

IMAGES

Visualizing Infectious Disease



Ouch! This shot of a bloodthirsty *Anopheles gambiae* mosquito in midbite shows in itchy detail just how this insect spreads the malaria parasite to 400 million people a year. Such graphic images can be essential to

understanding public health threats, notes the Public Health Image Library, created as a resource for teaching and research by the Centers for Disease Control and Prevention in Atlanta.* The site's 1500-and-counting photos offer perspectives from the lab bench to the village and beyond. You can find HIV budding from a lymphocyte, slices of malaria-infected brain tissue, snapshots of children being vaccinated, and even graphs charting global cases of measles. Many of these diseases remain serious scourges, but historical images also chronicle progress. For instance, a 1977 photo shows a Somali man with the world's last known case of smallpox.

phil.cdc.gov

SITE VISIT

Matching Faces With Numbers

The Witch of Agnesi, the bicorn, and the trisectrix of MacLaurin may sound like names out of Arthurian legend, but they're mathematical curves. The MacTutor History of Mathematics Archive is packed with graphs, definitions, and even Java applets for playing with famous curves like Agnesi's, a pointy hill shape studied by 18th century mathematician Maria Agnesi. Aimed at high school and college students, the archive also serves up bite-size histories of everything from Islamic math to "orbits and gravitation."

www-history.mcs.st-and.ac.uk/history

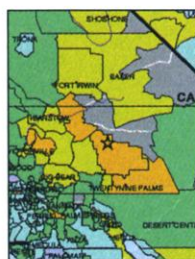
But the heart of the site is its trove of biographies. Mathematicians John O'Connor and Andrew Robertson of the University of St. Andrews in Scotland have compiled nearly 1400 short profiles of famous mathematicians indexed in various ways—you can even search by quotation or birthplace. The blurbs summarize the lives and works of everyone from the mystical Pythagoras to Andrew Wiles, who solved Fermat's Last Theorem in 1994. Those with a taste for math's dramatic side might



check out the profiles of Georg Cantor, who founded set theory and went mad, dying in an insane asylum in 1918, and 18th century algebraist Evariste Galois, killed in a duel at age 20. There is even an image of Galois's furious scribbles the night before his death—a snippet reads: "There is something to complete in this demonstration. I do not have the time."

HOT PICKS

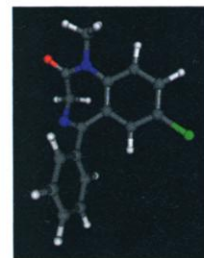
Selfish gene shrine. A fan of Richard Dawkins runs this "unofficial" site devoted to the Oxford zoologist known for his theory that evolution is driven by genes duking it out for survival. Besides loads of articles by and about Dawkins and other evolutionary biologists, you'll find links on related topics such as artificial life and the creationism debate in Kansas. www.world-of-dawkins.com



Sharing shakes. Just felt the earth move? Did doors sway, walls crack, or Grandma's china fall off the shelf? Send your notes to this site that posts constantly updated maps of earthquake intensity made from observations sent in by Netizens. More than 25,000 helped map the Hector Mine earthquake in Southern California last October. www.socal.wr.usgs.gov/shake/ciim_socal.html

Cleanup nightmare. The U.S. Department of Energy spends \$6 billion a year on cleaning up the nuclear weapons complex, plagued with everything from hectares of radionuclide-contaminated soil to tons of excess uranium. A new page of resources on our radioactive Augean stables links to reports, legislation, environmental groups, agencies, and more. www.rff.org/nuclearcleanup

GABAing. Neuroscientists studying GABA receptors, a class of cell surface molecules that bind to sedating drugs such as Valium, can zoom in on the latest research at this gateway to GABA-related protein and DNA sequences, PubMed papers, lab Web sites, and more. There's also a database of 3D structures of GABA drugs. gaba.ust.hk/Agent.html



Herb garden. Need to find out who studies orchids in Brazil, or track down a botany colleague in Europe? This online version of the Index Herbariorum, a directory of reference collections of dried plants, holds contact info and details on staff research specialties for 2010 herbaria in 134 countries. www.nybg.org/bsci/ih

Science ONLINE

Some cells get around by chemotaxis: crawling along slight gradients of attracting chemicals. This week *Science Online* features a chemotaxis film festival: 14 video clips of moving, fluorescently tagged cells shed light on the molecular mechanisms behind this process. See articles by Servant *et al.* and Jin *et al.* at www.sciencemag.org

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