|  |  |
| --- | --- |
|  | [Note: Best if viewed at Full Screen]  Recommendations   Although we feel that our research proves fairly conclusively that pH is not in fact the reason for the frogs� disappearance from the Arroyo Del Valle, that is not to say that we feel the subject requires no further research.  What we accomplished we did so blindly, with only vague research findings to guide our premise and some past biology experience to guide our procedure.  Therefore we feel that it would be an extremely worthwhile undertaking if someone were to attempt a similar project, using our information as a basis.  Here are a few recommendations (that we�ve learned the hard way) should you be the one to try...         First of all, choose a more specific hypothesis than ours to base your research on.  The creek ecosystem is such a complex one that there would probably be no single explanation to account for any changes in the system, and in something as serious as the complete removal of a population from the creek, there would probably be several factors involved.  For example, the California red-legged frog, which we discussed in our introduction, was driven to the point of extinction first by hunters and farmers, then by the invasion of more aggressive animals into the territory, and finally by some other, as-yet unknown factor.        There were several variables that we might have also tested for on top of pH, but chose not to because of the relatively narrow scope of our hypothesis.  We would recommend that if someone were to follow our experiments, they also test some of the other factors that would influence the primary productivity, or the amount of organic compounds produced in a given area in a given amount of time, of the system.  Nitrates, phosphates, dissolved oxygen, turbidity, flow rate - these are all factors that would influence frog populations in one way or another, and we feel strongly that they should be considered as factors in any further research.         On top of this we recommend further testing for any toxins that could be being actively dumped into the creek or seep in from man-made sources.  In past years people have dumped substances into the creek that killed off many of the fish and left bubbles and soapy residue on the banks.  More recently there has been a lot of attention paid to the gasoline-additive MTBE, which was recently banned because it was reported to have been seeping into our water supplies.  From this we can conclude that dangerous toxins have played and may continue to be a danger to the entire creek ecosystem, and thus the subject would merit some degree of research.          One other factor that should be considered in relation to the disappearance of the frogs would be the invasion of new species into their habitat.  The introduction of aggressive fish or something else that might prey on frogs or their eggs to the creek system could play a large role in the population�s disappearance.  Any research related to this would probably require an extensive population study of various species in the creek, something that would have taken too much time for us, but that still has enough potential relevance to the frog populations to warrant further research.     [Part Two](http://docs.google.com/recom2.html) |

*This Web Site is Best viewed with 256 or more colors.*

*For More Information about Creekwatch, please contact Eric Thiel at*[*ethiel@pleasanton.k12.ca.us*](mailto:ethiel@pleasanton.k12.ca.us)