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|  |  | .navigate |  |  | quite .abstract \_\_\_\_\_ |  |  |
|  | [[home](http://docs.google.com/index.htm)]  [[abstract](http://docs.google.com/abs.htm)]  [[introduction](http://docs.google.com/intro.htm)]  [[hypothesis](http://docs.google.com/hypo.htm)]  [[experiment](http://docs.google.com/exp.htm)]  [[data](http://docs.google.com/data.htm)]  [[conclusion](http://docs.google.com/conc.htm)]  [[we recommend](http://docs.google.com/rec.htm)]  [[daily log](http://docs.google.com/log.htm)]  [[other](http://docs.google.com/other.htm)]  [[bibliography](http://docs.google.com/bib.htm)] |  |  | Simulations of populations are a very useful tool to the field of science.  Instead of having to manually track and count populations of organisms, scientists can now simulate the interactions of organisms in the environment and predict an ecosystem�s future.  An application of such a technology would be useful to simulate, for instance, the Arroyo Del Valle creek and predict whether or not there are dire consequences for it in the future.          This project�s aim is to simulate accurately the population dynamics of an ecosystem involving a producer species, a herbivore species, and a consumer species in a computer program.  This is an extension of traditional predator-prey interaction systems, as our system has three species interacting.  We expect to see in our model a demonstration of the interactions between predators and prey in the ecosystem.          We constructed our computer program in the C++ programming language that, with the means of equations, calculated and predicted the population sizes of the three species.            Our results showed that, yes, the population dynamics could be simulated by a computer program, but not nearly accurately enough to predict the future very well with the algorithms we had. |  |
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