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Curriculum Units by Fellows of the National Initiative
2018 Volume V: Manipulating Biology: Costs, Benefits and Controversies

Chemical Footprints: Health Threats of Food Toxins?

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"Give us this day our daily bread", can now be inheriting a new interpretation. This insight possibly would read "Give us this day our daily poison" signifying the toxic chemicals humans ingest on a daily basis. How many times do you see middle school students with a bag of snack foods, and caffeinated energy drinks, and insisting this is their lunch?

This 7th grade unit will identify common toxins that students ingest on a daily basis. I will incorporate information concerning genetics, how toxins accumulate in their bodies, and how toxins can be passed along to children. I feel it imperative to introduce and establish a brief history of genetics / DNA, to set the foundation for the unit. Added building blocks will cover food sources manipulated by: adding hormones, using food additives to enhance and enrich taste, chemicals that extend the shelf life of food, and pesticides sprayed on produce that can relocate permanently to their body systems.

Topics emphasized here will cover problem solving, analytical writing, collaboration, communications and creativity which all 21st Century learners need to possess. NGSS standards in life sciences, and Earth sciences will be addressed at the middle school level.

(Developed for Life Science, Physical Science, and Health, grades 7-8; recommended for Health, grade 6)