

## **ASBMB Research C**

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## Planning Timeline

Timeline	Date	Done	Description
>6 weeks prior			<p>Determine your budget. An example budget is on page 4. Reserve the meeting room, A/V equipment, WiFi access and catering.</p> <p>Develop a list of local grad students, postdocs and faculty who may be interested in attending the workshop.</p> <p>Create a workshop website (<a href="#">click here</a> for example).</p> <p>Finalize the agenda and post on the website.</p>

## Workshop Logistics

### **The basics:**

- 1) Budget The ASBMB budgeted \$3,800 for each workshop. This includes up to \$1,000 in travel and lodging stipend for the











**Permission Form**  
**{Institution}**

## **Appendix I - Detailed Agenda**

I. Pre-workshop preparation    Workshop host and project PI or steering committee member  
    A.

- III. Decide Your Destiny activity (30 min) Facilitator TBD
- A. Pre-workshop preparation assign group moderators
  - B. Create small groups of 3-4 people (20 min)
    - 1. Attendees self-select their groups by the foundational concept area with which they wish to work
    - 2. Each group should end up with at least three people
    - 3. Each group selects their goal and objective. Refer to sample goals and objectives in Appendix II
    - 4. Moderators can round out a group if needed, but should not be the reporter. Moderators will thus be helping at least two small groups
  - C. Make introductions within small groups (5 min)
    - 1. Name, institution, courses taught
  - D. Select group member roles (5 min) -Moderators hit the highlights of the literature searching resource page
    - 1. Literature searcher to encourage evidence-based teaching
    - 2. Electronic submitter to capture workshop products using supplied templates
    - 3. Verbal reporter to communicate products to other attendees

### **Literature Resources**

Evidence is critical in any endeavor to create scientific teaching tools. What works? How do we know? What assumptions are in place? What are the limitations of the methods?

#### **How to search:**

CBE—Life Sciences Education (ASCB)

- K. D. Tanner (2013) Structure matters: Twenty-one teaching strategies to promote student engagement and cultivate classroom equity. *CBE—Life Sciences Education* 12:322-331, doi: 10.1187/cbe.13-06-0115.
- D. Allen (2012) Recent Research in Science Teaching and Learning. *CBE—Life Sciences Education* 11:351-352, doi: 10.1187/cbe.12-09-0167.

Journal of Chemical Education (ACS)

- J. P. Andre (2013) Opera and poison: A secret and enjoyable approach to teaching and learning chemistry. *Journal of Chemical Education* 90:352-357, doi: 10.1021/ed300445b.
- M. H. Towns (2010) Developing learning objectives and assessment plans at a variety of institutions: Examples and case studies. *Journal of Chemical Education* 87:91-96, doi: 10.1021/ed8000039.

Science (AAAS)

- D. C. Haak, J. HilleRisLambers, E. Pitre, and S. Freeman (2011) Increased structure and active learning reduce the achievement gap in introductory biology. *Science* 332:1213-1216, doi: 10.1126/science.1204820.
- A. Y. Zheng, J. K. Lawhorn, T. Lumley, and S. Freeman (2011) Increased structure and active learning reduce the achievement gap in introductory biology. *Science* 319:414-415, doi: 10.1126/science.1147852.



**BMB alignment table template:**

Please save your template as a separate working document for your group with the filename  
LocationAbbreviation\_LastNameA+LastNameB+LastNameC.docx  
(e.g. Alignment\_USD\_Garcia+Nguyen+Smith.docx)

**Designed by:**

Name of group member

Name of group member

Name of group member

**Selected BMB aspect:**

Homeostasis, evolution, data analysis and interpretation, scientific process (circle one)

**Keywords:**

Search terms relevant to your alignment

**Initial overall learning goal:**

Insert the goal that accompanies your selected objective in its initial form.

**Initial specific learning objective:**

Insert your selected objective in its initial form.

<b>Overall learning goal:</b> Insert refined goal
<b>Specific</b>

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## References

[1] J. T. Tansey, T. Baird, Jr., M. M. Cox, K. M. Fox, J. Knight, D. Sears, and E. Bell. (2013), Foundational Concepts and Underlying Theories for Majors in Biochemistry and Molecular Biology. *Biochemistry and Molecular Biology Education*. doi: 10.1002/bmb.20727.

[2] H. B. White, M. A. Benore, T. F. Sumter, B. D. Caldwell, and E. Bell. (2013), What Skills Should Graduates of Undergraduate Biochemistry and Molecular Biology Programs Have Upon Graduation? *Biochemistry and Molecular Biology Education*. doi: 10.1002/bmb.20729.

[3] A. Wright, J. Provost, J. A. Roecklein-Canfield, and E. Bell. (2013), Essential Concepts and Underlying Theories from Physics, Chemistry, and Mathematics for Biochemistry and Molecular Biology Majors. *Biochemistry and Molecular Biology Education*. doi: 10.1002/bmb.20728.

[4] J. Handelsman, S. Miller, C. Pfund (2006) *Scientific Teaching*, W. H. Freeman and Co.

[5] G. WBqib0ETBT9b0E81 0 0 1 295.97 481.75 Tm[(S)] TJT29 0 0 1 86.064 uate s-10(a Bi1 by D0 1 334.ig1