Geographic questions begin with the whys of where. Why are cities, ecoregions, and earthquakes located where they are, and how are they affected by their proximity to nearby things and also by invisible global interconnections and networks?

After asking geographic questions, students acquire geographic resources. They collect data such as maps, satellite imagery, and spreadsheets from their own fieldwork. They analyze this geographic data and understand relationships across time and space.

Geographic investigations are often value laden and involve critical-thinking skills. For example, after examining a map of cotton production in the USA, students investigate the relationship between latitude, altitude, climate, land use, and cotton production. After discovering much cotton is grown in dry regions that must be irrigated, students can then ask "Why is cotton grown in these dry areas? Should cotton be grown in these dry areas? Is that the best use of water and other natural resources?"

Finally, students present the results of their investigations using geographic tools such as web GIS and desktop geographic information systems. Their investigations usually spark additional questions, and the resultant cycle is the essence of geographic investigation.

Students study geography to understand that the earth is changing. Then they scientifically and analytically think about why it is changing. And they even dig deeper than that. Should the earth be changing in these ways? Is there anything that I can do about it or that I should be doing about it? This not only captures the heart of spatial thinking—inquiry and problem-based learning—but also empowers students to become decision makers, to make a difference in this changing world of ours.

Geography therefore is not simply just a "nice to have" subject for an already-crowded educational curriculum. It underpins, in my view, the critical-thinking skills, technology skills, citizen skills, and life skills that underpin all other disciplines. It is essential for grappling with the essential issues of our time.

If you care about geography education and want to see it strengthened and supported at all levels—K-12, university, formal, informal—consider joining NCGE at www.ncge.org.

Kerski Assumes NCGE Presidency

Dr. Joseph Kerski, education manager for Esri, will serve as president of the National Council for Geographic Education (NCGE) in 2011. This nonprofit organization has been supporting geography teachers at all grade levels since 1915. The NCGE promotes professional development for geography teachers and supports research on geography education. It also aids in the development, publication, and promotion of geography learning materials and recognizes exceptional supporters and teachers of geography. To reach these goals, the NCGE also collaborates with other organizations with similar goals.

As a graduate school student, Kerski joined the NCGE in 1995. He has served the organization as a member of both the External Relations Board and Remote Sensing Task Force. From 2008 to 2010, Kerski was the NCGE vice president of external relations.

Esri has a long history of supporting the NCGE by serving on NCGE boards; advising the organization on projects such as Birds Eye Remote Sensing for grades four through six; and teaching a multiday GIS lab each year at the NCGE conference, where education team members Charlie Fitzpatrick and George Dailey have been attendees and exhibitors for nearly 20 years. For more information about the NCGE, visit www.ncge.org.

Master of Science in GIS



at the University of Redlands

Our MS GIS Program is designed for an audience of professionals seeking to improve their knowledge of the analysis and management of geographic information. We offer both a full-time and a part-time residential program. Within the University's interdisciplinary learning environment, students have an unparalleled opportunity to interact personally not only with University faculty, staff, and students from other programs, but also with the many talented professionals at the world's leading GIS company, ESRI, located in close proximity to the University.

The University of Redlands, founded in 1907, is a fully-accredited, liberal arts and sciences university. This intensive, international learning environment ensures a global context of relevance to students from around the world. Graduates of this program can become GIS practitioners prepared for positions such as project managers, applications specialists, and applications software development team members.

