

International Natural Sciences Tournament

2010–2019

www.scitourn.com

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1. Xenomorphs

Science-fiction writers create a lot of "intelligent races" in their works. Investigate some of these made-up "intelligent races", which you believe do not break any of the laws of physics, chemistry or biology. Derive a general set of the morphological limitations, which describes the variety of possible "intelligent races" in our Universe.

2. The day after tomorrow

One of the problems of the global warming, which causes the sea level rise, is ablation. However, in some places, glaciers do not melt but grow, for example, the glaciers in Pakistan or some of them in Norway. Hypothesize, which factors could have led to these anomalies. How can we induce the growth of glaciers to keep the sea level constant?

3. Nutrients

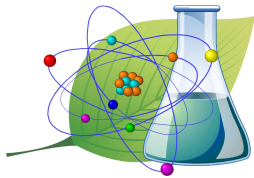
In the modern world, more and more people begin to pay attention to the food quality and nutrition facts of the products and dishes that make up their daily ration. Develop a concept of tableware or cutlery, which could determine the concentration of the relevant nutritional properties of the dish during the eating process. Define, which parameter is measured and which analytical signal is processed. Describe what kind of restrictions may arise when using this device. Note that the materials and technologies being used are supposed to be safe.

The Tournament consists of the Extramural and Intramural rounds. To participate in the Extramural round the team should send clear and outstanding solutions of two out of three Extramural round problems before the 30 of September 2019 (first wave). The dates of the second wave will be announced later.

Each solution consists of:

1. Presentation (*.ppt, *.pdf);
2. Extended solution (*.doc) – 5 pages or less.

The solutions should be sent before the deadline via the account on the [website](#).



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If you have any questions with regards to the presented information, please, do not hesitate to contact the Teams' coordinator Polina Lavrik via:

✉ e-mail: participants@scitourn.com.

Please, remember the following notes:

- participation in the Extramural round is free of charge;
- participation fee for the Intramural round for participants of the first wave is 1100 US Dollars per team, for participants of the second wave is 1200 US Dollars.

This will provide a team of 5 members and its coach accommodation for the Intramural round days of the Tournament.

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