Designing a Lecture for an Introductory Course

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First Day do's and don'ts

Do: Welcome students with contact information, course numbers, session times and hours and your contact information on the board.
Do Not: Simply hand out the syllabus and tell them to read it.

Do: Cover content in the first class in the same fashion you will during the semester.
Do Not: Spend the entire first class on admin, pre-tests, surveys, collecting student personal information.

Do: Solicit student input to course content.
Do Not: Imply you will incorporate all their suggestions.

Do: Finish on time with the most important ideas needed for next lesson.
Do Not: Finish with a pre-test or survey.

Clement, Mary, 2007. Ten Things to Make the First Day (and the Rest) of the Semester Successful, *The Teaching Professor*, 21 (7).

Planning a typical class period

- Classes should have a clear beginning, middle and end
- Clearly decide what you want your students to know and be able to do (learning objectives)
- Scaffold learning (apply Bloom's Taxonomy)
- Plan time for formative assessment
- Use collaborative learning techniques
- Reinforce class activities on summative assessments
- Do not reinvent the wheel (http://serc.carleton.edu/index.html)

- Become informed about your students' learning characteristics

serc.carleton.edu

Portals

Teach the Earth:
Resources for Geoscience Educators

Pedagogy in Action:
Educators Sharing their Expertise

The Science Education Resource Center (SERC), an office of Carleton College, works to improve education through projects that support educators. The office has special expertise in effective pedagogies, geoscience education, community organization, workshop leadership, digital libraries, website development and program and website evaluation. **Learn more about SERC»**

Collaborations: Projects, Workshops, Websites

- A Civil Action - The Woburn Toxic Trial
- Bringing Research on Learning to the Geosciences
- Building Strong Geoscience Departments
- Carleton Interdisciplinary Science & Math Initiative
- Climate Change Collection
- National Association of Geoscience Teachers
- The National Numeracy Network
- On the Cutting Edge: Professional Development for Geoscience Faculty
- Pedagogic Service
- Preparing Teachers to Teach Earth

Search

News

- **Workshop on Teaching the Process of Science**
  July 14-16, 2009 at Carleton College in Northfield, MN. Application Deadline is May 15, 2009. See full announcement for more details.
- **Upcoming Workshop on Strengthening Your Geoscience Program**
  The Building Strong Geoscience Departments project will be offering a workshop in June, 2009, on Strengthening Your Geoscience Program. This workshop will focus on areas of high interest to participants, such as student recruitment, curriculum, co-curricular programs, assessment, and leading/managing change.
- **Bring Google Earth into your Geoscience Classroom**
  Teaching with Google Earth shows instructors how to bring rich imagery and interactive information into the classroom. There are over 25 different examples of activities using Google Earth.

  We also have a new set of pages devoted to teaching geologic map interpretation with Google Earth, plus a collection of Google Earth locations for teaching map interpretation.
- **New Partnership with PKAL**

Scaffolding Learning

Teaching and learning goals can be ordered using **Bloom's Taxonomy (revised version)**

Remembering	memorization and recall	**Text**
Understanding	getting the meaning of	**Conceptests**
Applying	using knowledge	
Analyzing	taking apart information	**Venn Diagrams**
Evaluating	reorganizing information	**Evaluation Rubrics**
Creating	generating, producing	**Planning Exercises**

Open-ended questions can be used for all categories.

Lets Practice (group activity)

- Briefly review the provided material for a class covering plate tectonics
  - Decide how much content is appropriate
  - Write learning objectives
  - Organize material as you scaffold learning
  - Decide where formative assessments would be useful and the type (do not design them)