

Windows on Earth

Funders: National Science Foundation

Website: <http://winearth.terc.edu>

Windows on Earth responds to the need to improve public understanding of key issues in Earth science and their connections to daily life. It harnesses the power of visualizations (e.g., images, animations, video) to engage, inform, and support public understanding of these issues. Yet, what constitutes the most effective use of visualizations in a museum? How does the way a scientist thinks about images differ from the way the lay-public thinks about them? What kinds of interactivity help museum visitors extract the most meaning from a visualization? We will conduct a three-phase research program to investigate how visualizations can enhance museum visitors' understandings of key Earth science themes. We will construct a WinEarth area that simultaneously serves as a visitor exhibit and research lab. It will include a digital Earth Window and offer the team the ability to test a variety of interfaces, navigation systems, levels of interactivity, and presentation formats while visitors interact with the exhibit components. Phase I helps us understand museum visitors' experiences, interests, and misconceptions related to Earth science. In Phase II, we research how to use technology to maximize museum visitors' engagement with visualizations. In Phase III, we build on what we have learned and work with four partner museums to integrate visualizations into their exhibits. We disseminate the insights from this research by publishing a manual on the effective use of Earth visualizations, and we use these insights to produce a set of urban-focused learning activities. We will also establish the WinEarth network to share ideas, resources, and experiences among the museums throughout the project and to disseminate the results of our work broadly throughout the museum community.