

Young Students Get a Taste of Applied Technology

By Robert MacArthur

The Tucson Community Technology Education Network (TCTEN) is a spin-off from a collaboration between the city, county, university, and other agencies to share geographic data. It is a volunteer group whose purpose is to extend geographic data to the public as education. Primary target audiences are neighborhoods, small businesses, and youth.

TCTEN teaches these audiences how to use Geographic Information Systems (GIS), Global Positioning Satellites (GPS), digital photography, and 3D visualization. In a typical application during summer 2002, TCTEN taught youths aged 9 to 13 to map downtown's Scott Avenue for a beautification project (see cals.arizona.edu/agnet/cte/tpac.html).

The students were given a budget and instructed to locate benches, trees, water fountains, and lights to make Scott Street a more attractive urban hike. They interviewed business people and recorded historical sites on Scott to collect cultural data. Their work was turned into an online map, with budgets and explanations for their proposals. They presented their work to an audience of parents, professional planners, and city council members. They were also interviewed for radio and TV, and the work will be included in future planning models for downtown Tucson.

Applications like this are at the heart of TCTEN outreach efforts. The students are not taught technology per se, but



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Students map their ideas for downtown Tucson

given a real-world project to work on, and the technology education becomes a means to solving that end. The University benefits in several ways: its existing data is used in these applications, and new data is collected; students are recruited into UA areas of study; interns from UA gain good practical experience; and the university experiences good public relations.

Other classes are under way: Rogers Elementary is working on an urban habitat model of their neighborhood, primarily mapping for birds; the Santa Rosa Barrio is working on mapping its cultural assets (and also crime) to help track substance abuse; and Sunnyside is measuring wash erosion and run-off. There is promise that someday this type of vertical education model will become much more widespread. ☐

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