Changing Minds Project
Thursday, April 3rd
12:30-2 pm
SFSU Biology Faculty Meeting

SEPAL
The Science Education Partnership & Assessment Laboratory
San Francisco State University
Goals for today…

- To help our department get smarter about what we teach our students
- To select conceptual questions to ask our students before and after instruction
- To get faculty input for conceptual questions to be asked on the Graduating Biology Major Survey
Agenda

12:30  Welcome, Lunch, and Agenda

12:35  Revisit Graduating Biology Major Survey Results

12:50  Choose Questions Based on Disciplinary Group

1:20   Explain Changing Minds

1:30   Questions about Questions
Evidence that we can measure changing minds...


The majority of actual weight (dry biomass) gained by plants as they progress from seed to adult plant comes from...

a. Substances in the soil that are taken up by plant roots.

b. Molecules in the air that enter through holes in the plant leaves.

c. Water taken up directly by plant roots.

d. Energy from the sun.
Discuss concepts we think we change students’ minds about in biology

We want YOU to explore published assessment questions related to the content you teach

As a group, identify no more than 5-10 questions, for each of which the majority of the group would be interested in asking the question pre/post in their course

Use prediction sheets at your tables! Please record your preferred questions, predictions & comments as you go along.
The SFSU Biology Changing Minds Project will...

- include all SFSU Biology Faculty in administering conceptual questions to their students
- provide data for interested SFSU Biology Faculty on their students’ answers to questions
- engage a subset of SFSU Biology Faculty in analyzing data and working more intensively with the information as members of Changing Minds Conceptual Teams
Changing Minds Project

The Changing Minds Conceptual Teams Project is collaboratively offered by the SFSU Biology Department & HHMI Biology FEST.

Participants will receive 3 WTUs (or $5,000 summer salary as a previous HHMI Institute participant), by participating in:

- Participate in a 1-2-day Changing Minds Summer Institute
- Meeting four times per semester over the 2014-2015 academic year to talk about teaching with the conceptual questions in mind
- Analyzing the results from F14 over 1 day in January 2015
- Synthesizing data from F14 and SP15 over a 2-day Summer Institute in 2015
Biology FEST:
Faculty Explorations in Scientific Teaching

2014-2015 Changing Minds Project

- **2-day Summer Institute** (select questions with group)
  - Summer 2014

- **Conversations About Conceptual Questions** (Meeting to talk 4 times/semester)
  - Fall 2014

- **Analyze Questions**
  - Jan 2015

- **Conversations About Conceptual Questions**
  - Spring 2015

- **2-day Summer Institute** (synthesize data from F14 and SP15)
  - Summer 2015