West Virginia, Florida make moves to undermine science education



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Two recent bills introduced at the state level could spell trouble for science education. One of them is in West Virginia, where the state Senate has approved a bill that would allow teachers to tell students that the Universe is the result of intelligent design, an idea that was developed to avoid prohibitions on teaching creationism. While a court held that teaching intelligent design was an unconstitutional imposition of religion, a recent Supreme Court decision

weakened the legal foundations of that ruling.

Meanwhile, Florida's thinking much bigger, with the State House considering a bill that would say the legislature disapproves of college courses that cover "theoretical or exploratory" topics being used to fulfill general education requirements. That would seemingly rule out most science classes.

First, the second Virginia

The bill under consideration in West Virginia, Senate Bill 619, is a truly bizarre hybrid. Two of its provisions are basic housekeeping functions regarding the role of teachers in changing final grades and determining whether students are promoted to the following grade level. But then there's the third provision: "Teachers in public schools, including public charter schools, that include any one or more of grades kindergarten through 12, may teach intelligent design as a theory of how the universe and/or humanity came to exist."

A school board in Pennsylvania had instructed its science teachers to tell students that intelligent design was an alternative to evolution. This led to a lawsuit by the parents of several students. The resulting decision, called *Kitzmiller v. Dover* compiled an extensive record showing that intelligent design was simply a relabeling of creationism, which had already been found to be an unconstitutional imposition of religion. Not surprisingly, the court ruled that teaching intelligent design was also an unconstitutional imposition of religion.

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In past years, a handful of state legislators would typically introduce bills promoting intelligent design, apparently unaware of the legal risk that would expose schools to. But the current Supreme Court's willingness to overturn precedent has some legislators crafting bills in the hope that they

could get the court to overturn precedents that they disliked.

In fact, the Supreme Court has already overturned a precedent that could give advocates of teaching creationism in public school science classes some hope. To reach his decision, the judge in *Kitzmiller v. Dover* relied on Supreme Court precedent called the Lemon test to determine if the school board's policy violated the US Constitution's prohibition against state establishment of religion. But last year, the court threw out its own precedent and got rid of the Lemon test.

Instead, as it has in other cases, the court now wants determinations to be made based on the legal standards from hundreds of years earlier: "In place of Lemon and the endorsement test, this Court has instructed that the Establishment Clause must be interpreted by 'reference to historical practices and understandings.'" How that would apply to instruction in biology when the theory of evolution wasn't even developed until the mid-1800s is anyone's guess.

So, it's possible that the bill is intended to exploit the current legal uncertainty. When we asked, however, Senator Amy Grady focused on an aspect of the issues in *Kitzmiller v. Dover* that wasn't at issue in determining its constitutionality. "In [*Kitzmiller v. Dover*], the teaching of Intelligent Design was a requirement," Grady told Ars. "In SB 619, it simply allows a teacher to present it as a theory."

Grady was also unimpressed with the historical record from *Kitzmiller v. Dover*, which showed creationism and intelligent design being treated as synonymous. "Intelligent Design is not specific to a religion," Grady said. "It is different than Biblical creationism."

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As of Saturday, the bill had passed the state Senate on a 27-6 vote and will now be considered by the state House.

Who needs a theory anyway?

Meanwhile, science education may end up an inadvertent casualty of Florida's ongoing war against its own higher education system. HB 999 was recently introduced to the state legislature and continues a lot of the general themes of the state's ongoing efforts to stop teaching what it considers "divisive concepts." The bill largely targets topics like gender studies and critical race theory and would essentially eliminate those as viable majors at any state-supported institution. In the process, it would strip academic departments of their ability to hire new faculty, instead placing that in the hands of senior administrators.

But the bill is positively incoherent when it comes to science education. It calls on state-supported schools to provide general education classes on various topics, including the natural sciences. And it specifically calls for the classes to cover the use of hypothetical models as a central part of the scientific method: "Natural science courses must afford students the ability to critically examine and evaluate the principles of the scientific method, model construction, and use the scientific method to explain natural experiences and phenomena."

And then, a few paragraphs later, completely undercuts that by saying that things like science don't belong in general education classes at all. "Courses with a curriculum based on unproven, theoretical, or exploratory content," the bill suggests, "are best suited to fulfill elective or specific program prerequisite credit requirements, rather than general education credit requirements."

How you cover "model construction" while avoiding all "exploratory content" is apparently left as an exercise for the faculty.

At the moment, this bill hasn't passed either house of the

Florida Legislature, so there’s a reasonable chance that it will be modified before being voted on. But, the bill contains a *lot* of the ideas that have provided the Florida governor with a great deal of political traction. So it will likely draw much support from the governor’s backers in the legislature.

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