

**BUDGET NEEDS ASSESSMENT APPLICATION**  
**Fall 2016**

Name of Person Submitting Request:	<b>Lorrie Burnham</b>
Program or Service Area:	<b>Biology</b>
Division:	<b>Science</b>
Date of Last Program Efficacy:	<b>Spring 2013</b>
What rating was given?	<b>Continuation</b>
Amount Requested:	<b>\$1900</b>
Object Code:	<b>4210</b>
Strategic Initiatives Addressed: (See <a href="http://www.valleycollege.edu/about-sbvc/office-of-president/college_planning_documents/documents/strategic-plan-report-working-doc-8-25-15-2.pdf">http://www.valleycollege.edu/about-sbvc/office-of-president/college_planning_documents/documents/strategic-plan-report-working-doc-8-25-15-2.pdf</a> )	Student Success Leadership and Professional Development

*Note: To facilitate ranking by the committee, please submit separate requests for each general area of budget augmentation needed. Do not request a lump sum to encompass many different areas.*

One-Time                          Ongoing       

Does program or service area have an existing budget?    Yes            No       

Are there alternative funding sources? (*for example, Department, Budget, Perkins, Grants, etc.*)

Yes                          No       

If yes, what are they: \_\_\_\_\_

**1. Provide a rationale for your request (Give a detailed explanation of why this budget increase is needed.)**

The current request is new to support an institutional print journal subscription to the Journal of Animal Behavior and Madroño. These print journals will supply majors' Biology courses: Cell and Molecular Biology, Organismal Biology, and Evolutionary Ecology. At this time there is no particular allocation to fund these fundamental resources for the professional growth of developing biologists. Although, our SBVC library has an online collection, it is limited and the printed journals are not easily accessible to students. This budget request is for journals that are generally broad in content and are easier to comprehend by entering students.

These journals also provide an opportunity for professional development of faculty teaching both major's and non-major's courses. It is vital that faculty remain up-to-date with research methods and inquiries to maintain a competitive curriculum in a rapidly changing field. Because memorizing facts and information seems to be the core of science, it isn't the most effective and important skill in today's demanding economy. As we know, facts change and information is now more accessible than ever, so what it is truly useful in STEM training is comprehension and critical thinking skills for processing and analyzing evidence. But to gain these skills, it requires nurturing of inquiry-based attitudes that exist in primary research.

**2. Indicate how the content of the department/program's latest Efficacy Report and/or current EMP supports this request and how the request is tied to program planning. (*Directly reference the relevant information from your latest Efficacy Report and/or current EMP in your discussion.*)**

2013 Program Efficacy, p17-18 Planning, and p18-19 Accomplishments and Strengths. The narratives in these sections suggest challenges and opportunities that face the Biology program in the near term. The ability of the Biology Dept. to meet and take advantage of changing technology are contingent upon having the necessary resources

3. Indicate any additional information you want the committee to consider (*for example, regulatory information, compliance, updated efficiency, student success data, or planning, etc.*).

Our majors' biology has expanded to a three-course curriculum to meet transfer degree requirements (Strategic Goal 2.6.2, 2.6.3, 2.6.3.1, 2.8.10). Every course emphasizes the scientific process and lab and field methodologies of primary research. Efforts to improve STEM education are underway nationwide and they usually involve training of faculty and innovation in classroom activities (National Education Association and Chronicle of Higher Education 2012). Our majors' biology curriculum takes aim at both levels by having research projects and assignments that allow students to practice scientific thinking and perform activities with a discovery-based approach. Concurrently, faculty stay updated on research methods and concepts to apply in the classroom (Strategic Goal 2.9.1, 4.2.4).

Moreover, students are strongly encouraged to participate in research opportunities at institutions funded by the National Science Foundation and National Institutes of Health, among other federal and state agencies. Students who have succeeded in these research opportunities have been those who were able to work independently and evaluate research information (Strategic Goal 2.6.5, 2.8, 2.8.7, 2.13). Nonetheless, this is only one example of the impact that primary research journals have on teaching and learning. Although online journal access are a valuable alternative to our tech-savvy students, printed journals offer the casual opportunity to search content that might otherwise not be seen as interesting, provides the chance to learn more effectively, and eases introduction to a very challenging mode of communication within the sciences.

4. Indicate any related costs (including any ongoing maintenance or updates) and department/program plans to support those costs.

none

5. What are the consequences of not funding this budget request?

A lack of funding for these beneficial resources will narrow our scope in inquiry-based science and professional development. The training of biology students with a competitive edge will suffer in the short- and long- terms. Not providing funding for these vital resources will have broad impacts to the Department's curricular goals and the training towards upper division and professional school. It will have impacts on the success of transfer students entering 4-year universities as they compete with skilled counterparts from other community colleges and home-universities. It will also affect the ability of students to compete in research internships that they wish to participate in across the US and in their future attainment of a science job (technical or non-technical).