

Every task may be done by a student of any grade (tasks are not divided into groups by grade).

Task 1.

Humans as the majority of other mammals, have two eyes. Which groups of complex (multicellular) animals have another number of organs of sight? Where are these organs of sight located? Give examples of such groups of animals.

Task 2.

What traits in the organization of the human body indicate that they have aquatic ancestors?

Task 3.

The cells of a multicellular organism secrete a lot of heterogeneous substances. What these substances could be and what can they serve for?

Task 4.

What problems do you think the higher plants (not algae) that live in water bodies might have? How can aquatic plants solve these problems? Suggest the possible methods.

Task 5.

Normally most organisms have structures that separate the body from the environment. Humans have skin and trees have bark. Compare these two structures.

1. What do they have in common and what are their differences?
2. What can explain these similarities and differences in your opinion?

Task 6.

It is generally believed that the plants are only suffering from the animals that eat them. Can plants benefit from the animals that eat them? If so, what are the benefits?

We grade the answers as following. Points are given for correct answers only. The score is not reduced by incorrect answers. The total score depends on the points given for correct answers on each question and the student's grade.

Usually biology questions have several (sometimes many) correct answers. For each correct answer you can get 1, 2 or more points (the amount depends on question difficulty and answer evidence).

There are questions to which there is no uniquely correct answer. In this case, scores are given for any reasonable hypothesis.

If a student gives arguments for the answer, he'll get more points than without arguing.

In some tasks students are asked to provide examples; each correct example gives additional 0.5–1 point. Given examples should correspond to the question. For example, when asked about the luminous aquatic animals an example of "Firefly" will be ignored.

The same works for very homogeneous examples. If the question is about animals whose larvae and adults eat different food, examples of the "frog" and "toad" will be treated as homogeneous.

For every task you can get a few points, and even many (8–10). There is no upper limit. Unfortunately, often students give only one answer and get only 1 or 2 points.

The amount of consistent arguments and correct examples given by a student is important. The volume of written text does not affect the score. Arguing on the questions that are not from the task won't give additional points. Only student work is graded. No points are given for texts copied from any literature or any other source or other students' works.

Don't forget to **sign** your work (please, write the card number, your last name, school and grade) before **submitting** the work. You do not have to submit the sheet with the tasks. The tasks, their solutions and the results of the competition will be published at <http://turlom.olimpiada.ru> after November 20.