



ECOSYSTEM

Methodical material/guidelines

School's name (country)	Gaziantep College Foundation Private Science High School (Turkey)
Intro	We were aware of the harmful effects caused by red meat production. We criticised current projects and considered our own equipment. So, we came up with the idea of designing an aquarium ecosystem which will become an eco-friendly way of getting protein.
Subjects most relevant to both formal and non-formal education	We had to know how ecosystems work in a sustainable way, the roles of the minerals, how to adjust the pH level of the water, how-to cut-glass planes, the roles of nitrification bacteria... So basically, our project is mostly related to biology, chemistry and engineering subjects
Recommended target group (age/class of students)	Since our project was created by using advanced biology, chemistry and engineering information, our target group is high school and college students.
Equipment What kind of equipment is needed to produce this device?	Aquarium, glass planes, water glue, sand, mineral stones, appropriate fish, water plants, bacteria cults (Nitrobacter, photosynthetic bacteria)
Step by step instruction (might be also photo story): What steps have to be taken to produce this device?	First, we purchased the aforementioned equipment. Then we cleaned our aquarium to prevent it from getting contaminated. After that, we implemented glass planes and made the aquarium ready to be filled up. Eventually, we created an appropriate environment for our ecosystem.
What students will learn? What is the outcome of this task?	The students will be aware of the harms of red meat production and they will learn about the dynamics of the ecosystem. Also, last but not least, they will be encouraged to take small steps to active.