

Teaching Environmental Justice Through a Community Soil Lead Testing Project

Carrie Nielsen

Associate Professor of Biology and Environmental Science Cabrini University

The Ongoing Problem of Childhood Lead Exposure

- Over half a million American children are being harmed
 - Disproportionately Black and brown kids
- Lead causes permanent damage to developing brains
- Various sources
 - Pipes
 - Paint
 - Soil



Community-Based Environmental Science Project

1. I contact childcare centers.

- 2. Students collect soil samples
- Our collaborator at Penn's The Center of Excellence in Environmental Toxicology measures lead concentrations.
- 4. Students present results to community partners, along with recommended actions
- 5. Kids are protected!





Partnerships



County childcare organizations

Individual childcare centers

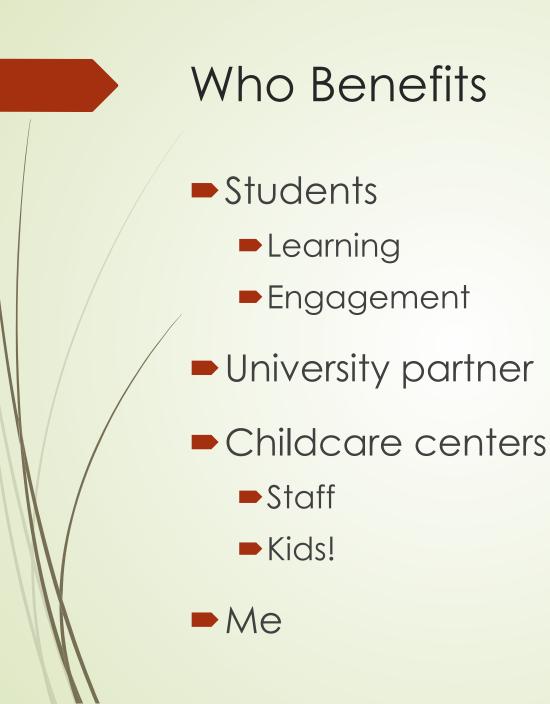


- Center of Excellence in Environmental Toxicology (CEET) at Penn's Perelman School of Medicine
 - They test our samples using an X-Ray Fluorescence Spectrometer
 - We contribute results to their GIS project

Our Results So Far

- 18 out of 20 centers tested safe
- One had high levels under a window
 - Put down mulch
- One had high levels throughout
 - Students started a GoFundMe to raise money for sod









Thank you!

Please feel free to contact me: cbn24@cabrini.edu

Also check out CEET.Upenn.edu

	Greater than 1,200 ppm: Soil at or above this level is not safe for any use with children. Contact EPA at: (215) 814-3178 for more information	
100	Do not garden in soil at or above 1000 ppm	
1000	Soil lead levels between 400 and 1000 ppm can be unhealthy especially for children under six years of age because they are growing rapidly and tend to put their hands and objects in their mouth.	
900	We recommend	
800	Take shoes off before entering a home Wash hands after outdoor play	
700	Change clothes after outdoor play Wet dust and mop homes	
600	Wash dust and dirt off porches and sidewalks	
500	Purchase a HEPA (high efficiency filter) vacuum cleaner	
400	Greater than 400 ppm: Avoid growing low-growing leafy vegetables which a to clean. Children should not be playing in this soil. Safe as a play area if so (i.e. grass)	
300		
200	Greater than 200 ppm: Soil lead levels in many urban areas exceed this level	
200		
	Greater than 150 ppm: Keep children out of garden soil. Do not grow roc Safe to grow legumes and fruits.	t crops
150	Greater than 150 ppm: Keep children out of garden soil. Do not grow roc Safe to grow legumes and fruits. Less than 150 ppm: Safe to garden and children to play. All food crops are grow.	
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