

POLICY NOTE

Anti Science Attitude of the OER Climate Change Curriculum

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Key Findings

1. Recently Washington officials added new climate change requirements in public schools, which a review shows have a heavy ideological agenda, despite claiming to be objective science.
2. The “OER” curriculum adopts an anti-science stance, presenting students with scientific errors and left-leaning social activism.
3. The curriculum takes a closed-minded approach, by directing what students should think instead of teaching them to reason independently based on actual evidence.
4. A review of the curriculum shows it promotes a collectivist mindset and discourages students from questioning prevailing groupthink.
5. This approach is focused on telling students to form opinions based on emotion and political concerns, instead of teaching the scientific method of pursuing the truth by following evidence and facts wherever they lead.

Introduction

In recent years Washington state has added requirements for teaching about climate change in public schools and increased funding to develop a climate curriculum. The arguments for the curriculum have been consistently partisan with a heavy ideological agenda, despite claiming to focus on objective science.

One such example is [a curriculum](#) developed “in collaboration with epidemiologists and communications professionals from the Washington Department of Health.”¹ While purporting to cover environmental and atmospheric science, the five modules of the curriculum concentrate heavily on a political agenda and substitute emotion and subjective use of information in the place of scientific rigor.

Washington Policy Center joined with Vanessa Ramsey, who was honored in 2011 as Washington State Middle School Science Teacher of the Year, to assess the curriculum. Here is her analysis of the modules included in DOH’s climate curriculum.

Analysis

The [OER curriculum](#),² using the Washington Tracking Network to Study Climate Impacts, adopts an anti-science stance, replete with scientific errors, and is blatant in their ultimate agenda of leading high school students in the arena of left-leaning social activism.

Key Issues:

1. Implanting ideas into students’ thought process using emotional narratives
2. Condemning rational thinking
3. The use of so-called “authentic data”

1 “Using the Washington tracking network to study climate impact,” Open Educational Resources (OER) Commons public digital library, accessed March 2023, at <https://v25.oercommons.org/courseware/lesson/85763/overview/>.

2 “Student View - Using the Washington tracking network to study climate impact,” Open Educational Resources (OER) Commons public digital library, accessed March 2023, at <https://www.oercommons.org/courseware/lesson/85763/overview/>.

4. Advocating the use of subjective standards such as “Community Wisdom”

Throughout my 21 years of teaching science, I’ve had the opportunity to examine a wide range of science curricula. Never before have I come across one as blatant in its agenda to dismiss objective scientific reasoning and instead promote political activism in social and environmental justice. As part of this agenda, the curriculum promotes a transparently anti-science attitude. In the paragraphs that follow, I will address some key issues around the anti-science approach embedded in this curriculum.

The curriculum establishes a framework designed to direct students’ thinking rather than teaching them to reach their own conclusions based on actual evidence and rational thought.

Nothing makes the anti-science approach that is embedded in the curriculum more obvious than the notes of slide 3, Module 2, “Climate Change & Pregnancy, Exploring Risks and Impacts.” Here the writers state, “we should be mindful of the emotional dimensions of the human experience. For too long, science and science education have prioritized my (sic) rational thinking.” [italics mine].

How can this statement even be made, because as any scientist knows, if science is not conducted with rational thinking, with what are we left? This anti-science slant is presented again at the conclusion of this curriculum in Module 5 with the repeated quote, “Science is not enough.”

Science is an objective method of learning about our physical world. We should remember this and continually return to applying objectivity in teaching our students. During scientific research we must remain impartial and set aside ALL emotion in order to clearly examine the data. We can then bring the data into the realm of the social issues and apply the science and discuss best to move forward to improve the lives of all humans and our environment. Without a firm foundation based in data and reason, however, science becomes little more than a slogan devoid of its value.

A prime example of how the curriculum prioritizes emotion of science occurs, in module 1, “Asthma & Wildfires: Human Story + Scientific Story.” Slide 4 introduces an “Internal Dialogue”, a warm-up activity intent on connecting students to a particular narrative about Rachel, the mother of a child with asthma. Prior to addressing any science questions or concepts, the writers plant an emotional seed using leading questions around imagining and connecting to human emotions about the narrative as opposed to connecting to and using objective scientific methods. They ask students, “Name some of the emotions that you imagine” and “What comes up for you as you think about Rachel’s emotions and life factors?” This moving “human story” lays the groundwork of the entire curriculum, placing greater value on emotion and anecdote over science and data.

As a professional educator I recognize the importance of utilizing guiding questions for lessons. Where the curriculum goes off track is the duplicitous manner in which students are being led. Instead of first introducing their primary data source, the Washington Tracking Network (WTN), and having students examine the data with an open mind, the writers have pulled on students’ heart

strings with the social narratives. This evokes emotional reactions in students, such as sadness, anger, and fear, which affects how they are expected to examine the data. This curriculum states that students should look at data, analyze it, and draw scientific conclusions, but in reality, it leads students to predetermined conclusions within the specific parameters of social and environmental justice.

Each module contains “Key Questions” which are frequently repeated to remind students exactly where to focus their learning. These key questions are not guiding scientific questions but rather questions around societal issues, emotions, and taking social action.

The “Key Questions” of Module One ask students, “What are some of the key social and environmental factors that Cora & Rachel have been facing? How can Rachel prepare to support Cora’s health as she grows up? What community-level and state-level actions can reduce harm to people who are vulnerable to asthma?” These are not questions regarding data but questions around sociology and humanities. This curriculum continues along a similar path with its “Key Questions” in Module 2. This time the questions focus students’ attention on social issues for pregnant black women, asking students about “community-level and state-level actions” – political questions rather than scientific assessment. The leveraging of students’ emotional currency should never be part of teaching science.

The writers purport that they are “doing science” with phrases such as “WTN: Data – of course!” yet the curriculum is clearly written in such a way as to create an activist lens that distorts the analysis and interpretation of data. The continuous interjection of emotional narratives while then asking students “how do you feel about...” is manipulative and completely contrary to the objectivity and integrity of the established scientific process.

Another example of how the curriculum’s writers determine what conclusions can be drawn from the data occurs in Module 4, slide 47. Here the writers argue, “We need more voices ‘unsilenced’ ... analyzing, interpreting, and speaking at the intersections of science and humanity.” However, science is not science when we are injecting subjective considerations and discouraging students to objectively analyze data. Science is a tool we use to observe, ask questions, and discover our world. The human condition benefits significantly from science conducted with rigor and objectivity. Science conducted with emotion and bias is not science, and if disguised as science can seriously harm the human condition. But it is imperative that the investigative process remain undiluted and free from activist emotion. It is only after the application of the proven scientific process that discussion regarding intersections of science and humanity should occur.

Another anti-science thread that occurs in the curriculum is the presentation of what they call “authentic data.” This term first appears in Module 4, which says in its subtitle that the authors of the curriculum are bringing science and engineering practices “alive for equity and environmental justice.” In slides 3-7 the writers build their case for “authentic data” citing criteria from the Next Generation Science Standards, Science and Engineering (SEP) Practice 4, Analyzing and Interpreting Data. The writers have included “attend to equity” as a key feature of “analyzing

and interpreting data.” They go on to further define and focus on equity principles with guiding questions, “Who is the data about? Whose voice is heard? Whose humanity matters?” Data are not authentic when students are being told what conclusions should be drawn.

There is an argument to be made that some data sets or research are incomplete because they have not considered all populations. For example, the lack of crash test dummies that are the size of women may have resulted in more injuries to women.³ These are legitimate issues, but the curriculum goes well beyond that and encourages students to “Challenge stereotypes of sexism, racism, poverty, ableism.” Rather than ensuring that data are complete, the curriculum encourages the inclusion or preference of unscientific anecdotes – consistently called “lived experiences.” Indeed, they instruct teachers to “Plan for time to discuss inequities that emerge from students’ personal issues.” The authors of the curriculum are not arguing for complete data, but for “authentic” data that privileges anecdotes and “personal issues” as an excuse to dismiss the scientific process when it is politically convenient.

Additionally, authenticity cannot be objectively determined. Who determines if data is authentic? What is the standard? From the writers’ perspective “authentic” data is interpreted in a way that leads students to the writers’ pre-determined conclusion.

Another concept promoted by the curriculum is the concept of “community wisdom.” In Modules 3 and 4, it is introduced in one of the Key Questions, “How can I use ‘community wisdom’ to prioritize and respond to climate impacts?” It’s a reoccurring theme throughout Modules 4 and 5 in various ways, such as “Community wisdom for gaining knowledge and taking action”, “Seek community wisdom”, “Public Health Departments routinely listen to community wisdom...and so should we!”, and “using community wisdom to understand and design solutions to public health issues.”

It is unfortunate that the curriculum writers do not clearly define community wisdom, which leads us to assume they are referring to various members of any given community. But who exactly are these vocal members that we should be seeking out and listening to? Why should we listen to them? Are we allowed to question their community wisdom? What if certain community groups don’t understand the full picture or have incorrect data? How is community wisdom different than groupthink?

Often people groups have specific motivations that we must consider, such as political or monetary gain, which puts us in danger of only hearing the loudest voices. We need to hear people’s stories. However, community wisdom should not override scientific data. Indeed, the scientific process is at its most valuable and important when it contradicts or supplements common wisdom, teaching things that would not have otherwise been discovered.

³ “Improving safety for women requires more than a female crash test dummy,” Insight News, Insurance Institute for Highway Safety (IIHS), September 15, 2022, at <https://www.iihs.org/news/detail/improving-safety-for-women-requires-more-than-a-female-crash-test-dummy/>.

There should be a clear distinction made regarding community wisdom as claimed in this curriculum, versus indigenous knowledge, which has been used in decision making for millennia. With traditional knowledge, which humans have generated throughout human history, information was gathered in real time, by using trial and error processes, and resulted in immediate feedback for the community. The use of this traditional or indigenous knowledge connects people to the process. This is different than what is occurring in this curriculum, the promotion of a collectivist mindset by discouraging students from contradicting groupthink.

Indeed, statements from UNESCO and others recognize that indigenous knowledge, while complementing scientific knowledge, is different than the scientific process. Again, it is appropriate to note that there are factors to consider outside the scientific process, but a scientific curriculum should first provide students the tools to understand and apply the scientific process. Students should understand the difference between the scientific process and political and subjective judgements that can be informed by that process. In this curriculum, the difference is intentionally obscured.

Conclusion

Science education has traditionally focused on guiding students in the scientific method and the process of how to think clearly based on evidence and fact. This curriculum is focused on teaching students what to think based on emotion and political concerns and will undermine teaching students about science and the scientific method.

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