



## Methodology of Organizing Courses to Work with Natural and Different Materials in Technological Education

*Tilavova Matlab Muhammedovna, Mahmudova Ruxsora Navruz qizi*  
*Bukhara State University*

**Annotation:** *Engaging elementary students in the science of technology and teaching them to work with a variety of materials is a fun and demanding process. This article discusses ways to help students develop collaborative, thrifty, careful, sewing, fabric and tin skills.*

**Keywords:** *natural material, technical creativity, design, modeling, design, cardboard, paper, machinery.*

Main purpose of teaching manual labor to primary school students is to develop manual motor skills, to teach them to work independently. 'Sewing and tailoring', 'Cooking', 'Working with plasticine', 'Working with paper and cardboard', 'Application and mosaic work', technical modeling and working with different materials in teaching students manual labor gradually become acquainted with the species. These types of activities play an important role in educating students to live independently.

*Teaching primary grades to manual labor is divided into the following types of work.*

1. Working with paper and cardboard.
2. Working with different materials.
  - a) Applications and mosaics.
  - b) Working with clay and plasticine.
  - c) Working with natural materials
3. Work with paper and cardboard.
4. Working with fabric.
5. Design and modeling work.
6. Agricultural work.

Technology education is carried out in the following order.

1. Put the purpose and topic of the assignment in front of the students:
  - a) the importance of the item or work intended to be performed in the classroom in meeting the needs of the student's life or that aspect;
  - b) Demonstrate what new knowledge and skills are needed to perform the assigned task well.
2. Check the readiness of the workplace, equipment, materials, samples, drawings on the board, recall the rules that help to organize the work in a good and organized way.
3. Pre-planning of work tasks to be performed:
  - a) analysis of the amount of samples, parts and components, preparation of the necessary materials, given measurements;



- b) recognize and understand the image of the product and its details from the sample, find and read all the dimensions and working lines, that is, determine what actions to take to make the work, what tools to use, the order of sequential labor movements.
4. Mark the material according to the sample, given dimensions. Students should know the order of marking and it should be done at the same time as the teacher who is doing the steps of marking it on the board or pointing to the item.
5. Carrying out marking work. Preparation of details, adjustment of details and assembly of all its details; in the process of assembling the item from the details; acquire the knowledge and skills required in the process of processing the product and its details.
6. Checking in motion, correcting errors and omissions, evaluating work.
7. Concluding the lesson, setting new tasks.

In technology education classes, students learn the first stages of preparation for social production labor. In the first grade, students first get acquainted not only with the material in the classroom, but also with other materials. They get acquainted with working with paper and cardboard, pre-processing of fabric, working with different materials, self-service and household chores, and so on. In the process of practical work, students are taught about hard work, economical use of materials, creative approach to work, care for nature, fostering a culture of work, some professions.

One of the main tasks of labor education of students is to develop students' skills in processing materials and provide them with appropriate knowledge. This work is done step by step from the first grade, because students are not yet able to remember the operations of making the simplest items.

The acquired skills are improved as a result of repeated exercises. To avoid mistakes, students should be accustomed to self-control. Students should not be accepted until they have identified and corrected any errors in the assignments and are sure that the assignments are correct.

In the process of performing practical tasks, new skills and abilities are formed. To do this, it is important to know the specifics of the use of hand tools, the nature of the materials, the nature of the products.

At the beginning of the lesson, the teacher conducts a conversation on a topic, explains the purpose of the product, ie where it is used, and then the students apply each product in practice.

The teacher demonstrates the methods of preparation of the item using a voucher map or technical means hung on the board. He then asks questions about the order and methods of doing the work, repeats the material, and moves on to preparing the item with the students.

Based on the above, the structure of practical work from technology education is carried out in the following order.

Setting the purpose and theme of the assignment for students:

(A) The importance of the item or work to be done in the classroom in meeting the needs of the student's life or that aspect;

B) Demonstrate what new knowledge and skills are needed to do the job well.

2. Check the readiness of the workplace, equipment, materials, samples, drawings on the board, recall the rules that help to organize the work in a good and organized way.

3. Pre-planning of work tasks to be performed:

A) analysis of the amount of samples, parts and components, preparation of the necessary materials, given measurements;

B) to recognize and understand the image of the product and its details from the sample, to find and read all the dimensions and working lines, ie to determine what actions to take to make the work, what tools to use, the order of sequential labor movements.

4. Determining the material according to the sample, given dimensions. Students should know the order of marking and it should be done at the same time as the teacher who is doing the steps of marking on the board or explaining the item.

5. Carrying out marking work. Preparation of details, adjustment of details and assembly of all its details; in the process of assembling the item from the details; Acquire the knowledge and skills required in the process of processing the product and its details.

6. Checking in motion, correcting errors and omissions, evaluating work.

7. Concluding the lesson, setting new tasks.

The teacher uses this procedure for the organization of practical work in technology education, taking into account the characteristics of the specific object or work identified for this lesson.

In the process of practical work, students develop an interest and love for work. One of the important requirements of interest in work is the correct choice of the workpiece. Students need to know what to prepare and where to use it.

All of these types of work are focused on the process of manual labor in primary school, the choice of profession in students.

Students should be able to use the materials sparingly, plan their work, use the material sparingly, use time efficiently, follow the teacher's instructions, as well as keep the workplace clean and tidy. then they have to clean the classroom.

Demonstrative teaching aids are used in labor lessons, as in all disciplines. In particular, in the lessons of labor are used a variety of patterns, drawings, sketches, schematic patterns, models of various subjects, as well as technical means.

### *Paper plane.*

To make this plane, the student will need a sheet of paper from a picture book , as well as a piece of tin, rubber, scissors. The student is given the following task: first cut a square of 180x80 mm paper. Then fold it in two lengthwise, ie make two rectangles of size 180x40 mm (Fig. A). Inside this rectangle, draw the body of the plane as shown in Figure b. As a load, attach a 1x2 cm tin to the front of the aircraft in two folds in the middle (Fig. C).

Make a wing of the plane from another piece of paper (picture, g), transfer it to the body of the plane and attach a ring (picture, g). Attach the rubber to the cut under the fuselage, pull it out and release the body of the plane, holding it with your left hand (Fig. D).

If the aircraft does not take off, change its payload . If the load is too light, the aircraft will tilt backwards. If it is too heavy, it falls to the ground with its beak.

The rubber can be cut from the old chamber of the bike. The whole paper ( picture, e) is in the following form:

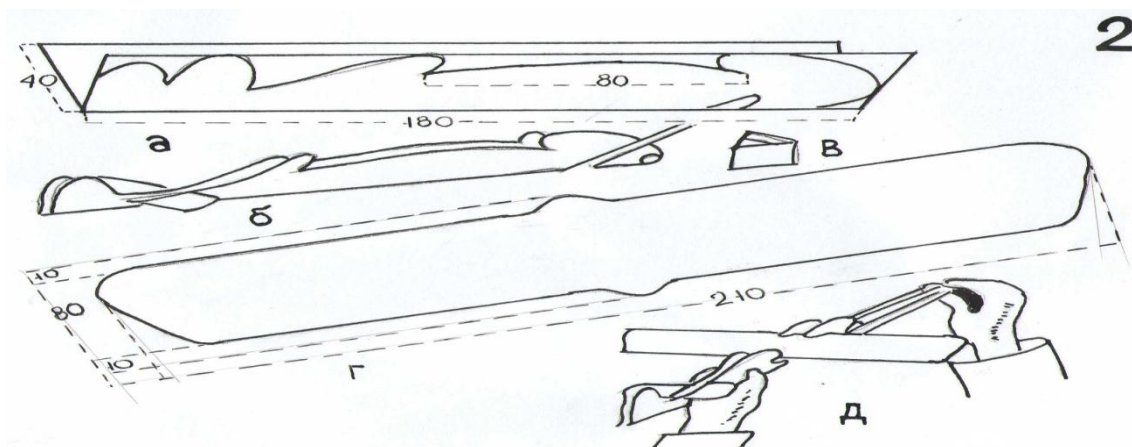
Task 2 About making a wooden plane:

### Wooden plane.

Make the body of the plane out of wood, like a prism that is thinning to one side (Fig. A). Play a beehive to tie a string from the bottom (picture, b) . The wing and the rudder can be made of paper ( picture, v, g) . Make them, put them on the body, in their place and tie with string or thin rubber band (Fig. D). Then shoot the plane forward and launch it (Fig. E). If the nose of an airplane The front of the body is heavy. In this case it is necessary to cut it with a knife and try to fly it again . Y wooden plane looks like this (picture, d).

These types of work help to develop in students such skills as technical creativity, design, imagination, observation.

Task 3 is to make equipment for a dollhouse, which is done by boys and girls together.



surface is 120x100 mm . The boys make it out of cardboard and stick paper on the surface (picture, a). The legs are made of flattened grass on all four sides . They can also be made of cardboard . If you want to make a cardboard , it is 1 cm wide and 7 cm long . Make 12 pieces of cardboard. Glue them in three layers ( picture , b), glue the four resulting legs under the table top. This will prepare the table (picture, c).

B) The round table is also made of cardboard , its diameter 80 mm (picture, a) as in other devices . To do this, q o is the diameter of the 100 mmpaper . Cut out the circle. Then glue it and glue a circle of cardboard in the middle. Cut the remaining edges of the paper into small pieces in the center and fold them under the table. Secure the legs of the round table with two pieces of cardboard (Fig. B) . Fold these legs with colored paper and fold them as shown in picture “v”. Then place both ribbons across each other as a sign of attachment and glue them to the bottom of the board (picture, g) . If the legs are too long , cut off the ends and cut short q iling.

C) The table on which the vase is placed is made of the same cardboard . Cut 80 mm4 circles of cardboard in diameter . Then place the tip of the compass in the center of the circle, draw a circle of 70 mmdiameter and cut the inside . Then the width 10 mm. The wheels are formed ( Fig . a). Glue these wheels in pairs . Then cut out the names of both 1/4 q from each of them ( Fig. B). Attach this cut -out name to the bottom of the large name box as shown in Figure “v” , then cut out two boards out of cardboard . Let one be 100x30 mm and the other 50x30 mm . Glue the same paper on them ( picture , g). Apply glue to the sides of the boards and attach them to the wheels . Let the lower leg stick to the q part (Fig. D). The girls put cone-shaped trays from the picture book on the table. The flowers are made by girls in very different colors from very thin paper .



G) other items used to decorate the house. After installing the furniture in the house, the girls first make window curtains, because every house has a window and curtains are hung on them. To do this, you need two pieces of gauze measuring 13x12 cm. Sew one end of it, pull the thread and twist the gauze so that the width of both curtains (see picture, a) is 16 cm. Attach the curtain to the top of the window with a round needle. Then a strip of cardboard about 1 cm wide is cut, covered with colored paper and glued to the top of the curtain. With this you both made the cornice and closed the visible threads (picture, a).

a framed picture to decorate the house. This work is done by boys. Cut or frame the frame from colored cardboard. Attach a beautiful picture from an old magazine to the back of the frame. When the picture is ready, attach it to the wall with a round nail and hang it (picture, b).

If the rug does not die, a piece of fabric with a wrinkled edge can be used instead of a rug. Gajim can be easily made by pulling a thread from the edge of the fabric (picture, c).

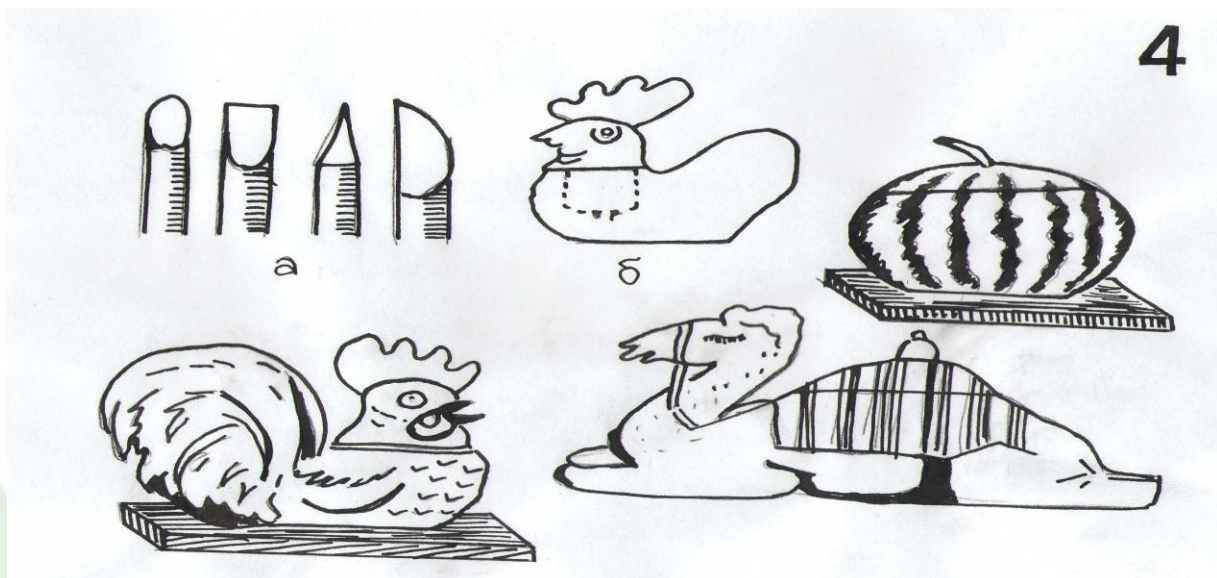
Girls will also have to make beds for sofas and chairs. To do this, take a piece of cloth and sew a yacht bed size 95x58 mm (picture, g).

In the same way, sew a bed on the chairs. Let there be a tie in its two corners. Chairs and sofas can be made of cork. They can also be made of plasticine. You also need a tablecloth to write on the table. Make it out of o q fabric. Cut the edges with a pair of scissors. Prepare a tablecloth for the round table in the same way. Put a tablecloth on the round table can be made of paper. If you can make something out of paper, make a decorative tablecloth (picture, d).

Think about it again \_\_ What else do you need to decorate it? Do n't you need vases and statues? Make them yourself from different materials. Do not forget to adjust their size to the size of the house and the size of the equipment.

During this task, along with the stabilization of solidarity and cooperation between girls and boys, there is an opportunity to correctly distribute the roles according to the gender of students. This activity teaches students to build, create, imagine, diligence, sophistication and mediocrity.

4 is to make a pencil out of clay, this task is mainly for boys. The ones in the picture are pencils and pencils made of ordinary clay. To make these, make clay from clean yellow soil. Knead it until it does not stick to your hands, then place it on a piece of board and make whatever you want.



Take four sticks and thin their ends (picture, a). You will need them to scrape off the excess clay and make a shape.

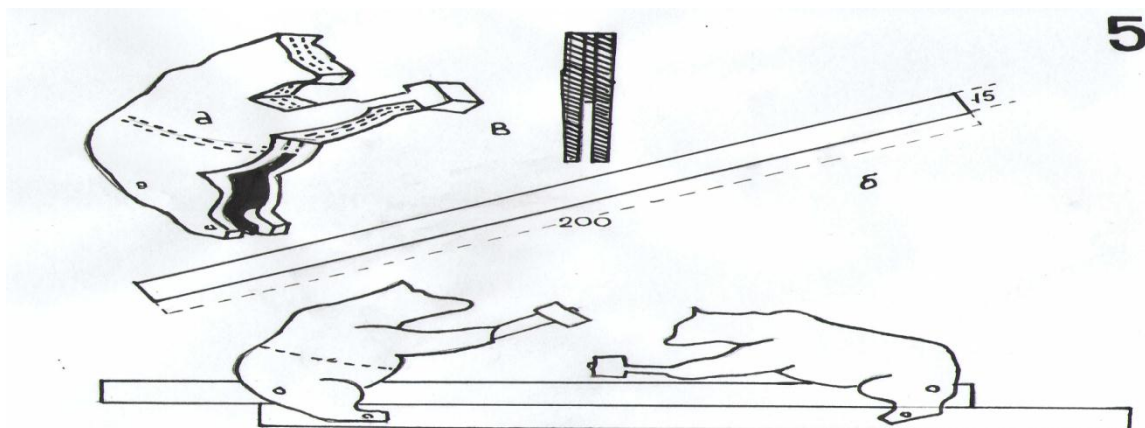
Below we describe the procedure for making "Rooster ink". You make an x-ray shape out of baked clay, wet your finger and smooth the tops. Then you cut its head ( q op q axis ) WITH A MACHINE THREAD. (It is also possible to prepare the bag separately ) . After removing the cap , dig a hole in the bottom of the rooster with a wooden knife (Fig. B) . It contains a mouthful of oil or medicine Place in a large glass or porcelain jar . The pit should be wider than the jar , because when the mud dries , it shrinks and cracks.

Be sure to dry what you make in the shade.

If the form cracks, cover it with liquid mud. After drying, paint it beautifully with watercolor paint . Try making ink in other forms as well .

As a result of such a network of work, students develop the skills of design, estimation, guessing, guessing.

Task 5 is called "Blacksmith Bears" and **it** should be done mainly by boys. Blacksmith bears are one of the most ancient folk toys . To make this toy, you need a piece of plywood, four nails with the ends bent in two directions, and a handle.

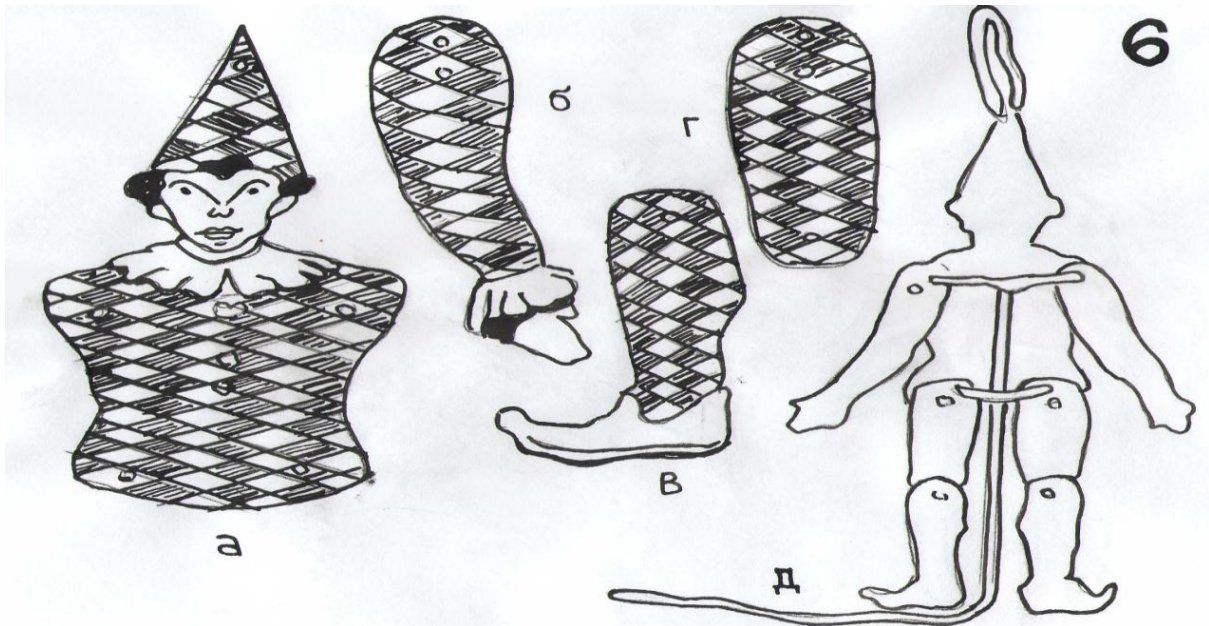


Draw the contours of the picture on a piece of paper and copy this shape on plywood 3-4 times . Then draw the shape of the upper half of the bear 's body twice more. Cut two plywood boards. Let them be 20 cm long and 1.5 cm wide . Then drill these boards with a parma or heated wire from both sides. Glue one half body in the middle of the two whole bodies (picture, c). Now install the bears on the plywood boards with a separate nail as shown in Figure "g" . Make them well. When the two plywood blocks are pulled alternately to the front and back , the bears begin to hammer in turn.

This type of assignment helps to develop students' design and design skills.

Task 6 is called " Play girl " . This task is mainly for girls. Oyuno 's daughter has been living in the works of folk art for many years . Prepare the body, arms and legs of the daughter of a thief from plywood . Make each leg separately (picture, a, b, v, g). Drill holes in the plywood with circular markings . Attach the arms and legs to the body with a separate pointed nail . Tie both hands and both feet together with a piece of string on the back . Tie the ends of these threads to the third long thread (Fig. D). Her daughter 's clothes were copied, and her face was copied by a clown .

Then hang a rope around his head . When you hold the end of the lower rope and swing it, it shows an interesting game .



This task serves to develop in girls the elements of sophistication, taste, sewing science.

Chickens eating don ch ” and this task is performed by boys.

Cut a board and make a circle as shown in Figure a. Make two holes in the four edges of the circle . Insert the chicken shapes into the holes in the edges . Attach a band to one side of the circle from the bottom (picture, b).

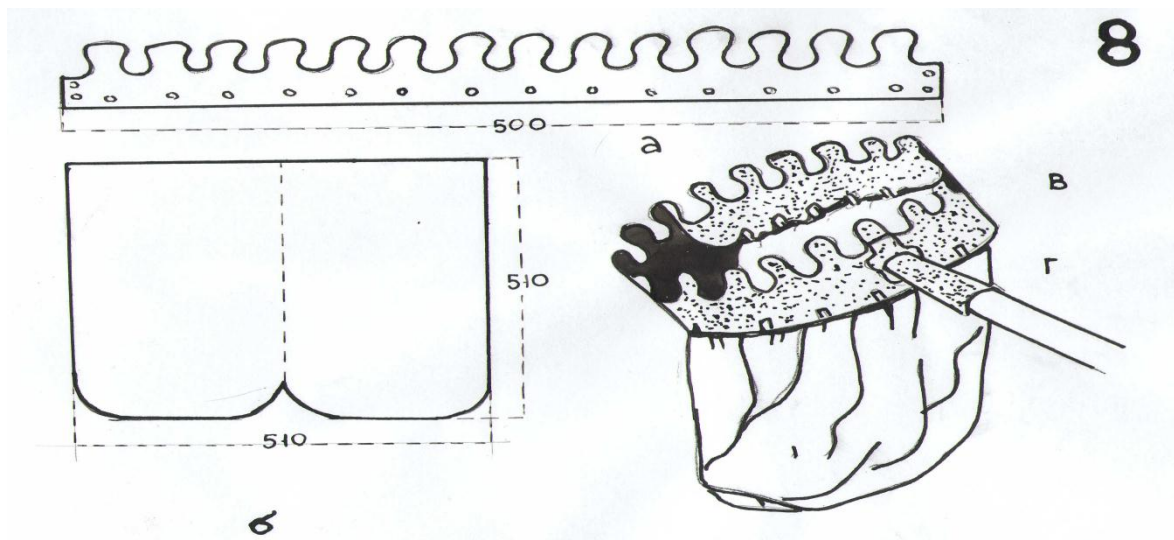
The shape of chickens consists of four names: two sides (picture, c), middle name ( picture, g ) and head (picture, d). All of these q names are made of plywood ; The plywood shapes are sawn with a saw . Attach each of the two side names to the middle name on both sides. Then make a hole in the side names and put a head on it . Two holes should be drilled in the name of the game . The nail is passed through a larger hole . The second is tied with a thread (Fig. E). Now the chicken is ready . Insert the chicken into the hole at the edge of the circle and pass the string through the hole in the center to the bottom . Join the ends of the lower half of the thread together and tie it with a round piece of wood ( picture , j ) . If you start to spin by holding the band of the circle, the round wooden threads hanging at the bottom of the circle will be pulled alternately from time to time. The hens , on the other hand, take turns laying eggs .

This task develops in boys the ability to imagine the shape of birds, to make them, to feel the connection between objects.

Task 8 is called “Making a jug-bag for picking fruit” and it is based on the joint work of boys and girls.

Make a flange from a long narrow tin. Make the fence "a" as shown in the picture . Sew a bag of fabric (picture, b), attach it to the flange and sew in a circle with the ends riveted to each other. To sew , make a series of holes in the edge of the housing of the flange (Fig. A ) . Then find a piece of tin pipe and cut one end into several pieces . Bend them perpendicular to the rest of the pipe and pierce each one. Place this side of the pipe next to the flange , mark the location of both holes in the flange, drill a hole in it and fasten the pipe to it (r, g) . Mixparchin can be made of tin . Push the wood straight into the pipe and make a band. If you hang the fruit band on the cell on the flange, the fruit will break and fall into the bag, and the stock will not die .





This task helps to develop students' skills of teamwork, economy, care, sewing, working with fabrics and tin.

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