and similarity of the depicted object with its actual appearance. And this should always be remembered. Accordingly, it is relevant today to include mutually complementary aspects of fine arts and perspectives in programs and textbooks.

For, as one of the great artists, Moni, who is able to give life to every line in the image, has mastered the key to art.

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