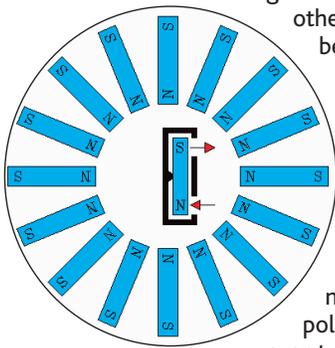


FUN

Engineering Folly

The Museum of Unworkable Devices gives students an entertaining way to test their physics know-how. The mechanisms depicted here are all real designs, but they would never work because their creators misunderstood or overlooked crucial physical principles.

Curator Donald Simanek, an emeritus professor of physics at Lock Haven University in Pennsylvania, gathered many of the designs from history books and received others from readers—some of whom believed their submissions were sound. Using basic physics, he clearly explains fatal flaws with contraptions such as this variant of the perpetual motion machine (left). The north poles of the outer ring of magnets all face inward, and by repelling the north pole of the central magnet and attracting its south pole, they supposedly create an ever-turning rotor. The main fault is that the shield surrounding the central magnet is subjected to forces equal and opposite to the forces on the magnet, canceling out the rotation. The design flaws can be subtle, and Simanek leaves several examples for readers to figure out.



www.lhup.edu/~dsimanek/museum/unwork.htm

IMAGES

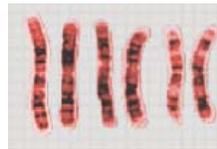
Meet the Beetles

Beetles account for about 20% of all species—so large a fraction that the English geneticist and wag J. B. S. Haldane quipped that God must have “an inordinate fondness” for the critters. You don’t need to feel that strongly to enjoy this introduction to the group from Cornell University. Get a close look at some of the ubiquitous insects with the Virtual Beetles feature, which allows you to rotate and zoom in on a selection of museum specimens. An impressive gallery showcases more than a dozen intricate drawings that reveal details such as the minute bristles on the mouthparts of this new species of Panamanian bess beetle (right). You can also watch footage of the destructive Asian long-horned beetle (*Anoplophora glabripennis*), an introduced pest whose tunneling larvae have ravaged hardwood trees in New York, New Jersey, and Chicago.

explore.cornell.edu/scene.cfm?scene=Beetle%20Science



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



EDUCATION

Genome A to Z

Geared for students and the public, this site from Britain’s Wellcome Trust offers a good primer on genome research and its possible impact on medicine and society. The site’s nifty Genome Browser profiles each chromosome and highlights its important genes. Visitors can read news updates and features on topics ranging from gene therapy to the origin of red hair. Helpful back-grounders explore the ethical implications of genome research.

www.wellcome.ac.uk/en/genome/index.html

DATABASE

Mother Lode of Earth Data

Headed to Hawaii to do a little chemical sampling of a volcano? Before you close your suitcase, log on to EarthRef.org, where you can find raw data from published papers on Hawaiian lavas, references to other studies, and a freeware tool to analyze your measurements when you get home.

That’s a taste of the offerings from EarthRef, a geosciences data archive maintained by the Scripps Institution of Oceanography in San Diego. The site boasts seven databases—covering everything from underwater mountains to magnetic profiles of rock formations—and links to three others. The data hail from all over the world and include peer-reviewed and unpublished measurements, maps, and video contributed by scientists. For example, plug a few keywords into the Seamount database to find references for isotope signatures of Hawaiian lava. EarthRef also houses tools for testing geoscience computer models and posts news and meeting announcements.

earthref.org

RESOURCES

Navigating the Privacy Rule

New federal regulations that strictly limit the release of patients’ medical information went into effect on 14 April. The so-called privacy rule applies not only to hospitals, pharmacies, and doctors, but also to many researchers. Find out if and how the regulations will affect your work at this new Web site from the Department of Health and Human Services. The site offers a handbook for researchers that explains who must abide by the regulations, what information is covered, and how to legally use patient data. The site will add in-depth guidelines tailored for particular types of scientists and organizations, such as clinicians and institutional review boards.

privacyruleandresearch.nih.gov

DATABASE: Mother Lode of Earth Data

Science **300** (5619), 557.
DOI: 10.1126/science.300.5619.557d

ARTICLE TOOLS	http://science.sciencemag.org/content/300/5619/557.4
RELATED CONTENT	file:/content/sci/300/5619/netwatch.full
PERMISSIONS	http://www.sciencemag.org/help/reprints-and-permissions

Use of this article is subject to the [Terms of Service](#)

Science (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. The title *Science* is a registered trademark of AAAS.

© 2003 American Association for the Advancement of Science