

## Student Attitude Survey

EOS-SEI – E.Lane, B.Kennedy, T-P Frappe

**Would you like to know whether your classes improve students attitudes toward the Earth?** The answer to this will take 2 minutes of class time and no extra work (at least by you!)

**EOS-SEI has been developing the “Student Attitudes about Earth Sciences Survey”** which aims to

- establish students' beliefs about the nature and relevance of Earth and Ocean Science
- determine whether students approach Earth and Ocean Sciences the same way that scientists do
- reveal the effects of course innovations on student attitudes and interest

*This is information we can't gather from the usual forms of assessment (i.e. exams)*

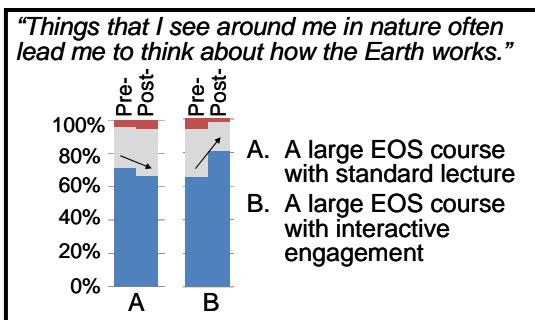
**EOS-SEI: What's happening...**  
**Fall term targeted courses:** 111, 112, 114, 210, 212, 220  
**TA training:** Encourage your grad students to take this 2-credit directed study!  
**Student attitudes survey:** Interested in having your students take part?  
**Curriculum discussions** start early this Fall!

**How does it work?**

1. Students respond on-line to a series of statements probing their attitudes and approaches to Earth & Ocean Sciences. The answers are on a scale of “strongly agree” to “strongly disagree”. Students do this twice – both at the beginning and at the end of a term.
2. The questions are all validated by interacting with students and Department faculty prior to using them in the survey. Student responses are compared to those of experts in the discipline.
3. By matching individual pre-post responses, the data show any shifts in student attitudes that occurred over the course of the term.
4. This information can be used to track the effects of different pedagogy on student attitudes and help guide pedagogic and curricular decisions.

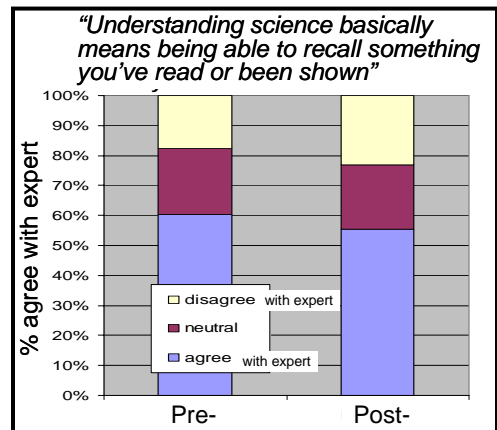
**What do our data show so far?** The good news is that, on average, students enter our classes with positive attitudes toward Earth & Ocean Sciences. However, their attitudes don't necessarily change for the better. For example, the composite data from 11 EOS courses suggest that about 20% of our students think science is about recall, and the % is worse by the end of the term. →

Student answers to this survey can also highlight



differences among our courses, which can be one piece of information used to

guide pedagogical choices. For example, if we compare the student pre-post responses from two large EOS courses, one with traditional lecture format and one that incorporates interactive engagement, the data suggest a positive shift toward the “expert” response (to this particular statement) only in the class that has incorporated interactive engagement. ←



For running an attitude survey in your class contact [elane@eos.ubc.ca](mailto:elane@eos.ubc.ca).

**Contact EOS-SEI:** If you're interested in talking about your course(s) or teaching and learning in general, feel free to drop by EOS-South 361 or contact Francis Jones ([fjones@eos.ubc.ca](mailto:fjones@eos.ubc.ca)), Brett Gilley ([bgilley@eos.ubc.ca](mailto:bgilley@eos.ubc.ca)), Ben Kennedy ([bkennedy@eos.ubc.ca](mailto:bkennedy@eos.ubc.ca)), Erin Lane ([elane@eos.ubc.ca](mailto:elane@eos.ubc.ca)) or Sara Harris ([sharris@eos.ubc.ca](mailto:sharris@eos.ubc.ca)).

For more faculty resources and information, see <http://www.eos.ubc.ca/research/cwsei/>.

On the good news side, most students report that their interest in Earth Science increased over the term. Good to know! →

### **Success of this type of survey in Physics – a wake-up call**

A similar survey drove teaching reform in physics by showing that after taking a physics class, students' attitudes toward physics got significantly worse and more novice-like. Physics professors in many institutions have changed their teaching techniques and reversed this negative shift.

### **Advantages of running the survey in your course:**

1. You will know what students attitudes are toward various important Earth Science issues at the beginning of the term.
2. You will know if you have been able to change student attitudes.
3. You will know areas of your class to work on for next term.

### **INTERESTED? Would you like your students to take this survey?**

**We're aiming to involve all levels of classes in EOS in this project.**

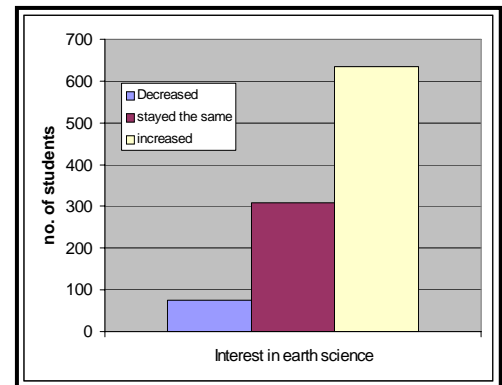
### ***Here's how to participate: It really is no extra work for you!***

Email Erin Lane ([elane@eos.ubc.ca](mailto:elane@eos.ubc.ca)) with the following:

1. Your class name and number
2. Your class login and password, if you use one for your course web pages on the EOS server. Your students will use this same login to access the survey. If you don't use a course login and password, let Erin know and she'll assign one for your class (you'll need to then tell them what it is).

Erin will send you information about communicating with your class about the survey, and will send reminders at both the beginning and end of term.

***Student participation is vastly improved by offering a small carrot*** (and a high return means better data). Based on experience, we'd recommend you offer a 1% extra credit bonus to your students for completing BOTH surveys (we can't use the data if they only complete one). At the end of term, Erin will send you a list of those who participated.



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For more faculty resources and information, see <http://www.eos.ubc.ca/research/cwsei/>.