

Hey!

My name is Pauline Rapoport (@pauline_avecame) and I am currently studying for a double degree program in Biochemical Physics in Paris. Since childhood, I have been interested in art, history, and everything in the world. I believe that any person is a magical collection of his interests. And the more we study the world around us and ourselves, the more multifaceted life and thoughts.

We - are formed due to our environment and the knowledge that we absorb into ourselves.

Our brain is unique and constructs very interesting neural networks, it is flexible and changes throughout life. Therefore, I want to give you some seeds that will shape you.

Whether to use this knowledge is up to you.

If you like it, write to me, it is important for me to understand that my work is not in vain.

Enjoy!

Disclaimer: I may not support the opinion of people (be it political, gender, or other position) who appear on these channels as lecturers or presenters. Here we are talking about useful information, lectures, and any knowledge that you can get.

The science

BioRxiv

<https://www.biorxiv.org/>

Here you can find preprints (essentially, basic verified draft scientific articles) of research in the life sciences, ranging from animal behavior and zoology, science education to neurology, paleontology, systems biology, and more. Remark: it is important to understand that a preprint is not always absolutely reliable information. The plus of the site - unlike the expensive Science, Nature, etc. here you can watch for free or offer your work for editing for free. (If you don't know, it is not journals that pay scientists to publish, but scientists pay journals, and there are situations when there is research, but there is no money to publish.) The advisory board is also very famous.

N + 1

<https://nplus1.ru/>

for me it was one of the first sites where I could read about science and discoveries when I was still in my first year. A distinctive feature is the complexity of the material on a five-point scale. Astronomy, biology, physics, robotics, etc. Briefly and clearly enough with links. For me, a minus - comparing with Postnauka - is not such a visually beautiful (accessible?) Site when you look for articles.

Bioinformatics Institute

<https://www.youtube.com/channel/UCWNvcYZJYc3CCIP7zfypaJA>

The video in bioinformatics summer schools discusses modern methods from two aspects: biological and informational:

examples:

Lecture how to parse single cell data

Lecture on the basic principles of molecular simulations

A huge plus: lectures from renowned teachers from all over the world, modern methods

Minus: basic knowledge is required and a little higher for a full understanding of the material.

Post-science

<https://postnauka.ru/> + YouTube channel.

A very cool site where you can find interesting discussions of scientists on various topics: from philosophy, political science and economics to physics, biology, medicine and mathematics.

Not only are there just articles (How is society reflected in buildings? How robots navigate in space? How do they test drugs on bioartificial tissues? How can cancer be diagnosed in the early stages? How will consumption change in the future? - titles of articles that I just fell for eyes when first opened!)

there are also tests! For example, here is a link to the Decision Theory test:

<https://postnauka.ru/tests/154814>

As for the video. I have already said that there are a lot of topics. They talk about the structure of the world (how to make waterproof fabric? What is the battery made of?), Conduct courses (wanted to learn about Irish mythology? Please!) Institute of Ecological and Agricultural Biology, TSU)

What is another plus - video transcripts. You can not always look right here and now. Or the sound quality fails. Decryption helps with this.

Very accessible, understandable for all ages. Recommend. You will one hundred percent find something that will lure you there.

Biomolecule

<https://biomolecula.ru/>

Biology (Anthropology, Epi- and simply Genetics, gender issues, psychogenetics, cytology ...), Biotechnology (Have you heard about Drag-Design? Optogenetics? Tissue engineering?), Medicine (about viruses and vaccines, about depression, stem cells, genetic therapy and much more), Biomolecules (hormones, neurotransmitters, chromatin, etc.), Processes (Do you know what metabolism is? And anabiosis? Autophagy? You can read it here) - what you could find out here!

A site known to me for its special projects: the guys choose separate topics and write several articles about them (damn it, remember the name of the ensemble as it is called) Digests from Nature and Science, book reviews and more. Everything is connected with beautiful and understandable illustrations and gifs that allow you to understand the process, even if you do not quite understand everything :))) (Visually about the beloved - video, infographics, comics and cartoons)

An example from me: a cool special project of 12 biological methods in pictures <https://biomolecula.ru/specials/metody> If you want to know what we scientists are doing there in our laboratories, then here it is! Very clear. I remember that before the exam in genetics I quickly repeated the material due to these articles)

Alexander Panchin

<https://www.youtube.com/channel/UC2q4mHrzoR48mwSuAYtVPtQ>

Russian biologist, Ph.D., member of the RAS Commission for the Fight against Pseudoscience. I also recommend his book Defense Against the Dark Arts (there is a playlist on YouTube regarding this book) Plus debates, cool lectures :)

SciOne

https://www.youtube.com/watch?v=_0JogO8i3Ls&list=PL0S_wSs_HtCszBiXr0iwbZBuA6LdJ7Sap&index=3

Guys scientists, journalists, artists and engineers popularize science and art in their videos. I really like the playlist "The most important ideas about ... #ArkIdey" People try to explain all the most important ideas and knowledge about a topic in order to convey to a person! Scientists choose the most important thing in their field of study and talk about it for 15-20 minutes.

The elements

https://elementy.ru/nauchno-populyarnaya_biblioteka/433205/Optogenetika_Kak_upravlyat_neyronom_s_pomoshchyu_sveta

an excellent site where you can find not only modern science news, but also a library (articles by different authors on a huge number of topics. For example, why do mosquitoes bite not everyone, but only a select few?)

BIO CPM

<https://www.youtube.com/channel/UCiejdJQoUR-suil5EkAaEVg>

The channel positions itself as "Everything to prepare for the Olympiad in Biology"

But!

I really like the course of lectures on molecular biology by Daniil Nikitin - if you have long wanted to learn about the structure of DNA, its packaging, evolution, how plastic the genome is, what recombination and replication are, and how complex our cell is, then this is here. It is very accessible and if you look through it to the end, then we can say that the level of knowledge in molecular biology will be at the level of 3-4 courses of bachelor's degree

course of lectures by Vyacheslav Dubynin

(basic knowledge of the brain, its chemistry. Still quite an interesting course in immunology)
- Doctor of Biological Sciences. , professor of the Department of Human and Animal Physiology at the Biological Faculty of Moscow State University, popularizes science. Author of scientific papers on brain physiology and neuropharmacology. You can look at his reasoning on Postnauka (<https://postnauka.ru/author/dubynin>) and on YouTube. I advise cycles on brain chemistry,

Brain and Human Needs and Immunology.

An important addition: once I loved listening to his lectures, but recently I began to notice that he does not always speak accurately, and also, for example, I cannot advise the lecture "Beta-casomorphins of milk and autism" (the scientific community treats this rather unscientific) But basic knowledge of the structure and chemistry of the brain is good.

Society of skeptics

on YouTube there is a broadcast of lectures from the Skepticon - the guys are analyzing myths in science and our common life (Myths about household chemicals, What fans of alternative medicine are trying to shove us and much more (I highly recommend the video Dangerous Medicine from Hollywood - <https://www.youtube.com/watch?v=WD4Ks5-O59Q> & list = PLgiJtHgkaPAhDSF-UtMG3PXz4YlbMzYZ7 & index = 2) Of course, not all lectures are insanely interesting to present the material, but at least for a few it's worth taking a look)

ANTHROPOGENESIS RU

<https://antropogenez.ru/>

Scientists against myths, myths about human evolution. I don't like the site itself, because it is not very modern. But if you dig in, you can look at the catalog of finds. If you dreamed of becoming an archaeologist as a child, then you will love it! And on YouTube, the channel is not bad, you will be interested if you are interested in evolution from all sides. Egyptologists, paleontologists, archaeologists, scientists of Russia and not only Russia!

<https://www.youtube.com/user/TheChieffff>

There are also several channels on YouTube:

Short training videos for physicians and biology specialties:

COR etc.

https://www.youtube.com/channel/UCWuufouGiLr5eTw34_3Ywrg

WEHImovies

-Biomedical animations, news and videos of research from The Walter and

Eliza Hall Institute of Medical Research. - when you understand the process, it is especially pleasant to see the models of how it is done in the body.

<https://www.youtube.com/user/WEHImovies>

teach-in

<https://www.youtube.com/c/NAUKA0/about>

MSU students and postgraduates use their own resources to record videos of lectures by teachers. I myself sometimes watch lectures from different faculties. (There is biology, chemistry, physics, mechanics, geology, philology and even the faculty of bioengineering and bioinformatics)

15x4 Talks

<https://15x4.org/> is an international team of guys who tell about interesting phenomena of our world in different languages. Here you can become their lecturer, and they can help you with the organization (experience and materials) of a lecture hall in your city. The lectures, of course, provide a brief general understanding of the topic. There are lectures in Russian and Ukrainian.

Reactions

<https://www.youtube.com/c/ACSReactions/featured>

the channel is produced by the American Chemical Society, which means that the language of the video is English. Leading Beautiful PhD Girls

Samantha Jones and Alex Dainis. Here are short videos about how this or that reaction goes (unexpectedly). For example, in a recent video, she and an expert discuss how fertilizer turned into an explosion in Beirut. Also, the channel has a good selection of your favorite channels.

ScienceVideoLab

<https://www.youtube.com/c/ScienceVideoLaboratory/about>

Myths about evolution, classroom lectures "Scientists vs. Myths" and more here. Famous Russian scientists participating

Applied Science

<https://www.youtube.com/c/AppliedScience/about>

The working language is English. On this channel, they talk about various electromechanical properties, electron microscopes, holograms (for example, how to transfer it to chocolate) The whole process is shown. And yes, here you can see what scientists' laboratories usually look like.

Sixty symbols

<https://www.youtube.com/user/sixtysymbols/about>

If you are a fan of space and have long wanted to know something about galaxies and supernovae, this is the place for you. Also, here they can explain to you why we cannot move faster than light. In short, physics at its best. English language.

Numberphile / Computerphile

<https://www.youtube.com/user/numberphile/about>

<https://www.youtube.com/user/Computerphile/about>

mathematics, numbers and computers in all versions of their interpretation. Tricks with statistics, nodes, geometry, algorithms and random numbers

Alpha centauri

<https://www.youtube.com/c/AlphaCentauriChannel/channels>

live streams of launches, weekly digests and everything about space: telescopes, streams of docks, simulations, discussions of stars and much more - here.

This is not a complete list, but I hope you enjoy it and learn something new!