

CLEARING

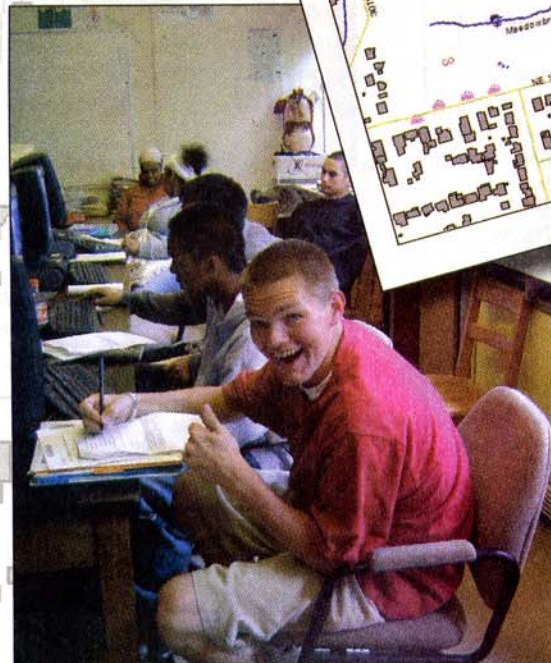
Teaching resources for ecology, sustainability and community

How Livable is Your Neighborhood?

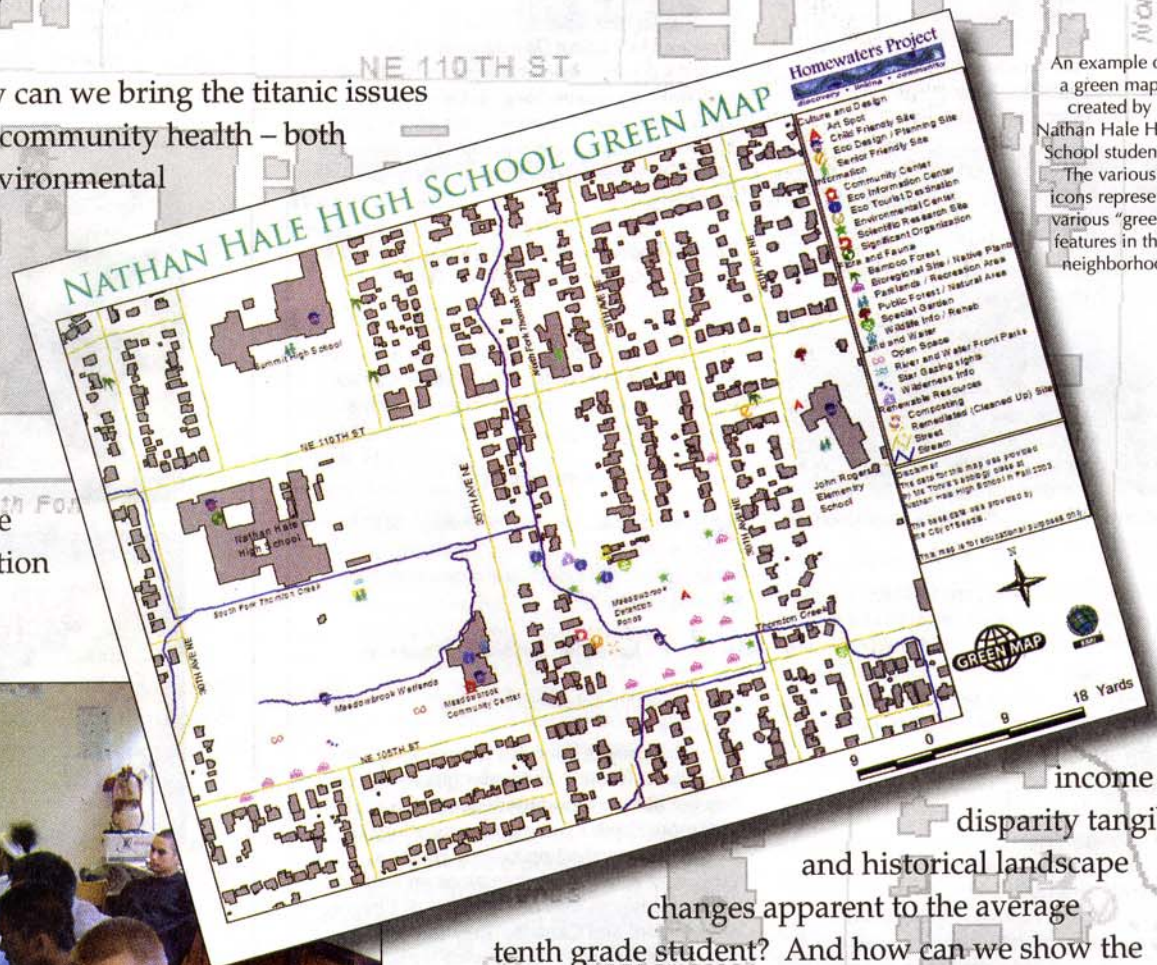
Seattle Students Use Real World Data to Make 'Green Maps' of their Community

by Todd Burley

How can we bring the titanic issues of community health – both environmental and social – down to a level that can be taught in the classroom? How can we make pollution immediate,



It's thumbs up for Homewaters Project's Neighborhood Green Map Project, a program that uses GIS technology to connect students to their home communities. Photo by Sharon London.



An example of a green map created by Nathan Hale High School students. The various icons represent various "green" features in their neighborhood.

income disparity tangible and historical landscape changes apparent to the average tenth grade student? And how can we show the connections among all these issues, including the personal connections for the students themselves?

Ten years ago, the seed of an answer to these questions germinated in New York's Green Map System. This nonprofit organization facilitates the creation of 'green maps' around the world that make visual the sustainable features – and problems – in a local community. Green maps are locally created, but use an international set of icons as a shared language.

Using these green maps as a starting point, Homewaters Project, an educational nonprofit organization in Seattle, developed the Neighborhood Green Map Project (NGMP) for local high schools. The NGMP adds a technological spin to green maps (after all, it is Seattle!) by using

the Geographic Information System (GIS) software *ArcView*, by ESRI (Environmental Systems Research Institute).

With real world computer data donated from the City of Seattle and King County, Homewaters has created lessons that guide students in investigating the health of their school's neighborhood. They use census data to explore income disparity in relation to population density, and how that density impacts urban runoff into nearby streams, lakes, and Puget Sound. Students locate superfund sites and places that require pollution permits, then investigate what type of pollution these sites may create. They use actual data and computer tools to answer the same questions GIS professionals and city planners deal with every day.

All Homewaters' programs are inquiry-based, and the Neighborhood Green Map Project is no exception. After the students have explored available information using ArcView, they devise a question of their own to guide their investigation of a community health issue they find important. This exploration centers on a green map walk around their neighborhood, where they look for features

— such as parks, pollution, or vacant buildings — that help answer their research question. They then return to the classroom and plot these features on a new GIS layer they create using the Green Map System's international set of icons.

The culminating event for the NGMP brings participating schools from different Seattle neighborhoods together at City Hall to present their findings and engage in small group discussions about the different challenges their local communities face. This cross-cultural exchange within their own city solidifies the realities apparent on the computer screen, and expands students' understanding of the diverse issues affecting different neighborhoods.

Perhaps the most powerful feature of the Neighborhood Green Map Project is the combination of real world data, professional-level technology, local investigations, inquiry learning, and the international Green Map System. By merging all these strengths, the NGMP connects students to

their neighborhood, their city, and even other countries. As students learn about their community, formerly amorphous issues such as pollution and economic inequity suddenly become tangible. The Neighborhood Green Map Project makes these and other issues real by using real data and personal experiences.

Learn more about Homewaters Project at www.homewatersproject.org.

Learn more about the Green Map System at www.greenmap.org.

Learn more about ESRI at www.esri.com.



Carisa Magee (left), Kaneshia Henderson, and Bonita Dyess of Cleveland High School present their findings from their Neighborhood Green Map investigations. Photo by: Bradley Enghaus



Students use ArcView, a computer mapping program, to explore community health issues in the neighborhood around Seattle's Cleveland High School. Photo by Sharon London.

"Green Mapping connected Cleveland's students to their community by opening up their eyes to the environmental benefits and detriments around them. It gave the students a sense of ownership, pride, and responsibility. The culminating presentation at City Hall was the icing on the cake—students were able to share their voice with students from other schools and show what they found from their research."

—Amy Baeder, 10th Grade Teacher, Cleveland High School

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What is the Green Map System?

The Green Map System (GMS) is a locally adaptable, globally shared framework for environmental mapmaking. It invites design teams of all ages and backgrounds to illuminate the connections between natural and human environments by mapping their local urban or rural community. Using GMS's shared visual language—a collaboratively designed set of icons representing the different kinds of green sites and cultural resources—Mapmakers are independently producing unique, regionally flavored images that fulfill local needs, yet are globally connected.

The resulting Green Maps identify, promote and link eco and cultural resources. Merging the ancient art of map making with new media tools, each of these maps creates a fresh perspective that helps residents discover and get involved in their community's environment, and helps guide tourists (even virtual ones) to special places and successful green initiatives they can replicate back home.

GMS is a 501(c)(3) not-for-profit organization active since 1995. We hope you'll be inspired by our collaborative, award-winning approach to communicating ecological perspectives on daily life in a fresh, democratic manner. Contact us at info@greenmap.org and let us know what you think.



The international set of icons used on Green Maps.