The teaching of science, particularly biology, has been questioned by several researchers, who consider the importance of considering new proposals that provide an integrated approach for content and biological concepts. Therefore, this paper is to experience science through the development of a research project and to propose from the same, an integrative approach to biology content presented in high school. To this end, this work aims to approach the concepts of biology by investigating the involvement of the microbiota of A. aegypti in blood digestion, in order to contribute to the production of knowledge. Thus, we intended to provide information on the biology of the vector and defend a proposal aimed at information and knowledge building. Can check that intestinal isolates of Serratia sp. secrete proteolytic enzymes that may be contributing to the digestion of blood in the mosquito. This idea was strengthened by observing the production of infertile eggs by females treated with the antibiotic spectinomycin. The use of antibiotics also delayed the process of hemolysis intestinal. Therefore, these results indicate that the bacterium Serratia sp. not only occupies the intestine of A. aegypti, but plays a role in it.

**Keywords:** Science, Mutualism, Education, Aedes aegypti, Serratia sp., Blood digestion.