

# "SMALL" IN TRAINING NATURAL FIBERS USE THE METHOD OF WORKING IN GROUPS

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## Abstract:

In this article, the method of working in small groups is a creative work in the lesson aimed at learning educational materials or completing a task by dividing them into small groups in order to activate students. When using this method, students work in small groups and actively participate in the lesson, have the opportunity to take the role of leader, exchange ideas with each other and appreciate different points of view. When using the method of working in small groups, the teacher has the opportunity to save time compared to other interactive methods. Because the teacher can attract all students to the topic at the same time and will have the opportunity to evaluate all students. The goal of improving the quality of the lesson is to effectively use the method of "Working in small groups" in the teaching of natural fibers in technology classes.

## Keywords:

Method of working in small groups, student, natural fibers, linen fiber, wool fiber, natural silk, crepe georgette, parachute gauze.

The method of working in small groups is a creative work in the lesson aimed at learning educational materials or completing a task by dividing them into small groups in order to activate students. When using this method, students work in small groups and actively participate in the lesson, have the opportunity to take the role of leader, exchange ideas with each other and appreciate different points of view. When using the method of working in small groups, the teacher has the opportunity to save time compared to other interactive methods. Because the teacher can attract all students to the topic at the same time and will have the opportunity to evaluate all students. After organizing the lesson and repeating the topic, the teacher explains the new topic to the students.

New topic statement: There are two types of fibers in nature - natural fibers and synthetic fibers. We will learn about natural fibers in today's lesson. Natural fibers include cotton, linen, wool and silk fibers.

Cotton is a very thin fiber that covers the seed of a plant called cotton. Cotton fibers that are not separated from the seed are called seeded cotton. 1/3 of seeded cotton is fiber and 2/3 is seed. There are 3-5 types of cotton. The structure of the fibers depends on their degree of maturity. If we look under a microscope, we can see that unripe (dead) cotton fibers are thin-walled like flat ribbons, and there is a wide channel in the middle. remains. Ripe cotton fiber consists of 95-96% cellulose and 4-5% various mixtures: oil, wax, paint and mineral substances. The length and thickness of the fibers depend on each other, they differ depending on the type of cotton. Thick and fluffy cotton is obtained from short fiber cotton; Baykaflaner, pumazeya and other gas products are made from it. Medium-sized cotton yarn is spun from medium-fiber cotton, and chit, satin, and other fabrics are made from it. The

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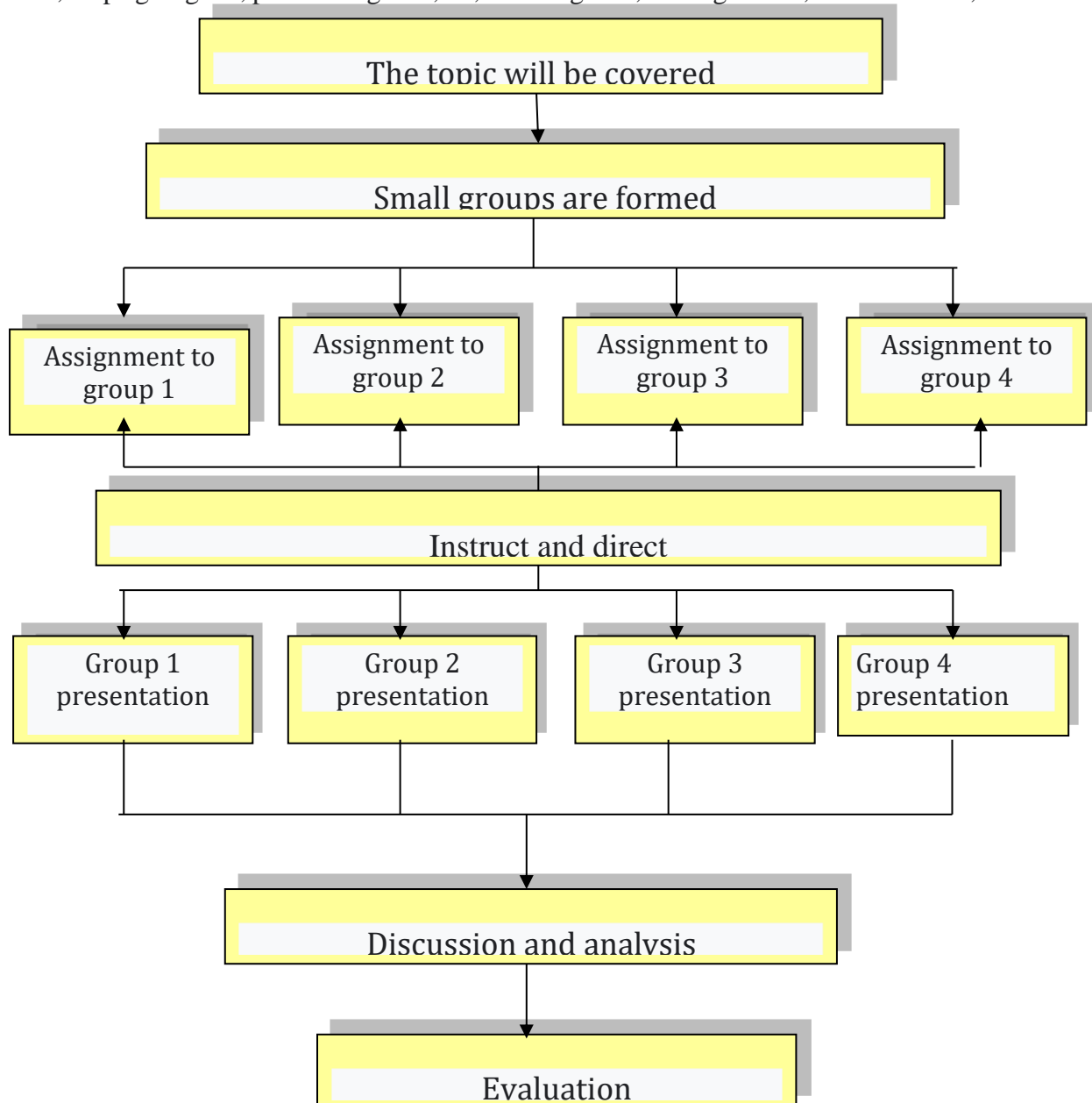
thinnest and smoothest thread is spun from long fiber cotton; it is used to make high-quality fine thread fabrics - batiste, marquise, soft satin and other fabrics.

Flax is a fiber obtained from the pulp of the flax stem. Flax fiber is divided into elementary and technical fibers. Flax fiber contains 80% cellulose and 20% other impurities. These compounds consist of oil, wax, mineral substances and lignin (the thickening part of the cell). Lignin thickens the fibers. Flax fiber contains about 50 percent lignin. Therefore, it is much harder than cotton fiber. The thickness of elementary flax fibers is the same as that of cotton, the length is 15-20 mm. The thickness of technical flax fibers is determined by the thickness of the elementary fiber and the number in the bundle. The average length of the technical fibers used for spinning is 35-90 cm, and the thickness is 10-3.33 tex. The toughness of the elementary fiber is expressed by the breaking force equal to 0.98-24.52 kN, that is, flax fibers are 3-5 times tougher than cotton. The color of flax fibers is from light gray to dark gray. Flax is unique because it has a smooth surface. The effect of acids and alkalis on linen is similar to the effect on cotton. Linen withstands the impact of hot metal, i.e. iron, because its hygroscopicity is much higher than that of cotton. 990 hours of direct sunlight reduces the hardness of flax by 50%. That is, its resistance to light is slightly higher than that of cotton. Linen burns like cotton, absorbs and removes moisture quickly. Wool - horn-like growths in the skin layer of woolly animals. Sheep, camel, goat, cattle and rabbit wool are used in the textile industry. Wool fibers consist of root and body parts. The root is the part under the layer of wool, the body is the part that protrudes from the skin and consists of protein-keratin. The body of the wool fiber consists of grain, shell and core layers. The granular layer covers the fiber body from the outside and consists of hornlike granules. Depending on the type of fiber, beads can be ring-shaped, semi-ring-shaped or plate-shaped. The grain fiber body prevents degradation, keeps the fiber compacted, and preserves the properties of the fiber. The shell layer consists of the cells that make up the body of the wool, and it is the main layer that determines its hardness, elasticity and other qualities.

The core layer lies in the middle of the fiber, it consists of cells filled with air. Depending on the thickness and structure, wool fibers are divided into the following types: fluff, coarse hair, intermediate and dead fibers. The length of wool fibers is 20-240 mm. In terms of length, homogeneous wool is divided into short fiber (up to 55 mm) and long fiber (longer than 55 mm). Dry fibers elongate 40 percent at break. A large share (up to 7%) of fluff elongation is formed by elastic and highly elastic deformations, so woolen products do not wrinkle much and keep their appearance well. Sheep wool with soft wool can be white, slightly yellowish, coarse and semi-coarse wool can be gray, sable, black. As it has the property of changing its stretchability and penetration when wet ironed, wool can be shortened, penetrated, stretched, dekatyofka by ironing. Woolen fibers are mainly used to make kalava yarns. They are used for suits, shirts and technical fabrics.

Natural silk is a very thin thread that silkworms weave. In cocooning factories, silkworm cocoons are pulled in automatic silk pulling machines. During pulling, the ends of several threads are joined together. As a result, raw silk is produced. Raw silk threads consist of several cocoons joined together with a softened oxide - sericin. The breaking strength of

the cocoon is 10 kN, the relative breaking force is 27-31.5 kN/tex. The elongation at break of silk reaches 22%. Under normal conditions, the hygroscopicity of fibers is 11 percent. Boiled cocoon threads are white, slightly yellowish in color. In terms of chemical stability, natural silk is better than wool. Natural silk dissolves only when boiled with constructed alkalis. When dyed natural silk fibers are exposed to water for a long time, a leaky stain appears on them and spoils the appearance of the products. In the wet state, the hardness of natural silk decreases by 5-15 percent. Gauzes are mainly made from natural silk. Crepe dish, crepe georgette, parachute gauze, tie, feather gauze, sewing thread, bobbin thread, etc.



After the description of the new topic, the students in the class are divided into groups. Group 1 - Cotton fiber, Group 2 - Woolen fiber, Group 3 - Silk fiber, Group 4 - Linen fiber. Then the teacher gives the task to the groups to explain the names of the groups based on the topic. While one group of students answers, the other group of students listens and has

the opportunity to correct incorrect sentences and other mistakes. In this way the lesson continues. The group that can describe the names of the group well will be declared the winner, and the students who participated well in the lesson will be evaluated. If this method is used in the lesson, students will be more active in the lesson and compete with each other. Where there is competition, there is growth. All future teachers are recommended to use this method.

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