Biology FEST:
Faculty Explorations in Scientific Teaching

Biology FEST Luncheon Workshop #2
Tuesday, January 22\textsuperscript{nd}
12:30-2 pm

\textit{Starting Strong: Active Learning from the First Day of a Course}
Biology FEST: Faculty Explorations in Scientific Teaching

Agenda

12:30 Welcome, Lunch, and Agenda
12:35 Discussion: Data about the First Day
12:50 Activity: What students will remember…
1:05 Activity: How we spend our time…
1:20 Activity: Looking for misalignments…
1:40 Big Idea: Teaching as Brain Changing
1:45 Reflection: Making Three Changes
1:50 Looking Forward and Next Steps
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Goals for today…

• Begin to build a community in our biology department focused on exploring scientific teaching

• Analyze and compare our approaches to the first day of a course

• Consider colleagues’ reasons for and approaches to using active learning on the first day of a course

• Commit to doing three things differently on the first day of one of your Spring 2013 courses
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Introductions and
Considering our Data on the First Day

Share at your table:

1. Your name...
2. What courses you are teaching this Spring
3. What, if anything, surprises you about our data on what we do (or don’t do) on the first day of class?
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The First Day of a Course:

**What do you want students to be saying?**

- List SIX things that you WOULD LIKE students to remember and enthusiastically tell others after the first day of your course...

- List TWO things that you REALLY DO NOT WANT students to tell others after the first day of your course...
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The First Day of a Course:

How do you spend your time on the first day?

• List each thing that happens on the first day of your course…

• Estimate how much time you spend on each thing….
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The First Day of a Course:

How well does what you want students to be saying...

align with

how you spend your time on the first day of class?
Strategizing Together about Potential Misalignments…

• How to make the class fun and exciting?

• How to get students arguing about biology on the way out the door?

• How to ensure clear understanding of expectations?

• Chemistry can be dry. Rather than start with first topic, begin with application to excite interest…
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# Three Key Ideas about Learning and the Brain

<table>
<thead>
<tr>
<th>Neuroscientists used to think that...</th>
<th>Neuroscientists now have evidence that...</th>
</tr>
</thead>
<tbody>
<tr>
<td>The brain was fixed by toddlerhood.</td>
<td>The brain is plastic and changing in elderhood.</td>
</tr>
<tr>
<td>Learning was discreet and intermittent.</td>
<td>Learning is constantly occurring.</td>
</tr>
<tr>
<td>The brain was like a container that could be filled up with information</td>
<td>The brain is like a filter with switches that have to be turned on for learning to occur.</td>
</tr>
</tbody>
</table>
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To remember on the first day of classes...

• Teaching and learning are fundamentally about changing the human brain.

• Scientific Teaching is about driving brain change, synaptic plasticity, and memory encoding.

• Sharing the biological reasons for active learning with students may reduce resistance.

• Channel your inner neurobiologist!
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The First Day of a Course:

What are three things that you aspire to do differently on the first day of your courses in Spring 2013? Why?

What resources might you need?
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Looking Forward & Next Steps

Biology FEST Luncheon Workshops
Tuesdays, 12:30-2 pm, Spring 2013

March 19th Exploring Classroom Assessment and Crafting Effective Questions
April 16th Crash Course on How to Use Clickers in Your Classroom
May 7th Strategies for Promoting Student Engagement

Applications for
Summer Institute and Fall Programs

Coming soon!

...invitation and rsvp links will arrive in your email inbox!
Reflection and Assessment

• On one side of an index card…
  *Write “agree” or “disagree” and a 1-sentence explanation in response to…*

  “Today’s workshop was a good use of my time.”

• On the other side…
  *What, if anything, would you like to see change about these workshops?*

This is anonymous!
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Strategies to address our goals…

2. Provide multiple ways to participate…

Scientific Teaching: *Monthly Workshop Series*  
(drop-in, introductory)

Scientific Teaching: *Weeklong Summer Institute*  
(intensive, advanced)

Teaching Squares

Classroom Partnerships

Luncheon Workshops

Spring Term  
Summer Term  
Fall Term