THIS WEEK

Those who can

An initiative from Scientific American *aims to find 1,000 scientists to visit schools, help teachers and boost US education.*

Many developed nations face chronic problems in high-school science education. Researchers in the United States, in particular, will be only too aware of the nation's sliding student scores in science, technology, engineering and mathematics (STEM) education. What may surprise, however, is that a truly powerful resource is available that, as one science and maths teacher exulted on Twitter, "will b a HUGE gamechanger for the good".

You.

How can you hope to inspire kids to love science when so many educators and policy leaders have struggled? And how can you possibly spare large chunks of precious time from research and grant writing to do so?

Your experience is invaluable, and you will have help. Just as large research projects involve many hands, so an initiative from the magazine *Scientific American* called '1,000 Scientists in 1,000 Days' seeks to recruit an army of researchers to help in targeted, concrete ways. The initiative is part of the 'Change the Equation' programme, which was set up in part to realize President Barack Obama's campaign mission to boost private and philanthropic participation in STEM education. Think of it as a kind of science corps to support the growth of developing minds. A sign-up form can be found at www.scientificamerican.com under the education tab. *Scientific American* is a sister publication of *Nature* within the Nature Publishing Group. We at *Nature* are glad to promote this initiative.

What can scientist volunteers do? Perhaps they could spend an hour in a local classroom or school auditorium talking about a typical day in the lab — thereby helping to demystify the world of science for children. They could give a local school board advice about curricula or specific research areas. They might simply answer questions by e-mail, teleconference or Skype. How scientists participate, and how frequently, will be up to them. By the beginning of the new school year, around September, *Scientific American* will be able to connect educators with experts.

Perhaps some additional background would help to convince you that it is worth the time to visit classrooms. Last year, a report by the US National Academies found that the United States ranks 27th of 29 wealthy countries in the proportion of university students who graduate with degrees in science or engineering. It called on federal and state governments to improve teaching in maths and science by targeting early-childhood education and the public-school curricula, and by supporting teacher training in crucial subjects.

In the younger grades, many US science teachers have no science training: in 2004, only 40% of fifth- and 80% of eighth-grade students were taught maths and science by teachers with a degree or certificate in their teaching field, according to the most recent figures from the National Science Foundation.

What is more, teachers have to juggle the often-conflicting demands to 'teach to the test', which requires a lot of learning by rote, with the need to imbue students with the inspiring wonder of science — and the process-driven critical thinking and evidence collection that proper research requires. Educators also wrestle with anti-science demands to 'teach the controversy' in disciplines such as evolution and climate change. According to the National Center for Science Education, at least eight anti-evolution bills have been introduced in US state legislatures since the beginning of 2011.

Obama has said that "winning the future" for an beleaguered US economy will require investment in research, innovation and education (see *Nature* **470,** 313–315; 2011). In his January State of the Union address, he said that science-fair winners should be as celebrated as Super Bowl champions, and he has added hands-on science activities to the Easter Egg Roll, an annual event for children on the White House lawn since 1878.

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Announcing the Change the Equation programme last September, Obama said: "Our success as a nation depends on strengthening America's role as the world's engine of discovery and innovation." The 1,000 Scientists in 1,000 Days programme is part of a broader initiative from Nature Publishing Group, called Bridge to Science, which includes five other schemes collectively focused on addressing the needs of parents, educators, policy leaders and, ultimately, the collective progress of science itself.

Although the programme initially targets US needs, the sign-up form is open to scientists anywhere, and the scheme could expand further. More than 230 scientists have already signed up. We welcome their generosity and interest, and hope you will join them. ■

Value judgements

The scientific endeavour needs to deliver public value, not just research papers.

The concept of a return on research investment has acquired a sharper edge since the global financial slump began. But an assessment of those returns should include more than knowledge for its own sake and economic growth — as highlighted by a timely series of articles in the latest issue of the journal *Minerva*.

Under the intellectual and editorial leadership of the policy scientists Barry Bozeman of the University of Georgia in Athens and Daniel Sarewitz of Arizona State University in Tempe, the journal presents case studies that analyse a broader way to measure returns on investment: public values. These public values include not only the commonly discussed knowledge and economic criteria, but also