Digging for the Next Generation of Geologists: The Effectiveness of Saturday Science Academy

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Students learning about dendrochronology and how fossils are made

The Problem



SAGUARO & MESA

- Saguaro NSF grant to increase diversity in geosciences
- MESA Mathematics, Engineering Science Achievement: underrepresented minorities in secondary schools
- Common goals, common events





Saturday Science Academy



- One day event to engage middle and high school students in the geosciences
- Emphasis on minority students
- Held each year at the University of Arizona
- More than 100 students attend each year
- Pre- and post-event surveys in 2010 and 2011

How we do outreach

Volcano Eruption



Who goes to Saturday Science Academy?

Middle and high school students





So, how did we do?



- Did our teaching increase the knowledge and interest of the students?
- Are there differences among the racial/ethnic groups?

The Surveys



- Pre and post surveys
- Incentives used to get both surveys back
- 2011: 150 surveys distributed
- 92 collected at end of event.

Self-reported increase in knowledge





Differences among minority groups

Differences in reaching each group...







Effectiveness



Students learning about river geomorphology

- Program is an overall success
- Pre vs. post surveys: increase in selfreported knowledge.
- Differences seen in reaching each group

Interpretation

- We increased interest among Hispanic students
- But not among Native Americans
- Why?

Conclusions

- 2011 results overall success
 - Students more interested in the geosciences
 - Students more knowledgable in geosciences
 - Teaching them about the kinds of jobs that geoscience majors can get
- Future Saturday Science Academies should be culturally sensitive

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