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METHODS OF TEACHING NEWLY INTRODUCED THEMES IN THE SUBJECT OF TECHNOLOGY

M. U. Turayev
Andijan State University, Associate Professor

D. I. Dadabayeva
Andijan Pedagogical Institute, 2nd Year Master

A B S T R A C T

In this article, we will show you topics that have just entered the science of technology. The reasons for creating new themes are highlighted by their place and achievements in science. The use of pedagogical technologies for teaching new subjects and their effectiveness is given. In order to have a positive impact on the market economy, it is explained what products are made through these topics.

K E Y W O R D S

Design, practice, pedagogical, new technologies, designers and engineers.

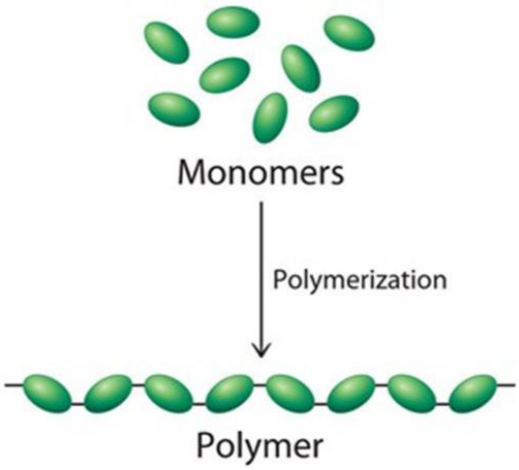
Introduction

We know that what we do normally in life is related to this science of technology. For this reason, the teaching and study of technology science is considered important. Teaching subject of technology is developing in Uzbekistan. In schools, students' interest in technology is growing. A new variety of topics are being added with the aim of advancing the science of technology. In order to add themes, the experiences of Foreign from developed countries are studied. Including in this article, we will cite the process of teaching the topics of polymer material processing technology, the basics of fast food using pedagogical technologies.

The main part

In the science of technology, themes related “technology for processing polymer materials” and “Basics of fasting” for 5-7 grades, “fundamentals of electronics” for 8-9 grades are introduced a new. ***Polymer*** is used in various industries in different ways mostly we all know it as plastic. Polymer is a great discovery of mankind because of it’s versatile nature. It is able adapt any type of typical shape and sizes. Basically plastic products is manufactured with the help of various machines like Extruder, Injection Moulding, compression moulding, and rotational moulding machines. It acts as an additive material in various industries like textile, construction, automobile interior and exterior parts manufacturing industries, Construction chemicals manufacturing industries etc. It is used in common household goods, like clothing, toys, in construction materials and insulation, water tanks, Electrical switches, Electronics etc. Polymer is present in our life in various products.

The word 'polymer' means unit or part. The term polymer is a very large group of molecules having a high molecular mass. These are also referred to as macromolecules, which are formed by joining repeating structural units on a large scale. The repeating structural units are derived from some simple and reactive molecules known as monomers and these are linked to each other by covalent bonds. The process of formation of polymers from monomers is called polymerization.



Characteristics of Polymers

- The main characteristics of polymers are the following:
- Polymers are crystalline and amorphous.
- For example, Bakelite is a crystalline polymer while polyvinyl acetate, polystyrene and PMMA are Acrystalline polymers.
- In crystalline polymers, the molecules of the monomer are arranged in a particular order.
- In Acrystalline polymers, there is no systematic sequence of monomer molecules.
- Crystalline polymers are hard but amorphous polymers are soft.
- The density of crystalline polymers is high while the density of amorphous polymers is low.
- Polymers with higher molecular weight have higher viscosity.
- Crystalline polymers have greater chemical resistance due to their densification.
- Polymers at low temperatures exist as glassy substances.
- Acrystalline polymers do not have a definite drug as they become soft on heating.
- Polymers in flexible crystals are flexible.

Metodology

In technology science, products are mainly made from polymer clay. The raw materials and equipment, devices on which polymer clay will need to be prepared are as follows: 1 cup of starch (200 grams), 1 tablespoon lemon juice (15 ml), mysterious vessel, wooden spoon, 200 gr PVA glue, different colored paints for coloring, hand cream, 2 drops of glycerin, water, mineral oil, 1 cup cornmeal**.**

The sequence of preparation of polymer clay:

1. To make polymer clay, PVA glue and water are poured into a mysterious container and annealed.
2. Add starch, corn flour and mix with a wooden spoon.
3. When brought to a dark mass, put mineral oil, lemon juice, glycerin on top and stir until it comes to the same mass again.
4. In order for the finished mass to work well, the Hand Cream is applied and the stirring is continued.
5. The polymer clay is stored in a glue bag so that it stays well.

The process of preparing a polymer clay mixture

№	Workflow sequence.	The content of the work	Necessary products and work tools
1		The necessary products are prepared. 1 cup of farm PVA Clay, 1 teaspoon of glycylin, 1 cup of corn flour, 1 teaspoon of hand cream, 1 teaspoon of citric acid.	PVA Clay, glycerin, corn flour, hand cream, citric acid.
2		Mix 1 teaspoon of hand cream into 1 cup of farm PVA clay.	1 cup of farm PVA Clay, 1 teaspoon of hand cream.
3		3-4 drops of glycerin are applied to the mixture.	Mixture, glycerin
4		Add 1 cup of corn flour to the mixture and mix.	1 cup cornmeal
5		The mixture is mixed.	Mix

6		The finished mass is rolled up to rest for 2 hours.	The product is ready
7		Polymer clays are colored with dyes.	Different color mix

Tools that you will need when working with polymer clay.

Knives-a beginner can use a clerical knife blade. The main condition for choosing a knife for plastic is that the knife must be sharp and thin, after which the parts retain their shape when cut, the thick knife simply "straightens"them. Of course, professionals use special sets of knives, but the beginner is completely guided by improvised means. Interestingly, in some molding techniques for cutting, as well as in preparing the material for use, a blender is used for the kitchen.

Rolling pin-for roll polymer clay. As a needle, you can use a small piece of metal pipe, a metal box, or a glass container.

Zımpara-In finished baked goods, it is necessary to soften various folds, fingerprints and seams. Sometimes sandpaper is used to give texture to an undercooked product.

Knitting needle - (plaster needle, awl) is needed to make holes in products.

Super glue-used when gluing individual pieces of the product after cooking, as well as gluing accessories. Remember to wipe your hands, tools, and work surface with wet wipes to prevent dust and dirt from entering the product.
Items made of polymer clay.

	
Preparing a ribbon for keys	Making a variety of buttons
	
Making toys	Making jewelry for women
	
Making dishes	Decoration of teapots
	
Making flowers	Clock decoration

Fundamentals of the science of housekeeping.

Many of the items used in our home become unusable over time. There is no need to rush to throw them away. They can be used to make objects that can be used in bed. Below are the methods of manufacturing such products.

Preparation of a floor washer from an unnecessary towel is shown step by step in Figure 1:

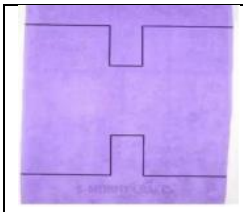
				
a	**b**	**v**	**g**	**d**

Figure 1. Preparing a floor washer from an unnecessary towel.

Making a work fartug, which puts work weapons from unnecessary pants (Figure 2).

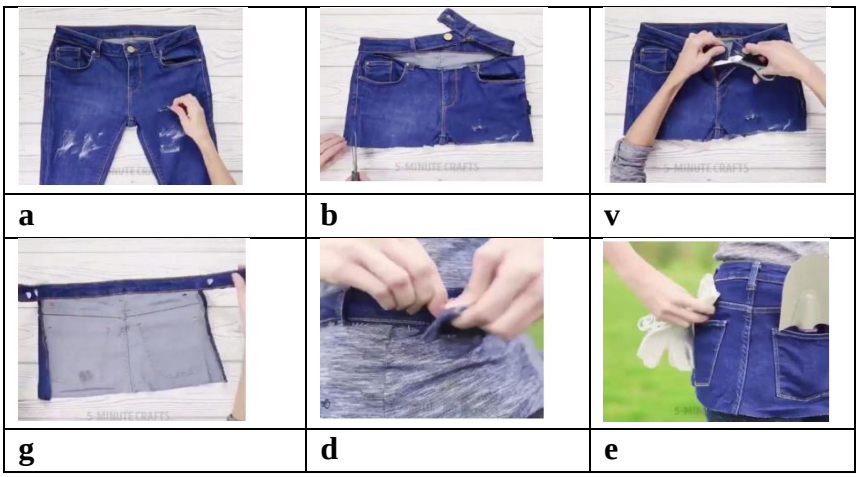


Figure 2. Working apron with working tools.

1. Taking the trousers, cut off the legs from the step line (Fig.2, a).
2. Then the front part is cut off with a belt (Fig.2, b).
3. The side cutout is cut off (Fig.2, c), and the work apron is put on at the waist ready (Fig. 2).

Conclusion

In the article, we studied topics that have just entered the science of technology. The preparation of products related to science was shown. The price of products that are always created using manual labor is valuable. When creating them, simple products can be used and the cost spent is a small amount. We have shown above that in technology science it is possible to create expensive products through cheap products and little spending.

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