# The Method of Interactive Lessons in Teaching Physics

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### Abstract:

The paper presents results of "non-traditional" teaching of the basic course of Physics in the first year of study at Chirchik State Pedagogical Institute, specifically teaching via interactive method enriched with problem tasks and experiments.

Keywords: physics, optics, mechanics, interactive teaching process problem task.

### Introduction

Education to the system intensity with come in coming innovation, pedagogical technologies, interactive methods are mastered by the teacher and used to go of the teacher own on relentlessly to be sought Demand does. In the course of the lesson, the teacher brings his students to science from a creative point of view their views organize to do them searchability characteristics formation and of course, modern pedagogical technologies and of the methods used without the lesson organize reach need will be.

Interactive methods, innovative technologies, pedagogy in the educational process and interest and attention to the use of information technologies in the educational process day by day getting stronger to go such to be reasons one, that's it until time traditional in education students only ready knowledge to take over taught if so, it is modern technologies them occupying knowledge themselves looking for to find independent by learning , to analyze, even conclusions themselves cause to release teaches. Therefore, it is now time to teach the learner in the process new modern method and technologies use and their efficiency increase important is counted.

The teaching methods presented in this article are qualified by students During the practice, school students were given an experiment as a test. Experience test in the process satisfactory the result given methods below we bring

### **Four Step Method**



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Explanation What to do need showing to give Shown way back Exercis



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#### Explanation

It is known that hard bodies own of volumes and of forms to change resistance shows they are elasticity feature has. Liquid and gases hard of bodies to form have that it is not with, they own la ri put the dish shape they differ in what they get. (From this, of course, liquids in a state of weightlessness is an exception. Because a liquid in a state of weightlessness takes the shape of a sphere due to surface tension takes Also, one liquid with the same density into another liquid occupies a spherical volume when inserted. Molecules of liquids and gases mobile will be, so for they are fluidity property have Liquid and due to the large volume elasticity of gases, external compressive forces effect after stopping, they return to their initial states. The liquid itself It is from everyday experience that the surface of a solid object is affected by a certain force known. This force is called the pressure forces of the liquid. Directly touching each other standing bodies between mutually influence forces – elasticity forces of bodies from deformation surface will come. Liquids volume to change relatively to elasticity owner that it happened for of liquid in compression elasticity forces appear It will be forces of liquid pressure is the power .Liquid how much a lot if squeezed pressure power too that's all big will be.

in terms of equal to to a physical quantity pressure is called

SI at pressure unit by doing one newton of strength one square meter surface showing pressure acceptance done This unity pascal (pa) is called



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$$1 \text{Pa} = 1 \frac{N}{m^2}$$

(gigapascal)=

 $Pa1KPa(kilopascal) = 10^{3}$ 

# What to do need show \_ \_

Pressure the following units too used:

1GPa

10<sup>9</sup> Pa

 $1MPa(megapascal) = 10^{-6}$ 

1mPa(millipascal)=  $10^{-3}$  Pa  $1\mu$ Pa (micropascal)=  $10^{-6}$ Pa Most of the units of pressure not included in the system: *millimeter <u>of mercury column</u>* 

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(mm.sim.ust),	physical	atmosphere	(atm)	and
	technical	atmosphere	(at.)	•

is used.

Shown way repetition

Millimeter mercury column that , height 1 mm was mercury column flat horizontal to the surface shows pressure it is said.

1 mm.sim.ust=133.3 Pa

*Physical atmosphere* that the air column points to the horizontal surface of the Earth pressure it is said. Press physicist atmosphere pressure (atm) unit normal atmosphere

, that is 760.mm.sim.up. pressure equal to being Pa at as follows will be:

1 atm=760 mm.sim.ust=101325 Pa

The technical atmosphere is 1 sm 2 of 1Kg of force perpendicular to the surface respectively showed pressure it is said. Pressure technical atmosphere (at.) unity Pa and mm.sim.ust. at as follows we express

1 at.= $1\frac{kG}{sm^2}$ =98000 Pa= 736.5 mm.sim.ust

### Exercise

Students themselves independent respectively of pressure learned basic in units units will pass .

Exercise.1.The following main to unity go  $15 \text{ mPa} = \dots$  $30 \text{ bar} = \dots$  $25 \text{ MPa} = \dots$ 2. The following mPa (millipascal) to go $980 \text{ mm. water column} = \dots$  $60 \text{ bar} = \dots$  $100000 \text{ Pa} = \dots$ 

### **BINGO Method**

"Bingo" game is this game lottery to the game similar being students his girlfriend to strengthen , in mind storage ability to develop help will give. This game through students to the topic circle formulas , units and instrument names fast remembering remains. In this to students



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teacher by in advance prepared placed cards distributed. Card to the cells divided and physical formulas in them or units written will be Their names are given by the teacher it is said students while that's right found top with axis hits vertical, horizontal, to Dioganali right if found BINGO says and to the student incentive is given .

To us it is known students units in front of front additions to study it's hard We this the problem Bingo game through solution we want to do .

For example, 7- class. Subject : Physics sizes and them measure.

10 -6	10 -3	10 -2
10 -9	10 <sup>3</sup>	10 <sup>6</sup>
10 -12	10 <sup>2</sup>	10

:

Teacher questions to ask

- Micro Hecto
- National Kilo
- Say

Students to physics interest for physicist life every a the law and examples of the term can be expressed through "Mechanic conservation of energy the law " topic and passed reinforce the topics in order to " Bingo We will use the game .

- 1. Given physicist of sizes units find .
- The work ; strength ; speed ; mass ; time ; acceleration ; energy ; distance ; density.

N*	kg	S
m	$m^{3}$	
m <sub>/</sub>	J	m
s 2		
kg	Ν	$m_{/s}$

- 2. Given physicist sizes formula find
- $h \max$  from the height leaving sent the body to the ground hit speed (v = 0) if ;
- *Ish*;
- Body impulse;
- Kinetic energy ;
- Potential energy ;
- Road ;



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$\frac{v \max}{= \sqrt{2gh} \max}$	A = = F * $S \cos \alpha$	P = mv
$\frac{mv^2}{2}$	mgh	S = v *
$W_k + W_p$	$\frac{2h}{\sqrt{g}}$	$\frac{kx^2}{2}$

"Bingo " strengthening the game and if used in revision classes high effect will give.

Above such as of methods education in the process application education Bingo method improves students' learning and learning strengthening of knowledge and skills, formulas, sizes, sizes units remembering to stay very big help gives. Four step according to the method When the lesson was held, the students were given a general education knowledge good mastered and long time grandpa in his memories preserved remains. That's it because of this method through lesson transition very efficient is considered.

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