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Watch a video about improving education in the developing world at www.sciencemag.org/special/education2013.

COVER
The 21st-century scientific workforce needs new skills and knowledge to keep pace with ever-changing technology. Larger, more diverse student populations clamor for access to knowledge. All global citizens, whether in a doctor’s office or polling booth, must be better informed. All of these needs call for expanded, improved science education. In this special issue, we have invited experts to discuss the most important challenges facing science education. See the special section beginning on page 290.

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Pervasive Externalities at the Population, Consumption, and Environment Nexus
P. S. Dasgupta and P. R. Ehrlich
Challenges posed by the economic consequences of population growth and consumption require collective action.

Near-Field Interference for the Unidirectional Excitation of Electromagnetic Guided Modes
F. J. Rodriguez-Fortuño et al.
Near-field interference can be used to control the directional propagation of electromagnetic excitations.

Polarization-Controlled Tunable Directional Coupling of Surface Plasmon Polaritons
J. Lin et al.
Control over the generation and propagation direction of light-induced surface plasmons in a thin metal film is demonstrated.

External Quantum Efficiency Above 100% in a Singlet-Exciton-Fission–Based Organic Photovoltaic Cell
D. N. Congreve et al.
Single photons are shown to propel more than one carrier in a carbon-based solar cell.

Multicompartment Mesoporous Silica Nanoparticles with Branched Shapes: An Epitaxial Growth Mechanism
T. Suteewong et al.
A one-pot synthesis method furnishes mesoporous silica nanoparticles with both cubic and hexagonally structured compartments.

Reorganization of Southern Ocean Plankton Ecosystem at the Onset of Antarctic Glaciation
A. J. P. Houben et al.
The Southern Ocean plankton ecosystem underwent an abrupt and profound reorganization in the earliest Oligocene.

Global Charcoal Mobilization from Soils via Dissolution and Riverine Transport to the Oceans
R. Jaffé et al.
A larger-than-assumed fraction of charcoal produced by wildfires leaches out of soils and is transported to the oceans.

Polarization-Controlled Tunable Directional Fire in the Ocean
P. Neubauer et al.
Current fish harvests and low fish levels make fishery recovery improbable for most of the world’s depleted stocks.

A KRAB/KAP1-miRNA Cascade Regulates Erythropoiesis Through Stage-Specific Control of Mitophagy
I. Barde et al.
Protein- and RNA-based transcriptional regulation governs the removal of mitochondria during red blood cell differentiation.

Structural Basis for Kinesin-1:Cargo Recognition
S. Pennig et al.
The structure of a portion of a molecular motor complexed to a cargo peptide provides a close-up view of the interaction.

Actin-Propelled Invasive Membrane Protrusions Promote Fusogenic Protein Engagement During Cell-Cell Fusion
K. Shilagardi et al.
An inducible Drosophila cell-fusion system reveals the interplay between cellular fusion proteins and actin-driven membrane remodeling.

Bat and Rat Neurons Differ in Theta-Frequency Resonance Despite Similar Coding of Space
J. G. Heys et al.
Stellate cells in the entorhinal cortex of bats and rats show significant differences in their electrophysiological properties.

Developmental Decline in Neuronal Regeneration by the Progressive Change of Two Intrinsic Timers
Y. Zou et al.
Reciprocal signals promote axon regeneration in young worms and repress axon regeneration in older worms.

A Neural Marker of Perceptual Consciousness in Infants
S. Soudry et al.
The brain mechanisms underlying conscious perception are already present in infancy and improve with age.

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