

III



IYNT 2015

Problem № 15

«Fly»



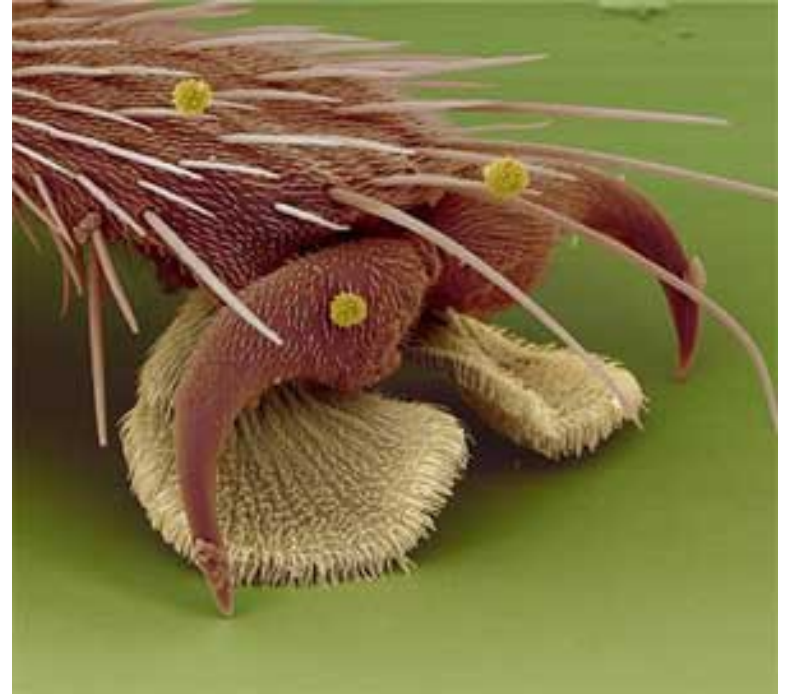
Team «MG 12»

Task N°15

A fly can easily walk on a ceiling. How is this possible? Can one find such a ceiling that the fly would be unable to walk on?

Hypothesis: if a fly moves on the ceiling using claws and suckers, you can choose surface where it cannot move.

Purpose: explore the principle of fly's movement on smooth surface and find a way to prevent insect's attachment to the ceiling.



Ways to move flies

1) Insect's feet are ended with claws, which help them to attach to different surfaces.

2) There are special pads on fly's feet. They are covered with hairs ended with thickened tips. These pads are glands, which has a liquid, that consists of sugars and fats.

Using this liquid fly sticks to smooth surfaces and stays on them.



Experimental part

$$F = 5H$$



$$F = 3H$$

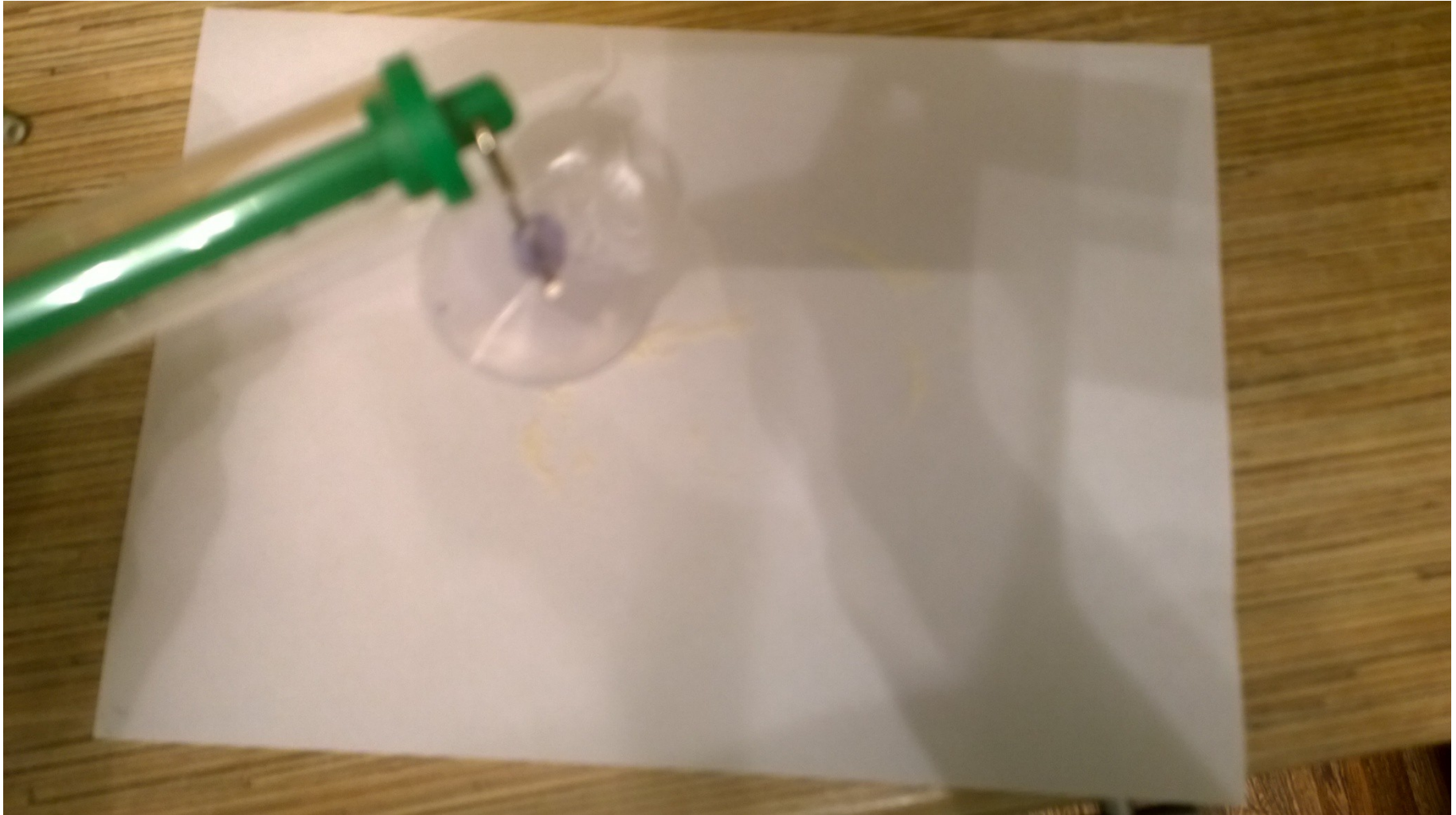




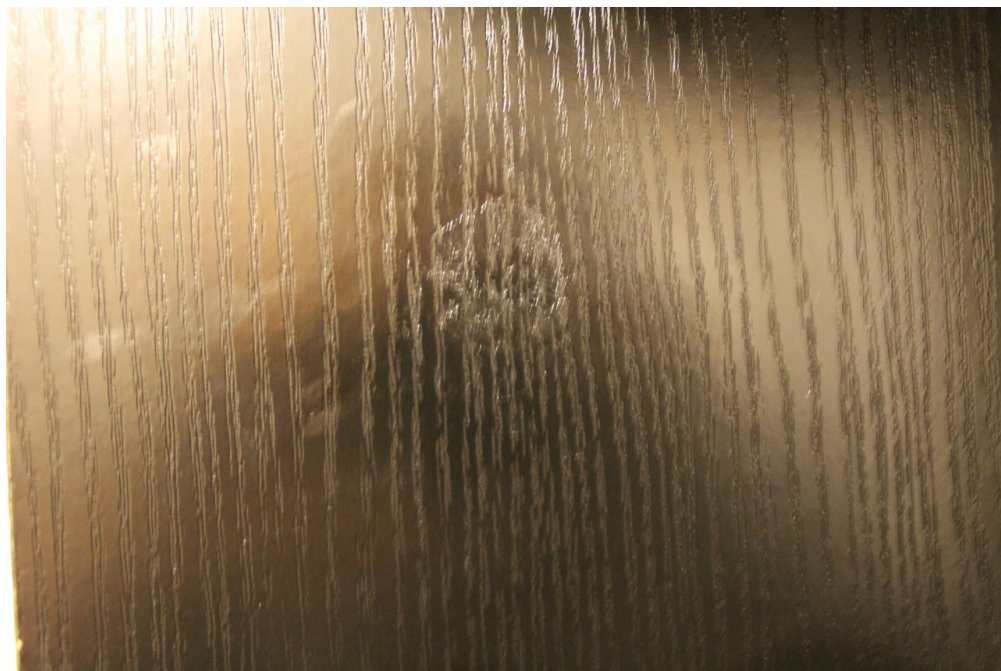












Result:

Means, because of which fly cannot move:
Covering with substances, which particles are connected weakly.

Covering the surface with substances, that destroy sticky liquids.

But you should know that all these means do not last long. That is why it is impossible to make such a ceiling for a house.

Sources of information:

- <http://mojznak.ru/kak-muxa-xodit-po-potolku>
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- <http://allforchildren.ru/why/why90.php>