

Science

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Egypt's Science

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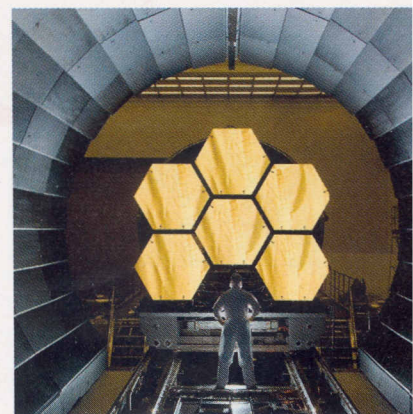
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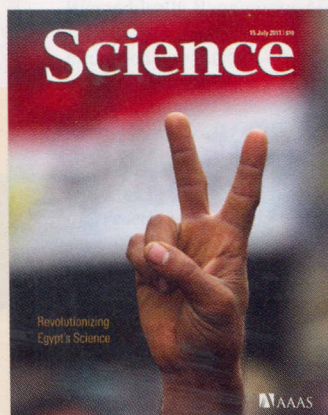
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COVER

An anti-government demonstrator shows the victory sign in Tahrir Square on 7 February 2011 in Cairo, Egypt, during protests that led to the resignation of President Hosni Mubarak. A special News Focus package beginning on page 278 examines the prospects for reforming science and higher education in Egypt as the nation prepares for parliamentary elections planned for later this year.

Photo: John Moore/Getty Images

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L. R. Gesquiere et al.

Alpha males have higher stress levels than beta males in a wild baboon society.

>> Perspective p. 293; Science Podcast

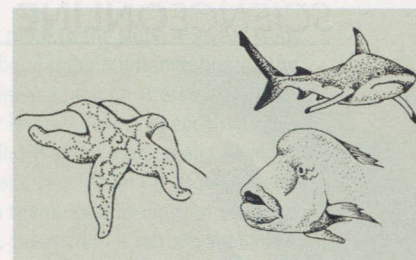
360 School-Based Early Childhood Education and Age-28 Well-Being: Effects by Timing, Dosage, and Subgroups

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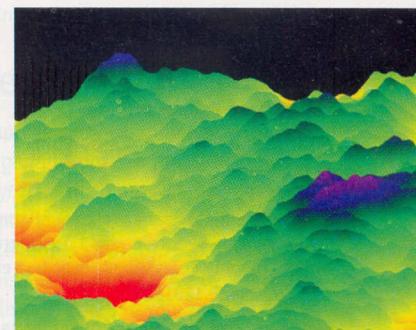
A little bit of preschool goes a long way.

>> Perspective p. 299

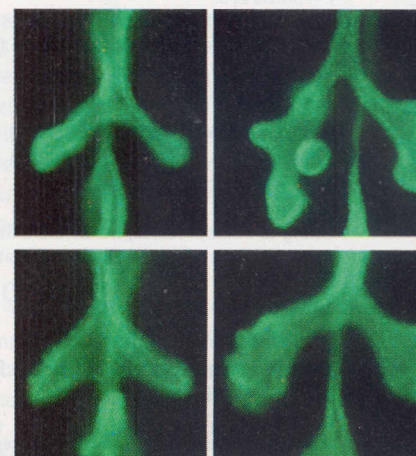
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SCIENCEONLINE



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A Large and Persistent Carbon Sink in the World's Forests

Y. Pan et al.

Net average global annual uptake of atmospheric carbon dioxide by forests was 1.1 petagrams of carbon, roughly one-sixth of fossil fuel emissions.
10.1126/science.1201609

Sequence and Structural Convergence of Broad and Potent HIV Antibodies That Mimic CD4 Binding

J. F. Scheid et al.

Anti-HIV broadly neutralizing antibodies with similar specificities and modes of binding were found in multiple HIV-infected individuals.
10.1126/science.1207227

Google Effects on Memory: Cognitive Consequences of Having Information at Our Fingertips

B. Sparrow et al.

Owing to Internet search, we are more likely to encode "where" aspects of memory rather than "what."
10.1126/science.1207745

>> *News story p. 277; Science Podcast*

The Leukemogenicity of AML1-ETO Is Dependent on Site-Specific Lysine Acetylation

L. Wang et al.

A protein that drives the growth of leukemia does so only when it carries a specific posttranslational modification.
10.1126/science.1201662

The Plant Cell Wall—Decomposing Machinery Underlies the Functional Diversity of Forest Fungi

D. C. Eastwood et al.

Comparative genomic analysis of dry rot fungus shows both convergent evolution and divergence among fungal decomposers.
10.1126/science.1205411

SCIENCE NOW

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Highlights From Our Daily News Coverage

Diver Snaps First Photo of Fish Using Tools

The blackspot tuskfish cracks open shells with a rock.
<http://scim.ag/fishtools>

Polar Bears Rooted in Ireland

DNA shows polar bears descended from a female Irish brown bear.
http://scim.ag/_polarbears

Scientists Play World's Oldest Commercial Record

An 1888 recording of a woman's voice is etched into warped metal.
<http://scim.ag/oldrecord>

SCIENCE SIGNALING

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The Signal Transduction Knowledge Environment
12 July issue: <http://scim.ag/ss071211>

RESEARCH ARTICLE: The Distinct Roles of Two GPCRs, MrgprC11 and PAR2, in Itch and Hyperalgesia

Q. Liu et al.

Sensory neurons perceive itch and heat-induced pain through two different receptors.

RESEARCH RESOURCE: Real-Time Imaging of Notch Activation with a Luciferase Complementation-Based Reporter

M. X. G. Ilagan et al.

Luciferase complementation imaging enables quantitative analyses of Notch pathway dynamics in real time in living cells.

PERSPECTIVE: HIF Takes It Up a Notch

E. A. Johnson

The interaction of the transcription factor HIF- α with the Notch receptor promotes cell fate specification and maintenance.

GLOSSARY

Find out what Hph, PHD, and EGLN mean in the world of cell signaling.

SCIENCE TRANSLATIONAL MEDICINE

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Integrating Medicine and Science

13 July issue: <http://scim.ag/stm071311>

PERSPECTIVE: A Lysosomal Lair for a Pathogenic Protein Pair

T. M. Dawson and V. L. Dawson

An unexpected link between Parkinson's disease and Gaucher's disease is explained at the molecular level.

RESEARCH ARTICLE: Rational Design of a Meningococcal Antigen Inducing Broad Protective Immunity

M. Scarselli et al.

PERSPECTIVE: Vaccine Design Reaches the Atomic Level

P. D. Kwong and L. Shapiro

PODCAST

R. Rappuoli and O. Smith

A single chimeric protein induces protective immunity against all meningococcal B strains with implications for producing broadly protective vaccines.

RESEARCH ARTICLE: A Critical Subset Model Provides a Conceptual Basis for the High Antiviral Activity of Major HIV Drugs

L. Shen et al.

PERSPECTIVE: Drug Effectiveness Explained—The Mathematics of Antiviral Agents for HIV

A. S. Perelson and S. G. Deeks

Disruption of the cooperative action of multiple copies of a drug target explains the high antiviral activity of the most active HIV drugs.

SCIENCE CAREERS

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Free Career Resources for Scientists

Tooling Up: Words With Punch

D. Jensen

In a variety of job-seeking contexts, the right choice of words can make a big difference.
http://scim.ag/toolingup_punch

Sowing Seeds Through Plant Taxonomy

E. Pain

Portuguese plant researcher Célia Cabral cofounded a company to produce essential oils.
http://scim.ag/celia_cabral

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On the 15 July *Science* Podcast: the effects of Google on memory, the stressful lives of alpha male baboons, science in Egypt, and more.

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Science Policy News and Analysis

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