Curriculum Units by Fellows of the National Initiative 2008 Volume VII: Urban Environmental Quality and Human Health: Conceiving a Sustainable Future

Mercury: An assessment of its life

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Mercury is as ubiquitous as it is toxic, but people don't know where it is, what it is, or what we can do to change levels of it in the world around us. To a great extent, we also may not know how to regulate our exposure. The purpose of this unit is to teach learners about the natural and anthropogenic ways that mercury cycles through our environment, to teach about the different types of mercury, and to teach about the different impacts that mercury in the environment has; on top predators in a food chain, on the ecosystem as a whole, and on human health. Additionally, the unit examines that mercury is a known pollutant with health risks, yet is still is widely used to make energy efficient and electronic devices. The final outcome of the unit of study will be an action plan-learners will be active in changing the status of mercury in the environment by building a recycling plan than allows the community to recycle electronics in our school. Additionally, learners will understand that individual choices balance risk, and that to navigate decision making, the risk involved in all factors must be known and assessed.

By looking at different types of pollutions and green technologies as systems of decisions and actions, and balancing themselves and their decisions within those systems, they can learn to make decisions that are more positive for the environment, and they can learn to share that information with the greater community, further solidifying their roles as active participants in society. Furthermore, they'll realize that each decision has a risk/benefit analysis which is never simple. When you realize the complexity of the decisions involved, you're able to make informed decisions because you're able to look at both sides of an issue. This lofty goal is one that I hope to achieve using this unit.

(Developed for Environmental Science, grades 9-10; recommended for Environmental Science, grades 9-12)

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