

How to Cite

Shomirzayev, M. K., & Yuldashov, K. K. (2021). Study of folk crafts in school technology education classes. *International Journal of Social Sciences*, 4(2), 283-292. <https://doi.org/10.31295/ijss.v4n2.1735>

Study of Folk Crafts in School Technology Education Classes

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Abstract---The article discusses the issues of educating students in the spirit of national values and traditions through the study of some topics relevant to the curriculum for the study of folk crafts in school technology education classes.

Keywords---developing, educational, folk crafts, lesson, national feeling, national model, national pride, pedagogical, practical work, profession, school, students, technology education, universal values, upbringing

Introduction

Today, it is very important to direct young people to the right profession, to increase their interest in various professions, to form a sense of respect and pride in the profession. Because the future of our great state depends on this issue. With this in mind, our government has always paid special attention to the development of handicrafts and the orientation of young people to vocational training. In particular, the Resolution of the President of the Republic of Uzbekistan "On Additional Measures to Stimulate the Development of Folk Arts and Crafts" No. PF-3983 of April 1, 2008; The Decree "On further support for the development of the arts" identifies ways to provide favorable conditions for the involvement of a wide range of people in the field of folk art, especially young people. All of these events indicate that a wide range of opportunities are being created, especially for graduates of professional colleges. In order to achieve such high results, in all our educational institutions, "My profession is my pride", "Profession, learn from the profession", "A skilled person will not be humiliated", p knows everything "roundtables, various activities will help to increase students' interest in the profession. To this end, in recent years, many vocational schools in the country have been holding events aimed at increasing the activity of students, glorifying the profession.

Results and Discussion

This work is important for the well-being of young people. Below we provide the development of some topics relevant to the curriculum for the study of folk crafts in school technology education classes (Akramov, 1973).

Topic: Folk crafts in the field of woodworking professions. Wood carving tools

- Course Objectives:
 - Educational – formation of knowledge, skills and abilities of students about the national crafts developed in the field of woodworking
 - Educational - to form students' interest in national handicraft professions, to inform them about safety rules and sanitary-hygienic requirements to be followed in handicrafts; s) *developer* – broaden students' understanding of national folk crafts.

- Classroom: exhibition and thematic tests, tools, samples of wood carving, slides, overhead projector.
- Course type: theoretical.
- Course type: introductory course.
- Teaching methods used in the lesson: story, demonstration, conversation.

Course: Organizational part (lesson organization, greeting, attendance determination).

Request a topic

- What home repairs can be done?
- What tools and equipment are used in the repair work used?
- What safety rules and hygiene requirements should be followed during repairs?

New topic statement

Dear students! In previous lessons with you, we learned about home improvement. Starting from today's lesson, we will get acquainted with the work of folk crafts. In today's lesson, we will learn about wood carving. Wood carving is a common form of Uzbek folk decorative art, in which a pattern or image is drawn, cut and engraved on a board or wooden object. This type of art is found in almost all nations and was widely used in the architecture of the countries of the ancient East. Over the centuries, woodcarving has flourished in Europe and Asia, giving rise to unique artistic styles. Similarly, wood carving has been developed in Central Asia since ancient times and has been widely used in household items and architecture (Shomirzayev, 2019). This carving has been used in ancient architecture to decorate doors, gates, columns, various beams, tables, tables, boxes, frames, pencils and other items (Figure 1). Wood carvings of the 5th-6th centuries were found at the bottom of the Yumalak hill in the Surkhandarya oasis. According to our scientists, 1-1.5 thousand years ago there was an art of carving in this place, which proved to be very well developed. In the 19th and 20th centuries, wood carving, coppersmithing, painting, and other forms of art flourished, and each city had its own unique wood carving. Wood carvings were created at the Khudoyorkhan Palace in Kokand, the Palace of Prince N.K. Romanov in Tashkent, the house of Zayniddinboy in Kuva, the Saidakhmadkhoja Madrasah in Margilan and the Sitorai Mohi-Khosavaboshka in Bukhara (Shomirzayev, 2019).



Figure 1. Wood carving

Therefore, it is difficult to understand carving in wood carving without knowing carpentry. Because each sculptor prepares the details of the carved object separately, that is, he measures the part by sawing and sawing. Students should be familiar with the profession of carpentry in folk crafts in the field of woodworking and know the tools used in this profession. Carpentry is one of the professions that is so ingrained in people's lives. There are many carpenter's tools in every home. That is why this profession has become a subject of study and is taught in every student's house and palace, in schools and universities. In addition, painting, cradle-making and box-making are also popular professions among the people (Shomirzayev, 2019).

During the study of wood carving, students should follow the following workshop safety techniques and fire safety rules (Shomirzayev, 2021). The wood carving workshop should be located on the first floor of the building and should be well lit. The placement of the workshop in a semi-basement or cellar is strictly prohibited from a hygienic point of view. One of the special requirements for the workshop is that it has good natural light, heating and air conditioning. Most importantly, the safety rules in the workshop must be followed (Shomirzayev, 2021).

Special attention should be paid to fire safety in the workshop. This is because wood chips burn quickly. Therefore, electric heaters should have a special place on the hob. The following should be taken into account when equipping the workshop with fire extinguishers (inventory) (Barczak et al., 1997; Daniëls et al., 2019).

- Wear work clothes properly and button them before starting.
- Fix the required wood to the bench during operation and check its strength.
- Check the blade of cutting tools, if not, sharpen.
- Work vigilantly without talking when working with an Arab.
- Check the fit of the lathe when working with the lathe.
- Careful use of power tools in the preparation of glue, its melting.
- Handing over the remaining materials and unfinished work to the duty officer.
- Wipe, clean and replace tools.
- Scraping work tools - use special brushes to clean the tracks.
- The workshop must have medical kits.

If a student's hand is injured by a cutting tool and is bleeding, the injured area should be bandaged at the top to stop it and taken to the nearest emergency department (Shomirzayev, 2020).

Wood carving tools

Woodcarving involves the drawing of patterns, measurements and other work, measuring and control tools (Shomirzayev, 2020). Examples of measuring and control devices include meters, rulers, gonya, Persian goniya, pargor (Russian - compass), caliper, nutrometer, pen, button, eraser, flywheel, flywheel, conveyer (figure 2).

- A compass is a two-sided drawing tool with a hinged end with a pencil stem at one end and a needle stylus at the other end. This tool is used to measure, determine the size, draw circles and arcs.
- A button is used to attach paper or something to a drawing board or wall.
- Pencil - used to draw shapes. Pencils are made of coal, graphite, lead, dry paint. Depending on the field of application, there are pencils - hard pens (T, 2T, 3T), soft pens (M, 2M, 3M, 4M or V, 2V, 3V) and medium-soft pens (TM, NV).
- The meter is made of wood or thin steel and can be rolled or straight.
- A goniya is a tool consisting of a ruler with a 900-degree angle to each other, used to check that objects are at right angles and to draw measurement lines. There are other types of gonia, such as Persian gonia (earthworm) and Surma gonia (malka).
- Eraser - used to erase excess lines when drawing patterns and compositions. The lines drawn in pencil are erased with a soft white or blue eraser, and the lines drawn with ink or ink are erased with a red eraser containing crushed sand.

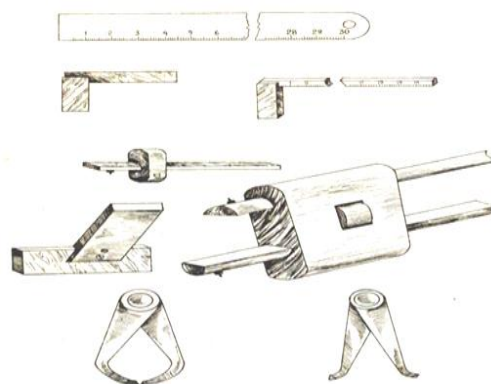


Figure 2. Measuring and control devices

Woodcarving uses a variety of tools to do unique things (figure 3). Wood carving tools are divided into two types, "engraving pencils" for engraving and "pencils" for engraving (Fraser et al., 1987; Benedek et al., 2014).

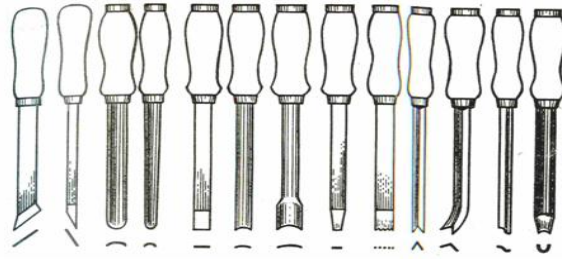


Figure 3. Woodcarving tools

There are several types of scanners, depending on the shape and function of the tools. For example, scan, morpech scan, fish surface scan, ground scan, bucket scan, smoking scan and others. Scans are divided into eight groups depending on the shape and function:

- Straight scans - 4 types, divided into small (blade width 1.5 mm) scans, medium scans, large scans. They are used to cut the edges of carved patterns and the edges of geometric patterns, to lay the ground and level them.
- Paddle blades - 2 types, the width of the blade is 15-25 mm.
- The tip of the cutting blade is tilted to one side and is spade-shaped. The sculptor grabs the handle of the chisel with his right hand and cuts it towards himself, piercing it at a certain depth above the pattern line. It is mainly used for carving narrow chains and fringes on the edges of objects.
- Nova scans - the tip of the blade of the nova scan is shaped like a groove and is 2 mm to 15 mm wide. These scanners are used to engrave and decorate various shapes of floral, Islamic, embossed patterns on the surface of wooden objects. There are four types of nova scans: point nova scan, small nova scan, and medium nova scan.
- Fish surface scissors - the scales of these scales are sunken, rainbow-shaped, in the form of fish ribs, the width of the blade is 3, 6, 10, 15 mm. To engrave a pattern on a piece of wood, the master holds the scythe in his left hand and cuts it with a hammer while placing the knife perpendicular to the line.
- Ground scanners - 2 types, the width of the blade is 5-7 mm. They are used to engrave Islamic and girih patterns on the surface of objects.
- Scaffolding - is used to ensure that the pattern on the surface of the product is flat, with a clear view of the pattern lines. When carving a pattern, students place the scissors between the palms of their left hands and hold it upright to limit the base of the pattern to one side. Smokers have one tooth, three teeth, five teeth and sixteen teeth.
- Morpech scanners - 4 types, the width of the blade is up to 5, 8, 15, 20 mm. These scanners are used to make chains, frames, semicircles, and dots on the edges of carved patterns. The Morpech scythe is also used to strike with a hammer.
- Bucket scanners - 3 types, the width of the blade is up to 5, 8, 12 mm. There are also types of scissors, which are called straight-edged and curved-edged. Bucket scanners are used to draw triangular convex lines and draw parallel lines on the pattern lines carved on the surface of the object.

The above-mentioned carving tools can be used to engrave a variety of patterns on objects (Shomirzayev, 2020). When we use carving tools, if they don't work, the work will not be of good quality, so it is not said that "the master is not the master, the tool is the master" (Schwarz & Steininger, 1997; Pawlowski et al., 2014).

Lesson reinforcement

- What folk crafts do you know in the field of woodworking?
- What kind of art is wood carving?
- When did wood carving appear?
- What tools are used in wood carving?

- What measuring tools do you know used in wood carving?

Completion of the lesson

- Assessment and motivation of students.
- Homework - what items of wood carving are in the house, professions in the field of woodworking and in wood carving learn how to use the tools used.

Topic: Peculiarities of the art of wood carving. Auxiliary materials and equipment used in the art of wood carving

- Course Objectives:
 - Educational – provide students with information on the selection of wood used in wood carving and auxiliary materials and tools.
 - Educational – aesthetic education of students through the Uzbek folk arts and crafts; s) developer – expand students' knowledge of wood carving.
- Classroom: textbooks, handouts, visual and technical aids, samples of wood species, equipment.
- Course type: theoretical.
- Type of course: imparting new knowledge, developing work skills.
- Teaching methods used in the lesson: conversation, discussion,
- Exhibition

Course Outline

Organizational part.

Request a topic

- What kind of folk crafts in the field of woodworking
- do you know your profession?
- What kind of art is wood carving?
- When did wood carving appear?
- What tools are used in wood carving?

New topic statement

From time immemorial, our ancestors have been passing on their professions from generation to generation, conquering the peaks of discovery and science created by mankind. The art of woodcarving and flower arranging has always been popular (Sh, 2017). Nowadays, wood carving is widely used in architecture as well as in the decoration of household items. By carefully preserving local traditions and enriching them with new content, folk masters are creating mature examples of ancient art that have been carved over the centuries. Today, gypsum and wood carving, which are related to architecture, are developing. From ancient times in Uzbekistan, wood carving, one of the types of folk arts, has been widely used in the decoration of architecture and household items. Various patterns are used in wood carving (Shomirzayev, 2020). Each artist reflects the unique aspects of the artistic traditions of the place where he lives and works. For example, Khiva folk craftsmen preserved the naturalness of wood in carving, while Bukhara craftsmen quietly painted the carvings and painted them with gold and silver colors. Kokand folk masters carved wood in the middle depths, Tashkent folk masters made patterns on the wooden surface without floors, through lines and used a lot of border patterns, Margilan masters laid the groundwork for carving. ' Nowadays, wood carving and painting are widely used in architecture as well as in the decoration of household items. We see beautiful examples of carvings on doors, folders, chairs, bowls and other items made by Tashkent masters (figure 4) (Govindasamy, 2001; Randall et al., 2011).

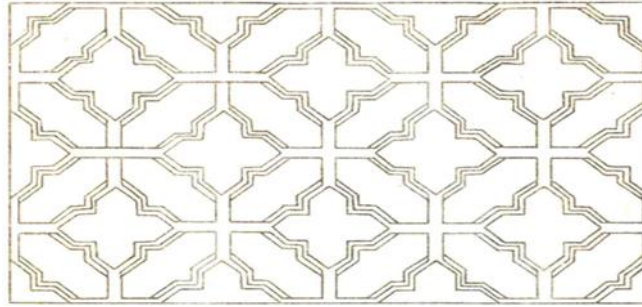


Figure 4. Examples of carvings on doors, folders, chairs, bowls and other items made by Tashkent masters

Carpenters carefully studied the characteristics of wood before carving it. Only later was the pattern carved into the wood. All woods are divided into two groups depending on the type of wood they are obtained from: deciduous and coniferous. Wood from coniferous trees is the main material in construction, carpentry and wood carving, because they have their own advantages. Due to the fact that it contains tar, it does not rot quickly, it is larger and lighter than deciduous trees, it is easy to process, the body is straight and smooth, so it is possible to make a smooth stalk. Wood materials are characterized by their natural color, color, luster and odor. The best wood carvers in Uzbekistan are walnut (Greek orex), pine, maple (platan), mulberry, spruce (pear), pear (pear), maple, beech, oak, white pine (fir), lime (listvennisa), sage (lipa), white birch (birch), black birch (beech), pine (pine). These woods are used to make patterns by decorating. In finishing, there are three types of work: thorough cleaning, polishing of wood surfaces, carving relief: cotton wool, choka (grain), tulip decoration, as well as painting, silver water treatment, varnishing and polishing (Karhu et al., 1977; Sadguna et al., 2017; Ariputra & Sudiana, 2019).

Wood used in wood carving should be harvested all year round. However, harvesting timber in October and November, when water escapes from the trees, gives good results (Shomirzaev, 2017). To ensure that the cut tree does not rot or worm when stored for a long time, its bark should be stored in a place where it can be touched by shade and shade. Wood should be carefully selected and sorted before use. Twisted, loose wood should not be used, as its products are of poor quality. Wet board is more difficult to work with than dry board. Wet boards can often get wet during operation. Therefore, the wood used in the manufacture of furniture and carvings must be dry. Depending on the size of the job, students will need to choose wood and plywood. The selection of materials ensures the quality of the product. If the wood materials used are well dried, there will be no cracks or cracks as a result of construction (Shomirzaev, 2021).

It is difficult to assemble the pattern on the machine as a whole. This makes it easy and convenient to cut into pieces. The carved parts are fixed on the machine with special screw clamps. Before applying the pattern to the surface of the product, cottonseed oil is applied to soften the surface of the product. At the same time, the tip of the scalpel is touched with soap so that the scalpel cuts smoothly. One of the great features of the art of wood carving is that the master carver works with both hands. Iskana holds the pen in her left hand, holds the hammer in her right hand, hits the Iskana handle and cuts out the pattern. The depth of carvings used in Uzbekistan ranges from 2 mm to 15 mm. Masters of Tashkent, Bukhara, Kokand, Samarkand carve the carved floor of the objects in the style of smoking with a special hammer. Khiva masters leave the patterned floor flat without scratching it. They apply heated seed oil to the surface of the carved objects. This increases the moisture and heat resistance of the product. Second, the seed oil makes the pattern look darker. The masters of Tashkent, Kokand and Samarkand varnish the finished products with a special varnish. Carpentry glue, casein glue, seed oil, sandpaper, glue are used. Carpentry also uses handles and mechanical tools for woodworking.

- Carpentry glue – used to glue wood materials together. Carpentry glue is made from meat and bones.
- Casein glue is a glue used in wood carving and carpentry, made from the last unusable part of milk. It is in the form of talc or 4-12 mm hard grains.
- Seed oil - After the carved pattern is painted with apricot, walnut or other wood color using bees, the seed oil is rubbed with a cotton cloth and alcohol varnish No. 3.7 is applied.
- The button is used to fasten the pattern to the surface of the item to prevent the paper from slipping.
- The devices use sandpaper and soft flat egos. The grains of paper are numbered from 120 to 180, depending on the size of the grains.

Lesson reinforcement

- What is the difference between the wood carvings of the masters of Kokand, Khiva, Tashkent and Margilan?
- What kind of wood do carpenters in Uzbekistan use for their work?
- Trees are divided into groups according to their leaves, and which group of trees is most often used in wood carving?
- What materials and equipment do you know used in wood carving?

Completion of the lesson

- Assessment and motivation of students.
- Homework - to prepare samples from different trees.

Topic: Drawing patterns on tracing paper using tracing paper

- Course Objectives:
 - *Educational* – to teach students how to draw patterns.
 - Educational - enrichment of the spiritual world of students, the development of artistic taste and spirituality; *s) developer* – to expand students' knowledge and skills in drawing patterns and copying patterns on wooden objects using tracing paper.
- Classroom: textbooks, handouts, tracing paper, needles, patterns.
- Course type: practical course.
- Type of course: imparting new knowledge, developing work skills.
- Teaching methods used in the lesson: conversation, discussion, demonstration.

Course Outline

Organizational part

Request a topic

- What is the difference between the wood carvings of the masters of Kokand, Khiva, Tashkent and Margilan?
- What kind of wood do carpenters in Uzbekistan use for their work?
- Trees are divided into groups according to their leaves, and which group of trees is most often used in wood carving?

Practical lesson

Inquiry on the topic, discussion (handouts on "History and development of the art of wood carving" will be given. students who collect are encouraged separately).

Give an introduction to the theoretical concept

The name of the new topic and the plan are written on the board plan:

- Draw simple pattern elements on paper.
- Technology of making kalka.
- Copy the drawn patterns on wooden objects.

Draw simple pattern elements on paper

Before drawing the pattern elements, the teacher will need to prepare the following materials: an album made of half a sheet of paper, a black M pencil, a soft eraser, a pencil sharpener, a straight and triangular rulers. Pattern drawing begins with the simplest elements, the simplest copy. Students should learn to draw a straight and beautiful line on a piece of paper to achieve a clear and fluent line. Most of the patterns carved in the Baghdad style are made of geometric shapes, and the surface of the objects is carved without decoration and shallow. Baghdad-style patterns are

used to decorate the sides of the gate. These patterns are debated in a “chain”. So, first of all, let's learn to draw simple chain patterns on paper. For example, to draw a chain pattern, a line 3 cm wide and 20-25 cm long is drawn, inside of which are drawn equilateral triangles. Vertical lines are drawn from the ends of the triangle to the sides, and the intersection of these lines is the center of the triangle. Combining the center with the ends of the triangle creates an element of the chain pattern. If we continue this element along the path, we get a complete chain. Chain patterns can be rectangular or square (figure 5).

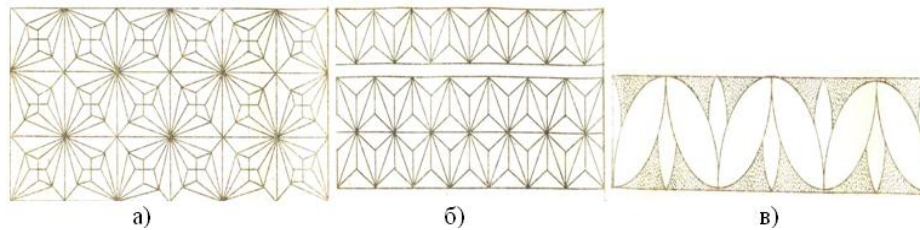


Figure 5. Chain patterns can be rectangular or square

Patterns made of wood consist of straight lines, semicircles and circles. When working with patterns, you need to divide them into equal parts. That's why students need to be able to do this kind of work perfectly.

Kalka preparation technology

The teacher explains to the students how to prepare the kalka. Kalka preparation is one of the oldest known methods. During the process of making the kalka, depending on the size of the surface of the object to be patterned, the kalka paper is cut. Depending on the parts of the pattern and the symmetry of the structure, the pencil is drawn in two, four, eight folds with a pencil. A needle is pierced over the flower line. The distance between each hole should not exceed two millimeters. The shield is written on the patterned object, held with the left hand, and the right hand is rubbed lightly on a piece of white or black powder wrapped in two layers of gauze. There are traces of pattern lines in the form of dots on the surface of the product. We draw on these traces with a black pencil. The engraving pencils are selected for the pattern, the edges of the pattern are cut and the floor is carved. The base of the carved patterns is embellished (figure 6).

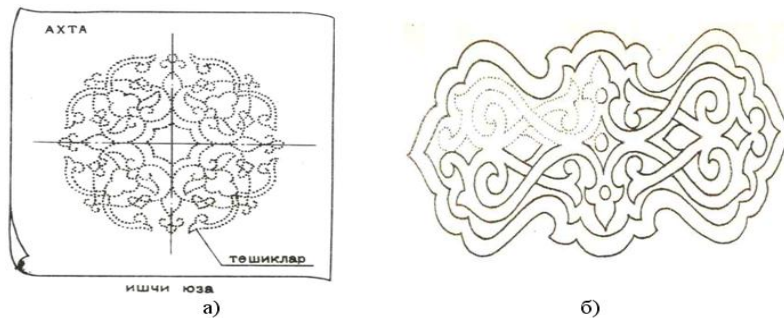


Figure 6. Base of the carved patterns

Copying patterns to wooden objects

To engrave patterns on wood materials, you must first select the surface on which the pattern will be applied and pre-treat it. In wood carving, various types of wood (soft wood that is easy to carve and hard wood that is hard to carve) are widely used, which have different qualities in terms of carving. During the workshop, students will be able to copy patterns from dishes, utensils, chairs, bars, boxes, and so on that are not as complex as they once were. As a result, students will learn about unique patterns and patterns, as well as how patterns are related to the shape of an object, and their understanding will expand. In addition, students will remember the process of copying the pattern elements used by this or that master. Then, in independent drawing, they learn to create new compositions by combining these elements. Items made by skilled craftsmen and their decoration should always be a source of inspiration for students. Tastefully crafted patterns and puzzles will keep students interested. Encourages the pursuit of drawing. Gradually, as students' experiences become richer, more complex patterns are chosen to copy the pattern.

In addition to copying, students will be introduced to the art of wood carving of the Kazakh, Kyrgyz, Tajik and Turkmen peoples. What are the peculiarities of the patterns of these peoples, their similarities with the Uzbek patterns are analyzed together with the teacher (or the leader of the circle) and students are shown samples of patterns (figure 7).

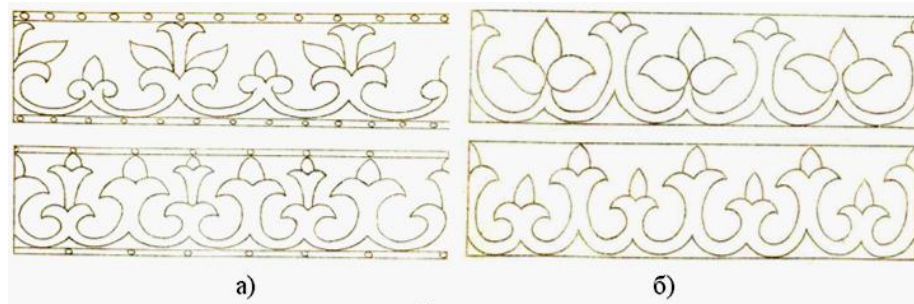


Figure 7. Samples of patterns

In addition to geometric carvings on the surface of objects, there are other types of carvings, such as Baghdadi, Islamic and Muqarnas, which are first drawn on paper and then drawn on the surface of the object. One of the oldest methods is to apply a pattern to the surface of the item using a trowel. Uzbek masters still use this method. The pattern falls from the well-worked shield. Therefore, the shield should be stored carefully and in a dry place. After transferring the pattern to the surface of the object through the shield, engraving begins. Flower carving depends on the experience and skill of the master. Therefore, the teacher should choose the most convenient way to explain the pattern to the students.

Practical work

Students will be introduced to the materials used to make pre-made kalka - kalka paper, needles, white or black powder, pattern patterns, and learn how to use them.

Lesson reinforcement

- What do you know about the art of carving?
- Explain the preparation of kalka.
- How to transfer the pattern to the wood with the help of a prepared sledgehammer?
- What types of patterns do you know?

Completion of the lesson

- Assessment and encouragement of student-prepared kalkas.
- As a homework assignment, students are asked to independently prepare a shield for different geometric patterns.

Then the lesson ends. The students on duty clean and tidy the room. Through the development of this course, we can conclude that a happy person is a person who has worked for society, made a personal contribution to its wealth, always glorified his profession, and encouraged others to be happy.

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