Classrooms Become Next Battleground for Climate Change Skeptics

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For years, science classrooms have been a battleground for supporters of teaching evolution versus creationism or intelligent design. Now, teachers may be once again caught in the crossfire as a new controversial topic makes its way into education: climate change.

Recently leaked documents from conservative think tank The Heartland Institute reveal plans to pay a non-climate scientist to create school curricula designed to foster doubt about the scientific evidence surrounding climate change. Meanwhile, surveys suggest that science teachers face criticism over teaching about global warming, and some states have passed legislation seeking to include anti-climate change material in the scientific curriculum.

Though climate change is politically inflammatory, climate scientists are nearly unanimous that the Earth is warming and that human-created greenhouse gases are to blame. This conclusion comes from multiple lines of evidence, including climate models, observations of warming, and isotopes tracing excess carbon dioxide in the atmosphere back to fossil fuels. Nevertheless, a 2011 Gallup poll with a margin of error of plus or minus 4 percent found that 43 percent of Americans blame natural changes for global warming, with only a small majority of 52 percent blaming human pollution.

Evolution and global warming

The climate wars have long played out in the media and on blogs, but education experts say that climate controversy is creeping into schools. What's more, they say that the new Heartland plans are from an old playbook, one used by creationists to suppress the teaching of evolution. In the same way that creationists urge schools to "teach the controversy," climate change skeptics aim to sow doubt about scientific consensus, said Mark McCaffrey, the programs and policy director of the National Center for Science Education, a nonprofit that has long supported the teaching of evolution in schools and recently began to defend climate change education.

"They'll say that it's bad science, they'll say that it's just a theory, they'll say there are models that are controversial," McCaffrey told LiveScience. "We see some of that kind of language and doubt that creationists use to try to play down evolution in the Heartland document."

Heartland confirmed Wednesday (Feb. 15) that the documents were sent by a staffer to someone posing as a donor to the organization. The institute holds that one document, supposedly the group's climate change communication plan for 2012, is faked. However, the climate education
plan is detailed in other documents, and the plan has been confirmed by James M. Taylor, a
senior fellow at the institute.

In an email to LiveScience, a representative for The Heartland Institute reiterated the claim that
the climate change document was fake, but did not respond to questions about the climate
education project.

As described in the group's 2012 fundraising document, the deal would pay policy analyst David
Wojick, whose doctorate is in epistemology, $25,000 per quarter to create supplementary
curricula for kindergarten through 12th-grade education. The curricula would teach students that
humans changing the climate is a "scientific controversy," a claim climate scientists dismiss.

"There is no controversy on whether humans are changing the climate," Andrew Dessler, a
climate scientist at Texas A&M University, told LiveScience. "You could argue about how much
humans are changing the climate, but most scientists agree that humans are responsible for most
of the warming, so that's really where the debate is, is it 60 percent, is it 80 percent?"

**Climate controversy**

These nuances may be lost in a political environment where the basics of human-caused climate
change trigger opposition. State education standards aren't uniform on the subject of climate. In
Texas and Louisiana, for example, state boards have introduced rules requiring that climate
change denial be taught as a valid scientific position. Other state legislatures have introduced
bills to require equal time in the classroom for climate change skepticism.

Teachers apparently feel the pushback. No comprehensive national studies have been done, but a
2011 poll of its members by the National Science Teachers Association found that 82 percent
had faced skepticism about climate change from students, and 54 percent had faced skepticism
from parents. Many teachers who responded said they "taught the controversy" of climate
change, presenting it as a subject to be debated rather than a scientific consensus.

"I'm concerned that parents will challenge the material that is included in my curriculum," wrote
one middle-school teacher from Wisconsin. "I focus on having students examine data and draw
their own conclusions."

**Setting standards**

If state standards are up to par with national science standards, writing a curriculum that denied
climate change would be tough, said Julie Lambert, an associate professor of science education
at Florida Atlantic University.

"I can't even imagine what they're going to come up with," Lambert said of The Heartland
Institute. "It would be difficult to do."

For example, Florida standards call for children to understand how scientists use data to come to
a conclusion, a process crucial to the field of climate science, Lambert told LiveScience.
"If students could just understand Earth's energy balance and some basic physical science, they should be able to evaluate what is a valid scientific claim," Lambert added.

But in many states, climate science doesn't appear in the educational standards at all, said the NCSE's McCaffrey.

"Each state has their own standards, sometimes districts have their own standards, in some cases teachers just ignore them and do their own thing, so there may not be accountability," he said.

Some teachers avoid the subject altogether to avoid controversy, he said. Other teachers are skeptics themselves.

"I believe that 'climate change' education is used to indict Western civilization of false[ly] manufactured crimes," one Ohio middle-school teacher wrote on the National Science Teachers Association survey. "Most of what the general news media and the education establishment insist upon as true science is simply not."