

Making the Most of your Intro Course

Earth Educators' Rendezvous,
July 13-15 2015

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ICE BREAKER

Go to the location designated for:

- Geography (East/West/South/North/Middle/Beyond)
- Class type (physical geology/earth science/atmospheric science & climate/environmental science/other)
- Size of class (<30/30-59/60-149/>150)
- Number of intro classes per year (0-1/2-3/4-5/6+)
- Number of years teaching (0-2/3-6/7-12/13-20/>20)
- Type of institution/program (PhD/MS/BS/2YC/Other)

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WORKSHOP GOALS

1. Identify the key ingredients of an effective course that promotes student learning.
2. Generate a sample lesson that is reasonable in the context of your course and doesn't significantly increase preparation time and grading load.
3. Leave with a template for redesigning lessons that includes strategies to enhance learning before, during, and after class.

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WHAT WORKS?

Characteristics of Successful Materials Development:

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| 1. Deliberate focus on changing instructor conceptions about teaching and learning. | 3. Instructors receive feedback on teaching materials and practices (and observe others). |
| 2. Instructors apply new knowledge and/or skills to create teaching and learning activities. | 4. Sustained, focused efforts, lasting weeks, months or longer. |

Garet et al., 2001; Henderson et al., 2011; NRC, 2012

Pick a Topic Activity

- Think about the course you want to work on
- Pick a lesson topic (lesson = one class "lecture", so be specific)
- Print the topic (3 words or less) on a post-it note (with your name on the back)
- Place it on the wall close to others with the same or similar topic

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PRE KNOWLEDGE SURVEY

How confident are you that you could create a lesson on that topic that would maximize student learning across a range of populations?

Not confident 1 2 3 4 5 6 7 Very confident

DAY 1 WORKSHOP OBJECTIVES

After Day 1, workshop participants will be able to:

- 1. Describe the characteristics of discipline-based education research (DBER)*
- 2. Summarize some key findings of DBER*
- 3. Explain what we mean by the term "active learning"*
- 4. Discuss how we measure the degree of reformed teaching (including active learning) in the geosciences*
- 5. Identify the key steps in the Backward Design process*
- 6. Create usable learning objectives for a class lesson*