



Jones, Stephanie

From: crwald@aol.com
Sent: Wednesday, June 23, 2021 2:58 PM
To: ED, State Board of Ed
Subject: [External] Pennsylvania Science Standards

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To: Ms. Karen Molchanov, State Board of Education Board,

I offer these comments not as a credentialed educator, but instead as a Pennsylvania citizen concerned that a democracy can only succeed if its voting citizens are educated. Thus, Pennsylvania's Pennsylvania Science Standard are crucial to ensuring that democracy does succeed, in a way beneficial to all its constituents.

Unfortunately, the Science Standards as currently written do not do this. The failure to include biodiversity in the standards is a shortcoming that must be addressed. I do not expect you to include biodiversity--as well as related subjects such as ecology, and ecosystems--based on my thoughts. But please consider the thoughts of 126 Nobel Laureates who arrive at the same conclusion regarding biodiversity.

<https://www.nationalacademies.org/news/2021/06/our-planet-our-future-statement-signed-by-126-nobel-laureates-delivered-to-world-leaders-ahead-of-g-7-summit> This is just the latest of many such statements by Nobel Laureates and other leading experts.

Pennsylvania, along with the rest of the world, is losing species at an alarming rate. This loss of species is causing the unraveling of Pennsylvania's ecosystems. Invasive species, climate change, and habitat loss are just three of the causes.

Further, this ecosystem degradation is a threat to human health both mentally and physically. There has been much written about the need for "green time" outdoors for our mental well-being, and native species have been shown to have the most positive affect. [cohab-policy-brief1-en.pdf \(cbd.int\)](#) ; [Is conserving biodiversity the key to good mental health? \(theconversation.com\)](#) ; [Biodiversity and Health \(who.int\)](#)

However, zoonotic diseases are another reason for protecting biodiversity. It has been shown that the loss of biodiversity has increased the incidence and spread of Lyme disease. <https://pubmed.ncbi.nlm.nih.gov/25544324/> ; [The ecology of infectious disease: Effects of host diversity and community composition on Lyme disease risk | PNAS](#) ; [Biodiversity and disease: a synthesis of ecological perspectives on Lyme disease transmission - PubMed \(nih.gov\)](#)

Lastly, biodiversity loss threatens economic well-being as well: [5 reasons why biodiversity matters to health and the economy | World Economic Forum \(weforum.org\)](#)

To not include biodiversity in the Pennsylvania Science Standards is an omission that must be addressed.

I have only scratched the surface with the above references. Should you wish any additional information regarding this I can be reached at: crwald@aol.com; or (717) 318-1903.

Sincerely,

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