

Semester Project Description

Overview

- Create an **original, hands-on** activity to use at volunteer site for **1 mentoring session**
- Past **beam** activities may be used as models, but should not be reproduced/extended

Criterion

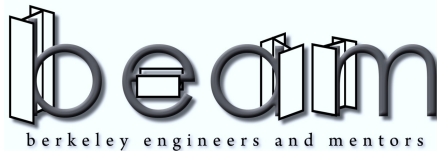
- Activity must cover 1 main science/engineering-related concept
- Develop strategies/metaphors to explain 5 smaller conceptual “*building-blocks*” to mentees
- Create 2 questions related to the activity to start a discussion among the mentees

Deliverables

- Estimated line-item budget (Due: Monday, October 20)
 - To be approved by facilitators
 - Each original activity will be funded by **beam**
- Lesson plan handout (Due: Monday, November 3)
 - Should follow attached template; online at beam.berkeley.edu/decal
 - Title
 - Materials
 - Instructions, accompanied with figures
 - Description and explanation of 5 conceptual “building-blocks”
 - References (2+)
- Run activity at volunteer site (Week of November 10 and November 17)
- PowerPoint Presentation (Due: Monday, November 10)
 - ~ 10-15 minutes
 - Include pictures of mentees participating in your activity
 - Brief demonstration of hands-on portion of the activity
 - Explain strategies for teaching conceptual “building-blocks” at volunteer site

Other Resources

- Past **beam** activity lesson plans at beam.berkeley.edu/decal
- Online meebo group chat at beam.berkeley.edu/contact
 - Post questions to facilitators, collaborate with other beam volunteers



Lesson Plan for “Name of Activity”

Written by:

Introduction/Background Info

Include background theory and concepts for your activity. Provide age-appropriate understanding and motivational material for students. Relate what the students are doing to benefits to science and society.

Student Objectives

Any specific objectives you wish the students to experience?
(e.g., do you want them to have a firm grasp upon osmosis, diffusion, and dialysis?)

Topic(s)

List the topic areas

Overview of Lesson Process

Example format: If possible, pose as a problem with a storyline to make it interesting. For example: the story could be a clinical case where someone comes in with a kidney failure.

- 1) Survey student’s prior knowledge. Answer questions, establish conceptual basis.
- 2) Activity
- 3) Wrap-up, concluding remarks, what is being done in research/industry?

Materials

*You MUST include prices and where to purchase

Procedures

Tips:

- Compartmentalize: phase 1, phase 2, etc then within each phrase you break the procedure down step-by-step.
- Number the steps
- Describe steps in simple words, use pictures and diagrams when you think they are helpful
- Make it as clear as possible.

Resources

*Here you might list the resources you used so future mentors can view it and search for more resources. Please, make sure you cite your references.

- http://www.teach-nology.com/teachers/lesson_plans/science/anatomy/

- <http://www.sciencenetlinks.com/matrix.cfm>