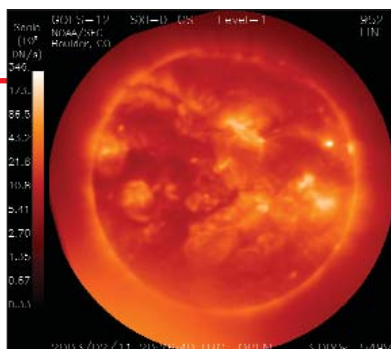


edited by Mitch Leslie

IMAGES

Sun Watching With X-ray Vision



Turmoil on the sun often means trouble here on Earth, because outbursts of solar particles can toast satellite electronics, squelch radio transmissions, and even knock out power grids. The newly activated Solar X-ray Imager will provide space weather forecasters and other scientists with a sharper picture of the sun's roiling atmosphere. From its perch on the National Oceanic and Atmospheric Administration's GOES-12 satellite, the instrument can detect "soft" x-rays overlooked by other sun-gazing satellites, such as SOHO. The resulting images allow researchers to pinpoint flares and rents in the sun's corona that presage geomagnetic storms. Visitors to the site can download movies of the last 12 hours of solar activity, updated every 5 minutes, or browse an archive of stills and daily and monthly summary footage.

www.sec.noaa.gov/sxi

DATABASE

Networking, Protein Style

DNA often gets the glory, but hard-working proteins actually build our bodies and keep them running. Scientists can find out how these blue-collar molecules work together at the Biomolecular Interaction Network Database, sponsored by researchers at several Canadian institutions.

Pick a protein such as insulin, and the database specifies what proteins, nucleic acids, and other molecules it interacts with and how these liaisons were discovered. You can also learn what biochemical pathways a particular protein participates in and whether it belongs to any larger conglomerations of molecules. Users can submit their own information to the database, which so far has information on more than 6200 interactions. The site also features PreBIND, a prototype search engine that scans PubMed for articles that mention proteins likely to interact with your chosen molecule. (The search currently works only for yeast proteins.)

bind.ca

IMAGES

Diving Into Ancient Seas

Vertebrate evolution boomed during the Devonian period some 400 million to 350 million years ago. Bony fishes diversified, sharks branched out, and the first amphibians—husky creatures the size of a small alligator—galumphed onto land. The Devonian Ocean Simulator lets you zoom through seas teeming with trilobites, mollusks, and a multitude of fishes, from jawless bottom-huggers to *Dunkleosteus*, a 6-meter predator with a bear-trap mouth. Click on the creatures swimming by to summon information about their identity, size, and habits. The animation is a prototype museum exhibit created by Christian Darkin, a London-based artist and writer.

www.geocities.com/christiandarki/fish.htm



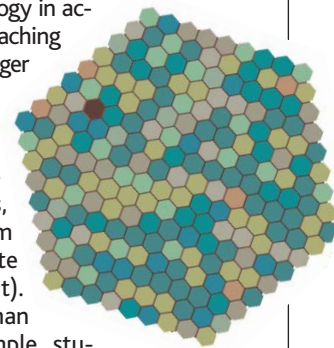
EDUCATION

Electronic Ecology

Many ecological processes unfold over large areas and long time periods—which makes them a bear to study and a challenge for students to visualize. To see ecology in action, try this collection of more than 20 teaching simulations created by programmer Ginger Booth and ecologists Os Schmitz and Dave Skelly of Yale University.

The modules explore classic problems such as the interlocked fluctuations of predator and prey populations, as well as more complicated ecosystem dynamics, such as the effects of climate and moose browsing on a forest (right). Another set of simulations probes human impact on the environment. For example, students can play town council members who must save the species inhabiting a chaparral ecosystem in fast-growing Southern California. The creators request a small donation from teachers who assign the simulations.

www.gingerbooth.com/courseware



LINKS

Science Survival Kit

Women outnumber men in some scientific fields, such as psychology, but they lag far behind in physics and computer science. This diverse collection of annotated links is aimed at women scientists and those considering scientific and technical careers. Collected by a professor who studies women in information technology, the offerings range from advice on searching for an academic job to historical accounts of women mathematicians to mentoring projects.

The site also leads to a number of online reports that probe the reasons for the lack of women in technical fields. A 1998 survey of Irish college women, for instance, found that they turned away from computer science in part because they found it "machine-focused, boring, and unsociable."

research.umbc.edu/~korenman/wmst/links_sci.html

Send site suggestions to netwatch@aaas.org. Archive: www.sciencemag.org/netwatch

CREDITS: (TOP TO BOTTOM) SPACE ENVIRONMENT CENTER/NOAA; GINGER BOOTH; CHRISTIAN DARKIN