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Last night at 10:50 pm I testified before the SBOE about an environmental systems book called Environmental Science that was anything but science. We should not be misleading our kids and scaring them away from the sciences because "science hurts people and the environment". I strongly urged rejection of this "techbook" as it was called.

- 1. It addressed violence and malnutrition as absolute results of drought caused by global warming. It never mentioned global cooling which is the other part of the climate cyclical phenomenon and should not be insinuated into the science portion of education. There is drought in many parts of the world and violence is not an absolute result of that condition.
- 2. Pictures of holes in the Ozone depicted the hole expanding but the picture dates stop in the year 2000 and scientists have reported and showed recent (2000-2013) pictures of the same Ozone layer healing and the hole decreasing in size.
- 3. Depicts population maps overlapped with erosion problems failing to point out the topography and geologic structures in the same areas that are especially prone to erosion irrelevant to population density.
- 4. There is a isolated box that states hydraulic fracturing might harm water wells in the area of fracking activity in direct contradiction to the EPA statement that no evidence of hydraulic fracturing contaminating groundwater has been found.
- 5. This "techbook" gives absolute outcomes on environment, air quality, economic destabilization, necessity for taxation based on data, studies and information that is old and has been deemed incorrect, absolutely false and partially true.
- 6. The suggest that there would be a \$1500 per year decrease in everyone's energy bills if they just install energy efficient windows. That is absurd and cannot be proven to be true since many homes already have them and individual households use differing amounts of energy depending on the number of people in the home, age brackets and number of appliances.
- 7. Using one scientist's estimation of kilowatt savings and endorsing ENERGY STAR products is not only inappropriate it is lacking scientific testing on a broad scale.
- 8. Connecting to math from the teachers edition makes an invalid assumption that Germans use less water than United States citizens and thus the US should save more water through green technology.
- 9. RETEACH sections to change lifestyle choices in a science class have nothing to do with science. This has the potential for children to conflict with the lifestyles their parents have worked hard to afford for them and can create an argumentative situation in the homes that cannot afford

to make major changes to their living conditions, which could result in psychological or self esteem problems of the students.

- 11. Offering alternative energy sources without full explanation of the negatives associated with them is an incomplete set of information for the students that leads to false conclusions.
- 12. Proposing mass usage of hydrogen gas for fuel is ignorant of the volatility of the gas and the explosive nature of this type of fuel which would endanger users. It is not ready for mass production.
- 13. Speaking of wind power as though it is the abundant, inexpensive and the solution to all of our energy needs is false, naïve and misleading. It takes 500 gallons of diesel fuel per month to START every 75 windmills that are used commercially produced electricity leaving a footprint and creating electricity with two forms of energy, fossil and wind, instead of just one. The text also fails to point out that wind energy is not reliable, and cannot be transported over great distances so often times it is generated in area with low population density.
- 14. Pictures of mining operations from the 1850's and the early 1900's are misleading toward the mining industry and misrepresenting how mining technology operates in current day.
- 15. Presenting hybrid cars as an energy efficient alternative without presenting the excessive cost of the batteries that we have no place to dispose of when they no longer work.

These examples only scratch the surface of the misleading, inaccurate and partial explanations of our global environment. We need students informed with accurate, factual and fully explained science. I wish I had more time to address all of the inaccuracies in this "techbook" but time is not on our side. I suggest you vote on the side of caution and reject this failed attempt at creating opinion to be taught as science.

This is very similar to Common Core with the teachers being told what leading questions to ask and how to present the materials by showing how efficient something like fluorescent light bulbs are without giving equal time to disposing of the used bulbs that are filled with gas that hurts the Ozone.

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