

NASA Triad: About

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NASA Triad: A Triangulated Program to Promote NASA STEM Education Nationwide

The American Geosciences Institute (AGI), an umbrella organization of 49 member societies representing 120,000 geoscientists, is working in collaboration with the School of Earth and Space Exploration at Arizona State University (ASU SESE) to develop and implement NASA Triad: a three-pronged project to promote the geoscience, technology, engineering and mathematics components of NASA's missions to grades 6-12 teachers and students nationwide. The parts of the two-year project are:

1. Development of an online professional development handbook of NASA content for lead teachers to use in conducting workshops for peers and establishment of a national professional development network of lead teachers prepared to deliver workshops in NASA content for their peers in grades 6-12.
2. Incorporation of NASA science and technology content into AGI's middle and high school nationally distributed Earth science curricula.
3. Local workshops for teachers in the Southwest U.S. led by ASU SESE faculty and AGI staff.
4. Promotion of Parts one, two and three of the program through AGI's outreach programs such as Earth Science Week (ESW), *Earth* magazine, Earth Science World web site, the geoscientists comprising AGI's membership and through ASU SESE's outreach efforts.

The anticipated results from this project are:

1. Increased use of NASA's geoscience, technology, engineering and mathematics content in secondary classrooms nationwide. This will result from three major efforts:
 - a. Local workshops on NASA content conducted by a cadre of 60 lead teachers from across the U.S. (30 teachers each year over the two years of the project). These lead teachers, all of whom have already received extensive training and follow-up by AGI in both geoscience content and in conducting workshops, will receive both the materials and the training to conduct NASA workshops in their local school districts. Training will also include sessions for teachers in the Southwest U.S. by ASU SESE faculty and AGI staff.
 - b. Online professional development guide of NASA content and resources for the 60 lead teachers described in a. above to use in conducting their local workshops. Both AGI and ASU SESE, who will develop the guide, are extremely familiar with NASA's STEM education efforts. AGI has worked with NASA as an Earth Science Week partner for many years and has promoted NASA's programs annually through the ESW kits, web site and press releases. ASU SESE is among the nation's top centers of NASA research, having the lead role or a principal collaborating role in most of NASA's missions to Mars over the past two decades, and currently serving as lead institution for the Lunar Reconnaissance Orbiter Camera.
 - c. Nationally distributed secondary Earth science curricula that have been revised to include NASA geoscience content. These curricula, *Investigating Earth Systems (IES)* for middle school and *EarthComm* for high school, were originally developed by AGI with National Science Foundation support and commercially published in 2001/2002. They are undergoing revision over academic years 2009-2010 and 2010-2011 to update content, as well as to incorporate new investigations and technologies. Working with ASU SESE to incorporate NASA geoscience content into the revised curricula will ensure that this content will reach students and teachers throughout the U.S.
2. Increased visibility for NASA's geoscience, technology, engineering and mathematics content in secondary classrooms

nationwide. This will occur through promotion of the training program and revised curricula through AGI's and ASU SESE's outreach efforts. AGI will be promoting the program through its member societies, Earth Science Week, Earth magazine, and web sites. The anticipated reach includes the geoscientists who belong to AGI's member societies; the 46 million documented reach of ESW; readers of Earth magazine; visitors to AGI's web sites and AGI's network of school districts. ASU SESE will also promote the program through its outreach efforts.
