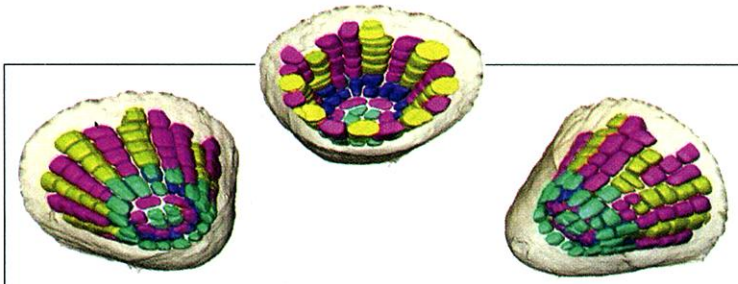
NETWATCH

edited by MITCH LESLIE



IMAGES

Watch the Grass Grow

Plants can't run, jump, fly, or swim, but they are still more active than many baseball players. Screening at Plants-In-Motion* are 21 time-lapse movies that reveal the almost imperceptible movements of plants.

Tended by botanist Roger Hangarter of Indiana University, Bloomington, the site captures plants in action: Roots snake through the soil, flowers furl and unfurl, bean plants deploy their leaves in the morning and tuck them away at night. Like spectators at the Kentucky Derby turning to watch the horses pass by, a row of tomato seedlings swivels in unison, stimulated by light shining from the side. The films illustrate concepts such as geotropism and phototropism (movements in response to gravity and light) and daily cycles of activity.

More than a dozen unusual images await you at this site† from a Cambridge University lab studying cell interactions during root development. There are three-dimensional models of cell arrangements at the root tip (above) and several views of segments tagged with green fluorescent protein, which allows researchers to identify specific cell types and monitor their fate.

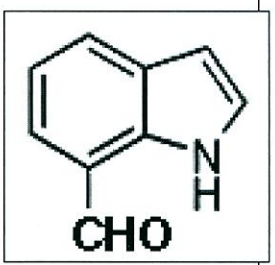
* sunflower.bio.indiana.edu/~rhangart/plantmotion/PlantsInMotion.html

† www.plantsci.cam.ac.uk/Haseloff/MOVIES/IndexMOVs.html

CONTESTS

Cash In on Creativity

Dream up a better way to synthesize 7-formyl-indole (below), and you could pocket $75,000, more than enough to pay off those Christmas debts. Find out more about this and other potentially lucrative scientific challenges at InnoCentive, a spin-off of pharmaceutical giant Eli Lilly and Co. that serves as a scientific matchmaker. Companies post their pressing problems, and hopeful "solvers" submit their best efforts through the site.



The 10 active challenges are all problems in organic chemistry, with rewards of up to $100,000. Naturally, all potential solvers have to abide by some small print. For instance, if your solution is selected as the best, you will have to turn the rights over to the "seeker" company to collect your reward, and you may have to sign a contract even to view some of the hush-hush problems. If organic chem isn't your forte, InnoCentive promises future challenges in analytical, biological, and combinatorial chemistry and in informatics.

www.innocentive.com

DATA SETS

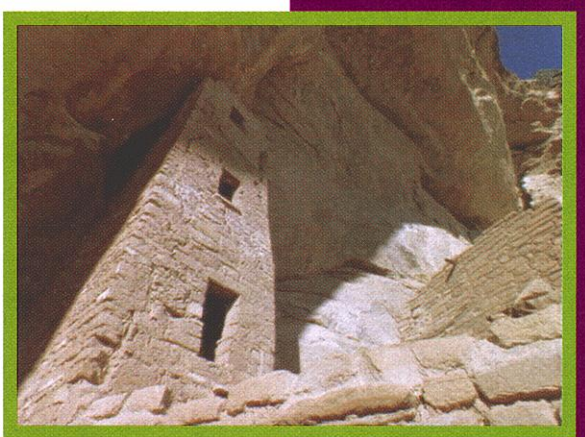
Follow the Money

Anyone interested in patterns of investment in research and development will find a bounty of information at this site from the National Science Foundation (NSF). The Industrial Research and Development Information System contains more than 2500 tables of R&D statistics gathered by NSF between 1953 and 1998. The data, in Excel spreadsheets, come from NSF's annual Survey of Industrial Research and Development, which estimates total spending on R&D by industrial firms within the United States. For example, you can see how priorities have shifted in a post–Cold War world, with research on aircraft and missiles shrinking from 33% of total industrial R&D in 1960 to just 8.5% in 1998 (of $169 billion overall). The tables break down data by state and industry, by scientific field, by number of companies, and even by R&D expenditures per scientist or engineer.

www.nsf.gov/sbe/srs/iris/start.htm

EDUCATION

Roaming Ruins



The Archaeology Channel isn't the latest cable TV offering but a year-old Web site with a library of 25 educational films, available as streaming video. The growing site is sponsored by the Archaeological Legacy Institute, a Eugene, Oregon–based educational organization.

Up to a half-hour long, the movies are the kind of earnest documentaries you might see at a visitor center or museum, and they explore remarkable sites the world over. You can explore the unsolved mysteries of Machu Picchu: Was this Inca bastion high in the Andes a fortress, a ceremonial site, or both, and why did the Spanish Conquistadors never find it? Other films nose around the dusty cliff houses of Mesa Verde in Colorado (above) and follow efforts to preserve Crump's Cave in Kentucky, where Native Americans carved exquisite glyphs into the mud floor. You'll also find related links, audio of archaeology news, and interviews with experts.

Expect to see and hear more from the channel in the future, says institute director Richard Pettigrew, including an audio collection of some of the world's disappearing languages.

www.archaeologychannel.org

Send great Web site suggestions to netwatch@aaas.org

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