

Reference : SELECT



Contemporary planetary issues: energy, soil

Cognitive objective:

A biological crisis is often linked to a change in environmental conditions (favourable to natural selection) and to a decline in population numbers (favourable to genetic drift).

Proposed activity:

Two strains of *Drosophila* (long wings and vestigial wings ebony body) are cultured in a small aquarium.

Note: The ebony body phenotype has been selected to facilitate the identification of *Drosophila* in the aquarium.

To highlight the phenomenon of natural selection, we have voluntarily created unfavourable conditions for one of the two strains through an exciting study subject! Students will place *Drosophila* in living conditions that will lead to the gradual disappearance of one of the two species:

- A tube of culture medium with a bezel is placed in the centre of a Petri dish filled with water. Vestigial *Drosophila*, not being able to fly are forced to cross this first obstacle to reach the tube of medium, most will drown. Students will be able to observe the ingenuity of *Drosophila* that congregate to float. Only a few individuals will succeed in reaching the food.
Drosophila with long wings (wild phenotype) will be able to fly, and easily reach the food and lay their eggs. We will thus observe the disappearance (or at least the rarefaction) of the vestigial phenotype after two generations.

Composition :

- 5 Wild *Drosophila* Tubes

- 5 vestigial ebony Drosophila Tubes
- 25 Petri dishes
- 40 tubes with 20 bevels
- Dehydrated culture medium for 40 tubes (with caps)
Technical and educational instructions available on our website.

Necessary material:

FLYNAP, stereo microscope, etheriser. terrarium

Conservation:

Room temperature