

## EDUCATION

### Pulp Astronomy

The universe began with an explosion and remains a tumultuous place. Check out its rough side at *Violence in the Cosmos*, created by astronomer Mike Guidry of the University of Tennessee, Knoxville. Based on a popular public lecture, the five sections expose how turbulent events such as the big bang, galactic collisions, and stellar explosions shape the universe. Graphics include animations and great photos. Above, the dying star Eta Carinae, which will likely blast apart within a few million years, spews roiling clouds of gas. Many of the same topics are covered in more detail at this site designed to accompany a beginning astronomy course.<sup>†</sup>

<sup>†</sup>csep10.phys.utk.edu/guidry/violence/index.html

<sup>†</sup>csep10.phys.utk.edu/astr162/lect/index.html

## TOOLS

### Conversion Kit

In an epic snafu, the controllers of the Mars Climate Orbiter failed to convert English units of force into metric ones, one of several mistakes that sent NASA's \$87 million spacecraft into oblivion 2 years ago (*Science*, 8 October 1999, p. 207). Don't let your work go down in flames. This handy site performs conversions faster than St. Paul. From parsecs to hogsheads, the calculator handles some 5000 units of length, temperature, weight, speed, volume, time, power, and other measures. You can change metric to metric, English to metric, and for that retro thrill, metric to English.

www.onlineconversion.com



## EXHIBIT

### When Cholera Met Its Match

Whether they are stalking bioterrorists or tracing the origin of a hepatitis outbreak, today's epidemiologists stand on the shoulders of John Snow (1813–1858), the English anesthesiologist whose methodical investigations showed that cholera spreads through polluted water. Reserved, fastidious, and determined, Snow comes alive at this site curated by epidemiologist Ralph Frerichs of the University of California, Los Angeles.

Follow Snow's life and illustrious career (he was the first doctor to use anesthetic on Queen Victoria) with several biographical sketches, memoirs from friends, maps, book extracts, and slide shows. You can also read the full text of his 1855 treatise *On the Mode of Communication of Cholera*, a model of epidemiological detective work that included Snow's map of cholera cases in the Soho district of London (left). The coffin-shaped rectangles marking cholera deaths clustered around the infamous Broad Street pump, which supplied drinking water for the victims and, Snow realized, was the source of the gut-wrenching bacteria.

For more on epidemiology, Frerichs's linked site on bioterrorism features a case-by-case rundown of the recent anthrax outbreak. And his HIV Controversies page includes discussions of contentious HIV-control strategies such as widespread testing and partner notification.

www.ph.ucla.edu/epi/snow.html

## RESOURCES

### Connecting With Biomaterials

Biomat.net is a useful community site for the burgeoning field of biomaterials, which aims to create replacement parts for the human body: everything from artificial joints to lab-grown organs. At the 3-year-old site, you'll find links to biomaterials organizations, labs, companies, and more than 100 journals. There's also a long list of meetings that runs to 2004, a directory of researchers, and the all-important jobs board. (Free registration is required to access some sections.) Keep up on developments in the field with a news section featuring articles from journals and the popular media, or browse the monthly roundup of the top five biomaterials Web sites.

www.biomat.net

## FIELD GUIDE

### Name That Tree

Recognize the spring finery of the flowering dogwood (right), Missouri's state tree? To spruce up your knowledge of this and other North American trees and shrubs, try leafing through a free guide created by a former forestry professor and colleagues as part of their site selling landscaping software. More than 800 accounts organized by family, species, and state include range maps and basic facts such as the identify of pollinators and degree of shade tolerance. And for some species, such as the yellow poplar, there's an illustrated page with detailed paragraphs on ecology, life history, interactions with other species, and potential uses.

www.treeguide.com

