



## PRESIDENT'S COMMENTARY

Amanda Townley

### Education: The Ultimate Form of Activism

Educators face a delicate balancing act, keeping students, parents, and districts in mind while navigating curriculum and a world of distractions outside the school doors. While there is a rich history surrounding the teaching of science in schools nationwide, over the past few years, we have seen an increase in events happening beyond schools that have a tremendous impact on what is happening within our classrooms, in both K–12 and higher education. In a time once anticipated with flying cars and space colonies, we instead find ourselves fighting book bans, continued underfunding of education, and movements to stop teaching critical topics that impact everyone—evolution, diversity, climate, vaccinations, and even dissection.

Science teachers focus time heavily on classroom practices, learning content, and the best instructional methods to engage students and ensure they learn. We spend hours planning lessons, vetting potential lab experiences, and evaluating assignments. However, one critical aspect we don't often think about is our role as advocates for science, but that unwritten part of our job description is increasing in importance.

In 2024 alone, legislators in several states have attempted to interfere with accurately teaching science in K–12 education classrooms. Most notably, the state of West Virginia passed legislation that would allow the teaching of nonscientific alternatives to science in public school science classrooms and provide protection for those who do so. The passage of the West Virginia bill reminds us that eternal vigilance is the price of both liberty and the integrity of science education. Students need and deserve to learn about scientific concepts as the scientific community understands them. Sadly, such problematic legislation already exists in states such as Mississippi, Tennessee, and Louisiana.

While evolution education has long been the exemplar of a range of anti-science movements, we are also seeing a rise in challenges toward other topics. A recent bill was proposed in California to phase out all dissections in California classrooms. Luckily, this bill was amended in a way that aligns with NABT's position that alternatives should be made available for those in K–12 whose beliefs or practices prevent them from participating. It also recognizes the importance of dissection in specific fields of science and occupations. In Texas, Florida, and beyond, climate change instruction is facing scrutiny, as certain districts, and even the governor in Florida, are pushing to limit or remove reference to the human impacts on climate change. Both states mentioned have reached out to textbook companies to alter the coverage of climate change in state-approved books or online instructional materials. What large states mandate in their textbooks will impact the instructional materials smaller states can offer. While teaching about viruses remains uncontroversial, conversations surrounding emerging viruses and vaccination are a substantial point of contention around the country, creating a political divide and frustrations surrounding the very nature of science—especially what we know about viruses and vaccines and how science is self-correcting as our understandings grow in time.

The science field has specific guiding tenets—conclusions require empirical evidence, science progresses through direct observation and inference cues, conclusions are subject to change with more data and work, and much of science is tied to cultural and social elements. Two key elements of scientific literacy include (1) the realization on the part of citizens that science explains events in nature based on the available technology and physical evidence of phenomena, and (2) science is one of many tools that people use to understand the world. After all, seeking understanding is how we, as a species, make sense of the world. At the same time, some situations and events require scientific thinking, and including nonscientific approaches is inappropriate. As science teachers, we aim to ensure that all students understand science, what it is and is not, and how we have come to explain the world around us through scientific enterprise. Other ways of knowing do not require the same standard of empirical evidence and are not limited to focusing on the physical world as science. Nonscientific explanations may be of interest in discussions of philosophy and world religions but not in science classrooms.

The interference with science teaching that we are facing feeds the misconception that there is controversy surrounding specific topics in science, including climate change, vaccinations, and evolution when that controversy does not exist scientifically. Science teachers are at the forefront of action to protect the accurate representation and teaching of science in our K–12 schools. Therefore, I encourage you to examine what is taking place in your state and community, get involved in the discussions surrounding standards and legislation that impact your classroom, and seek support from professional organizations such as NABT and the National Center for Science Education. We need all science teachers engaged to help us ensure that the primary focus of science classrooms remains the accurate teaching of scientific concepts.

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