

# Let's teach science in the science classroom

Science is, in simplest terms, a method of explaining the natural world. It's a problem-solving process requiring not only an open mind but also hard evidence.

New scientific discoveries, based on such evidence, get translated into improved understanding of distant planets and human origins, and into treatments for illness, disease-resistant crops and safer motor vehicles. Science and technology provide the basis of industrial innovation and the economic prosperity of the future.

Because our commitment to science has brought such enormous benefits to Americans and other people throughout the world, it has been extremely troubling to watch recent attacks on the teaching of evolution science in places such as Dover, Pa., and the state of Kansas.

Now lawmakers in Utah are proposing a similar measure. It never mentions God or Intelligent Design, but it would encourage students to doubt the science of evolution and perpetuate the myth that evolution is challenged by "opposing scientific viewpoints."

Too often, this controversy is framed in the news media and among hard-core partisans as a disagreement between science and religion. Proponents of evolution have an "imposing view that we can't have a belief in God," Utah Sen. Sheldon Killpack, R-Syracuse, claimed during a recent debate.

That's untrue. In fact science has no interest in attacking religion or trying to undermine faith. Science and faith have different domains: Science seeks



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natural explanations of how life developed over millions of years; religion, guided by faith, seeks the spiritual meaning, the purpose of life.

Many scientists are religious, and thousands of U.S. religious leaders from every creed and denomination have testified that they see no conflict between their faith and evolution.

But when religion tries to cast itself as science, as happens in the Intelligent Design (ID) movement, the arguments get distorted. ID advocates and other opponents of evolution insist that their motivations are not religious, and their efforts to change school curriculums rarely mention God. And yet, the ID movement's 1999 "Wedge Document" pledged to promote "a science consonant with Christian... convictions."

While they insist their interests are purely scientific, they have not joined the scientific process. They have not submitted their evidence or published their studies in mainstream scientific journals. They insist that evolution is unproven, "just a

theory," never noting that in science, unlike in popular usage, a theory is a unified, evidence-based explanation of how things work.

And they insist that scientists are deeply divided by controversy over evolution; in fact, aside from a few fringe researchers, the scientific establishment overwhelmingly accepts evolution.

Yes, there are gaps in evolution science — but isn't that the nature of all human knowledge? Not so long ago, our ancestors believed that sun revolved around the Earth, or that illness should be treated with leeches. It's the job of science to fill those gaps.

The sponsor of the Utah bill, Sen. Chris Buttars, R-West Jordan, is among those who claim that science somehow erodes human dignity. "That professor they brought in... talking about (how) we evolved from chimpanzees, he don't know that," Buttars said in one recent news account.

Yet the evidence of evolution — not just human evolution, but of all living creatures — is overwhelming. Scientists working in Utah and around the world have

amassed tons of fossil evidence. Other recent discoveries show the close genetic relationships between chimps, humans and even the simplest forms of cellular life.

U.S. District Judge John E. Jones III listened to the arguments against evolution last year in Dover, Pa., and in the end, he saw through the spin. Intelligent Design is fundamentally a religious doctrine, he concluded, and cannot be taught as science in public schools.

The Utah measure is proof that this issue still divides us and distracts us. That's unfortunate, because the times call for unity and common purpose.

America faces unprecedented challenges — to protect our national security, to find new energy sources and to defend against diseases such as avian flu. And at a time of mounting economic challenges from around the globe, we must do all we can to train the young scientists, engineers, technicians and medical professionals who will compete to make groundbreaking discoveries in the years ahead.

This has been recognized in recent months not only by

scientists and engineers, but by academic and business leaders, Republicans and Democrats, all of whom are urging a renewed commitment to science education in our country. We need a well-educated workforce to allow us to compete in the world's science and technology-based economy of the future.

We can't afford to discourage or confuse our children. Science classrooms are where we cultivate the mindset of discovery

that benefits millions of people worldwide and where we train the workers of tomorrow. The challenge is not to bring religion into those classrooms, but to teach science better than ever, with new imagination and energy.

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