



II All-Russian (with international participation) scientific conference of students named after N.I. Lobachevsky

Theme: The influence of nicotine and vape on the vital activity of living organisms

Hirazov Oscar, 11th grade
MBOU "School No. 167"
of the Soviet district of Kazan

The purpose of the work: to identify the effect of nicotine and vape on living organisms.

Tasks: 1. Conduct experiments proving the negative effect of tobacco smoke and vape on the growth and development of a living organism (maggots);

2. Conduct a social survey among students on this issue;

3. Get acquainted with the results of all survey participants and their opinions;

4. Create a booklet and place a memo for parents and schoolchildren.

Relevance: Nowadays, many teenagers start smoking cigarettes and vaping, not knowing how harmful they are.

Hypothesis: After the experiments, children will stop smoking, realizing their mistake.

Research methods:

1. Questioning "My attitude to the problem of smoking";

2. Conducting experiments "The effect of tobacco smoke and vape on a living organism (maggots)"

Subjects and object of study: The effect of nicotine and vape on maggots.

Smoking or health - choose for yourself!

Smoking is one of the common bad habits people have. In the modern world, tobacco smoking and vaping are the most common. Gradually, a bad habit turns into a painful addiction to smoking, caused by the presence of nicotine in tobacco.

Tobacco contains nicotine, the most harmful component in ordinary cigarettes.

Nicotine is an alkaloid synthesized in the roots of plants of the nightshade family and accumulated in the leaves.

A vape is an electronic device that creates an aerosol (highly dispersed vapor) that is designed to be inhaled. Vapor is generated by the evaporation of a special liquid for vapes using a heating element.

Smoking is especially harmful for teenagers, boys and girls, because at this age the whole organism is finally formed, which should serve all life.

Smoking is dangerous not only for the smoker, but also for the people around him.

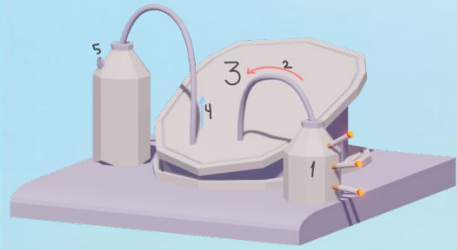
Smoking is a slow but certain death!!!

Survey Analysis

The first practical part of the work is to identify the attitude of parents and relatives to smoking, the popularity of various brands of cigarettes, as well as the reasons that encourage people to start smoking. Based on the results of the survey, we made the following conclusions:

- the main age when people start smoking is 10-17 years old;
- 50% of respondents do not care about the warning label on a pack of cigarettes;
- 20% do not know the composition of cigarette smoke;
- 40% know about the properties of nicotine;
- 70% are aware of the consequences of smoking;
- 100% know what "passive" smoking is

Description of steam/fume distillation apparatus



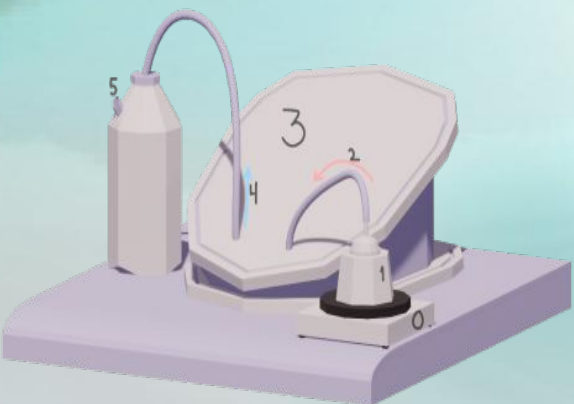
This mechanism is based on a 2-valve boat pump.

The mechanism consists of a pump (1pc), a pipe (2pcs), a container for keeping organisms and a container for cigarette smoke / stove and a container for liquid (for the 2nd case). **First case:** The mechanism works in such a way that, when unclenched, the pump creates a draft, sucking the smoke coming out of the cigarettes (1) into itself (3) through the pipe (2). When unclamped, it displaces smoke from itself (3) distilling it through a pipe (4) into a vessel with contained organisms (5). Excess air and old smoke exit through a small hole in the vessel.



Description of steam/fume distillation apparatus

Second case: The second experiment was carried out with the same mechanism as the first, except for replacing the cigarette container with a container (1) heated on a stove (0)



Results of experiments with cigarette and vape

After conducting experiments with cigarettes, we found out that nicotine has a strong effect on living organisms. After the experiments, the maggots began to move more slowly and turned a little black, these were the consequences of nicotine. Then we can say that nicotine has such an effect that makes the body fall asleep and function less, so to speak. Also, nicotine kills the organs from the inside, after the organs turn black. Therefore, after there are many diseases, some of them are deadly.



And after conducting experiments with vaping, no strong consequences were revealed, only that this liquid remained on them, therefore, it made it difficult for them to breathe, closing the airways. Due to its property, the vape liquid settles in the lungs in the form of a dense slurry, which makes it difficult for the lung alveoli to work.



Work conclusions:

1) The results of our study showed that smoking / vaping is not the best habit and it is better to relieve stress in a different way, because nicotine slowly kills. When conducting the survey, we also paid attention to the emotions of people during the response, most were embarrassed and tried to speak more quietly, as if this was their little secret and the fear that someone would find out and be judged. Some of them spoke confidently and loudly.

2) After conducting experiments with cigarettes, we found out that nicotine has a strong effect on living organisms. After the experiments, the maggots began to move more slowly and turned a little black, these were the consequences of nicotine. Nicotine slowly kills the organs from the inside, the organs turn black.

And after conducting experiments with vaping, no strong consequences were revealed, only that this liquid remained on them, therefore, it made it difficult for them to breathe, closing the airways. Due to its property, the vape liquid settles in the lungs in the form of a dense slurry, which makes it difficult for the lung alveoli to work.

Thank you for your attention!



*Вдыхая – убиваешь себя,
выдыхая – других!*

