Supporting Geoscience Student Success

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While I look forward to the workshop and learning about additional strategies and resources for effectively teaching the range of students I see, here are a few approaches I use to support student success:

- 1. In my geoscience classes, I offer extra credit to students who bring back to class, after spring break, a photo of anything geoscience-related. The students share the photo with the class, describe the feature(s) in it and how it may have formed, and inevitably we also learn something personal about each student (where his or her relatives live, what they do as a hobby when not in school, etc.). Depending on the class, there may be excellent participation, and the show-and-tell can drive a fun and helpful review session after a long break. It's a simple and effective way to help students connect book learning and the real world; everyone likes to feel smart! Although I assign it as a spring break extra credit activity, I don't require students to go anywhere special, and have made a mental note to use it as a regular assignment in any class.
- 2. My lab classes usually only consist of 10 to 18 students. Even so, in lab, I rarely grade the work students do and turn in; rather, students simply earn points for attendance and participation. I encourage them to work in groups of 2 or 3, and always ask them to mix up the groups for each of the first few labs in the course so everyone gets to meet and work with everyone else. Eventually, regular groups form, although, rarely, a student will insist on working alone. During each lab period, after focusing the students' attention to the lab and giving a brief introduction to the topics, I rotate among the groups in the class to answer questions, review or reinforce concepts, and check students' work, correcting and clarifying as I go. The students know my goal for them during the period is for them to leave with a correct understanding of the concepts covered. Of course, they unavoidably lapse into chit-chat and general banter, which adds to the light atmosphere, but I come around often enough to focus their attention back to the lab, and the students know they need to keep on task to finish it within the lab period. I initial each page of their lab as I go, and students hand them in when they finish and leave. It's a simple matter to record the students' participation before returning the labs promptly the next day in class, when we might review or build on the same material. I find this weekly, low-pressure, sociable environment is conducive to student engagement and collaboration, and effectively motivates almost all students to contribute to and support their group's work.
- 3. Lastly, but definitely not least, I try to establish strong personal connections—between teacher and student, teacher and advisee, and between students—as early as possible in the semester. These relationships make a big difference in how students feel about the course(s), me as the teacher, and their understanding of my goals for them. It's important for students to know I want to see them work hard and succeed, and it makes a difference to me when I know a little about their backgrounds, goals or aspirations and life outside the classroom. And of course, one of the most gratifying aspects of a successful classroom is the rapport that students build with each other. Classrooms are small communities of people of different backgrounds and opinions, but the students are in it together: when they get to know each other, they are more likely to look forward to and enjoy coming to class, set up study groups outside of class and become collaborative and active learners. On the flip side, one of the major challenges to fostering strong relationships is the rare but inevitable student who habitually misses class or is absent for the first few days, regularly arrives late, leaves early, or otherwise does not interact with others, for whatever reason. There have been times when students mention, in informal evaluations at the end of the semester, that one of the most valuable aspects of the course was the connection they made with classmates, or having found some good study buddies and made some new friends. These comments suggest that an atmosphere that fosters collaboration and active group work is very effective in engaging students and supporting their academic success.