

TOXIC CITY SICK SCHOOLS

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Edited by Jim Neff; photos by Jessica Griffin
The Philadelphia Inquirer & Daily News



Supported by grants from USC Center for Health Journalism, the Dennis A. Hunt Fund for Health Journalism, and the Lenfest Institute for Journalism.

**6-year-old Dean Pagan
landed in the hospital
with a 46 blood lead
level from eating paint
in his classroom.**



Dean has lost his ability to do simple math,
like adding three plus three in his head.

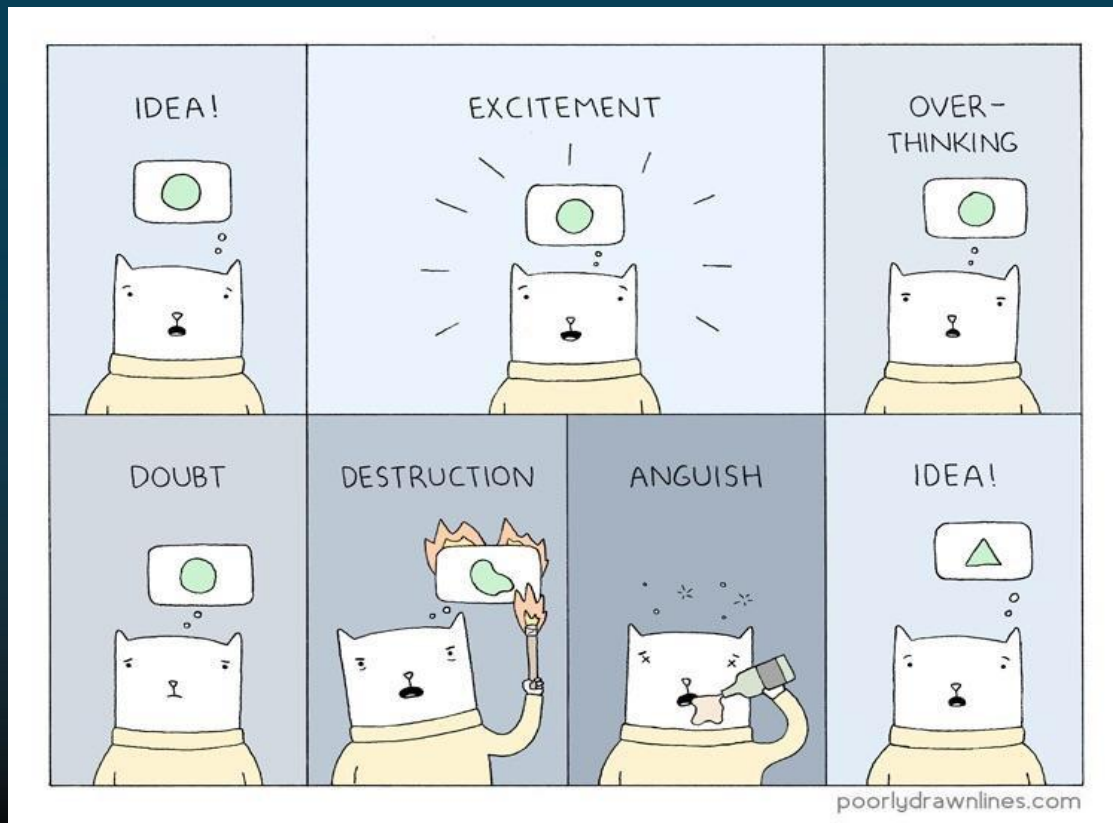


So you're thinking of investigating environmental hazards inside public schools?

Asthma triggers:
mold, rodents and
cockroaches

Carcinogens:
asbestos fibers and
silica dust

Toxins:
lead in water and
damaged lead paint
(and lead dust)



OK, how does your school district track problems and how is that data stored?

- Maintenance logs
- Work orders
- Asbestos surveys (AHERA)
- Drinking water survey and test results
- Building-level asthma numbers (# of students with asthma, # of attacks by month, # of times meds given)
- Paint and plaster surveys
- Facility Condition Assessments (FCAs)
- Renovation and construction contracts and budgets

The school district
paid an engineering
firm to rate its 300
buildings from best
to worst

This became our first
dataset



PARSONS

School District of Philadelphia Facility Condition Assessment



January 2017

delivering a better world



Some schools
rated so poorly
it would be
cheaper to
replace them, if
only they had
the land.

Instead they
patch and patch

PARSONS

BUILDINGS WITH FCI > 60%

21 buildings in SDP's facility portfolio have FCI greater than 60%, of which 1 building is closed.

Tables below categorize the buildings by facility type. This FCI tier does not include any building in Middle / Middle Secondary category.

High School / CTE / Alternative Ed Ctr / CAPA (1 total)

Bldg ID	Building Name	Year Built	Gross Area (S.F.)	Repair Cost	Replacement Value	FCI %
B240001	Peirce, WS (closed)	1929	76,630	\$23,960,422	\$37,771,456	63.44%

Elementary School / LSH / PEC / Spec Ed (12 total)

Bldg ID	Building Name	Year Built	Gross Area (S.F.)	Repair Cost	Replacement Value	FCI %
B525001	Dunbar	1932	53,200	\$13,855,861	\$22,916,164	60.46%
B438001	Peirce, T M	1908	62,000	\$18,843,451	\$30,380,560	62.02%
B129001	Hamilton	1970	89,500	\$28,328,697	\$44,906,143	63.08%
B547001	Cramp	1969	80,088	\$25,678,231	\$39,750,240	64.60%
B622001	Emlen	1926	74,500	\$23,863,790	\$36,832,655	64.79%
B820001	Allen, Ethan	1930	66,482	\$21,838,552	\$33,465,820	65.26%
B630001	Logan	1924	65,000	\$21,335,512	\$32,381,280	65.89%
B221001	Bache-Martin	1906	45,300	\$16,345,458	\$23,575,460	69.33%
B623001	Fitler	1898	38,000	\$13,989,789	\$19,207,000	72.84%
B541001	Sheppard	1898	34,000	\$13,236,239	\$17,275,280	76.62%
B540001	Richmond	1929	48,300	\$16,748,313	\$21,193,242	79.03%
B424001	Cassidy	1924	59,123	\$24,971,234	\$30,252,903	82.54%

School boards approve contractors for lead paint, asbestos, roofing and other repair work

The district also tracks capital spending and makes plans years into the future

**The School District of Philadelphia
The Office of Capital Programs**

**Summary of Completed Capital Projects
5th Councilmanic District**

School	Project	Completion Date	Contract Amount
Adaire	Roof and Masonry Repairs	11/30/07	\$573,174
Allen, Ethel	Transformer Replacement	5/18/07	\$66,622
Allen, Ethel	Major Renovation	7/15/09	\$4,778,602
Allen, Ethel	Fire Alarm Replacement	5/13/11	\$206,358
Bache/Martin	Site improvements Campus Parks	1/23/08	\$85,817
Bache/Martin	Classroom Modernization	6/15/11	\$499,393
Bethune	K to 8 Expansion	4/10/07	\$558,820
Blaine	Elevator Replacement	10/13/10	\$322,015
Bus Garage	Structural Repairs	6/19/07	\$3,369,150
Bus Garage	Structural Repairs	6/9/08	\$1,096,715
Carver, George Washington High	New Addition and Major Renovations	5/30/09	\$36,708,203
Carver, George Washington High	Structural Modifications	8/19/14	\$176,500
Clymer, George	K to 8 Expansion	7/31/07	\$740,105
Clymer, George	Site improvements Campus Parks	12/14/07	\$192,751
Clymer, George	Boiler Replacement	10/1/09	\$1,367,810
Clymer, George	ADA Modifications	1/13/12	\$22,986
Clymer, George	New Electric Service	6/28/13	\$160,972
Dick, William	K to 8 Expansion	10/23/08	\$377,724
Dick, William	Emergency Generator	11/13/13	\$237,750
Dobbins HS	Selective Building Demolition	6/25/15	\$109,800

Our best data: We used school maintenance logs to come up the most rundown elementary schools and guide staffers to test. (In Philly, it's called the IEQ dashboard)

Here, JB Kelly elementary had moldy, damaged asbestos in a kindergarten room:

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Location	ULCS No	II	Date Issued	Location (Room/Area)	Quantity	Recommended Corrective Action	Category	Trade 1	Additional Trades	Notes	Status	Repaired	Date of Update	Location Closed
Kelly J.B. ES	6470	76	3/16/2016	Room 102		Increase pest management activity at this location.	Point Source	IPM		Mouse dripping were observed in sections of the room around the TV cart and sink.	closed	No	3/24/2016	NO
Kelly J.B. ES	6470	77	3/16/2016	Room 111		Replace the fiberglass pipe insulation on the dual temperature line.	Mold/Moisture	Steamfitting		The mold growth on the insulation was remediated and pipe leak was repaired. The ceiling tiles were missing and the piping needs to be reinsulated	closed	No	4/6/2016	NO
Kelly J.B. ES	6470	78	3/16/2016	Kindergarten (K-3) Back Vestibule		Replace the fiberglass pipe insulation on the dual temperature line.	Mold/Moisture	Steamfitting		Pipe insulation was missing from the line located above the suspended	closed	No	3/16/2016	NO
Kelly J.B. ES	6470	79	3/16/2016	Kindergarten (K-3) Closet		An asbestos Design Data Collection (DDC) package was issued on 3/17/16.	Mold/Moisture	Environmental		Water stained fiberglass pipe insulation was observed. This section of pipe insulation is covered with a layer of asbestos containing textured ceiling overspray.	closed	No	4/13/2016	NO
Kelly J.B. ES	6470	80	3/16/2016	Kindergarten (K-3) Closet		Replace the fiberglass pipe insulation on the dual temperature line.	Mold/Moisture	Steamfitting		Pipe insulation was missing from a section of piping.	closed	No	3/16/2016	NO
Kelly J.B. ES	6470	81	11/10/2016	Room 105	16 LF	A mold Design Data Collection (DDC) package was issued on 11/10/16.	Mold/Moisture	Environmental		Mold growth was observed on the fiberglass pipe insulation located above the suspended ceiling near the teacher's desk.	closed	No	12/29/2016	NO
Kelly J.B. ES	6470	82	11/10/2016	Room 105	1 EA	Evaluate and repair the leaking pipe above the suspended ceiling.	Mold/Moisture	Steamfitting		An active leak was observed on a 4" line located above the suspended ceiling near the teacher's desk. The teacher indicated it has been leaking for months and rusted the metal file	closed	No	1/18/2017	NO

sed by the leaking radiator in the 1st floor hallway.

K	L	M	N
Notes	Status	Repeat	Date of Update
Minor damage was observed on an asbestos insulated pipe riser.	closed	No	3/20/2017
A section of asbestos pipe insulation will require removal to allow for repair to the plaster that was damaged by the leaking radiator in the 1st floor	closed	No	3/20/2017
Water appeared to be leaking from an uninsulated elbow passing through the boiler room window. A small puddle of water was observed on the floor.	closed	No	3/9/2017
Sticky traps with mice on them were observed.	closed	No	3/10/2017
	closed	No	3/10/2017

The IEQ, or Indoor Environmental Quality, database has many fields:

- School
- Room location
- Corrective action
- Repeat problem?
- Status. Fixed?

Photos can be vital. This is what a moldy pipe at JB Kelly looked like:





**Lead paint (right) and
mold growth (below)**





Old buildings with water damage can release lead dust and deteriorate asbestos insulation.



Request copies of federally required AHERA reports on asbestos

This one shows damaged asbestos found in several areas during one school inspection:

Section I – C.4

Information on the AHERA inspection that noted damage to various Building Materials at this location is contained in updates to the Management Plan. These updates are kept on file by the School District of Philadelphia and were reviewed for this project. Work orders are created for Corrective Action responses and tracked for completion. Updates to the Management Plan include the following:

Periodic (Six-Month) Surveillance (Damaged Materials)

<i>Date</i>	<i>Element</i>	<i>Floor</i>	<i>On Site Room Name</i>	<i>Material</i>	<i>Amount of Material</i>	<i>Amount of Damage</i>
10/17/2016	1	BS	Hallway from Stairwell near Cafeteria/Kitchen to Boiler Room	Pipe Fitting Insulation	7 EA	1 EA
10/17/2016	1	BS	Fan Room adjacent to Smaller Cafeteria (Room 15)	Pipe Insulation > 6 inch	45 LF	1 LF
10/17/2016	1	BS	Storage Area behind Fan Room	Pipe Insulation 2-6 inch	6 LF	1 LF
10/17/2016	1	BS	Meter Room (Natural Gas & Water) used for Storage	Pipe Fitting Insulation	28 EA	1 EA
10/17/2016	1	BS	Tank Room (Between Meter Room and Boy's Restroom)	Pipe Fitting Insulation	14 EA	1 EA
10/17/2016	1	BS	Tank Room (Between Meter Room and Boy's Restroom)	Tank Insulation	296 SF	1 SF
10/17/2016	1	BS	Classroom 014 (ESOL Room)	Pipe Insulation 2-6 inch	90 LF	1 LF
10/17/2016	1	BS	Hallway between IMC and Boiler Room	Pipe Insulation 2-6 inch	82 LF	1 LF
10/17/2016	1	BS	Gymnasium	Pipe Fitting Insulation	26 EA	1 EA
10/17/2016	1	1	Teacher's Lounge	Pipe Insulation 2-6 inch	56 LF	1 LF
10/17/2016	1	1	Principal's Office Restroom	Pipe Insulation 2-6 inch	71 LF	1 LF
10/17/2016	1	1	Classroom 105	Pipe Fitting Insulation	12 EA	2 EA
10/17/2016	1	1	Classroom 106	Pipe Fitting Insulation	13 EA	1 EA

Ask your district if they've tested the water for lead

In Philly, little was reported about the school drinking water

We published all unsafe water outlets online, including ones they didn't shut off because they just missed the limit

Lead in drinking water

Schools built before 1986 are more likely to have pipes, fixtures and soldering that contains lead, which can leech into the water supply. The EPA says the concentration of lead in drinking water should not exceed an "action level" of 15 parts per billion (ppb). The district follows a lower threshold, 10 ppb. Ingesting slight amounts of lead can cause loss of IQ and behavioral problems in children.

LOCATION	TYPE	RESULT (PPB)	SAMPLE DATE
Cafeteria - Kitchen end of room	Drinking fountain	276	9/1/2016
Cafeteria - Elevator end of room - facing kitchen	Water cooler fountain	74.1	9/1/2016
Across From Room 508	Drinking fountain	56.1	8/18/2016
Across From Room 503	Drinking fountain	43	9/1/2016
Outside Room 115 - Right	Drinking fountain	36	8/18/2016
Basement - outside of Room 5D	Drinking fountain	36	8/18/2016
Teachers Lounge - Left	Drinking fountain	32.8	8/18/2016
Outside Room 321 - Right (left side has been removed)	Drinking fountain	28.1	8/18/2016
In the cafeteria - on the far wall past the kitchen	Drinking fountain	22.1	8/18/2016
Outside Room 321 - Right (left side has been removed)	Drinking fountain	21.4	9/1/2016
Outside of Room 17 - left	Drinking fountain	19.9	9/1/2016
Outside of Room 17 - left	Drinking fountain	19.7	8/18/2016
Across from Room 13	Drinking fountain	18.2	9/1/2016
Across From Room 503	Drinking fountain	16.6	8/18/2016
Cafeteria - Kitchen end of room	Drinking fountain	16.2	8/18/2016
Across from Room 13	Drinking fountain	16	8/18/2016
Outside Room 317	Drinking fountain	15.2	8/18/2016
Cafeteria - Elevator end of room - facing kitchen	Water cooler fountain	15.2	8/18/2016
Outside Room 414	Drinking fountain	13.2	8/18/2016
Outside Room 211 - Left	Drinking fountain	13.1	8/18/2016
Across from Room 303	Drinking fountain	12.9	8/18/2016
Outside Room 115 - Left	Drinking fountain	12.5	8/18/2016
Outside Room 305 - Right (left side has been removed)	Drinking fountain	12	8/18/2016

Where else can you get data on school conditions?

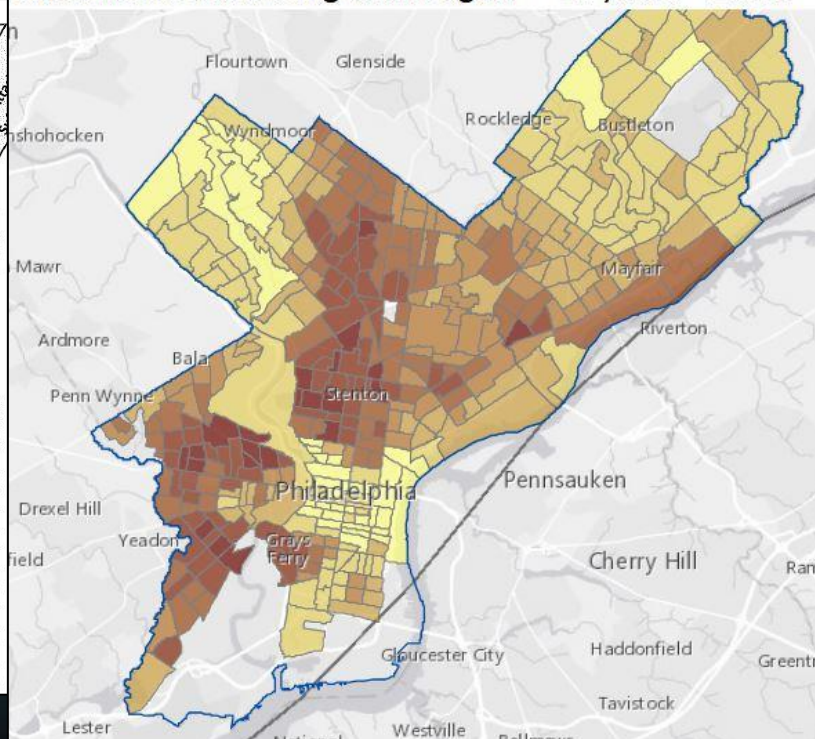
Local and State Health Departments

- Asthma rates; lead poisoning rates
- Asbestos permits or notifications
- Cafeteria inspections (rodents and cockroaches are asthma triggers)
- Asbestos complaints: Investigations, violations
- Data on asbestos contractors

The Health Department tracks asthma and so did the district

School Number	School Name	1718 - Enrollment *YTD	1718 - Number of Students with Asthma *YTD	1718 - Total Number of Asthma Medication Given *YTD	1718 - Number of Asthma Attacks Suffered *YTD	1617 - Enrollment	1617 - Number of Students with Asthma	1617 - Total Number of Asthma Medication Given	1617 - Number of Asthma Attacks Suffered	1516 - Enrollment	1516 - Number of Students with Asthma	1516 - Total Number of Asthma Medication Given	1516 - Number of Asthma Attacks Suffered
1010	Bartram, John HS	575	83	0	2	729	100	2	0	716	109	6	0
1020	West Philadelphia HS	470	101	0	4	527	116	12	0	468	102	0	0
1030	HS of the Future	487	104	0	0	490	99	2	0	484	92	4	0
1050	Robeson, Paul HS	306	65	0	0	326	85	2	0	290	76	0	0
1100	Sayre, William L. HS	435	92	0	2	573	124	7	1	515	113	4	1
1130	Tilden MS	369	51	0	4	432	64	5	1	424	65	10	0
1190	Motivation HS	412	75	0	0	393	74	5	2	334	56	3	0
1200	Barry, John ES	652	72	0	0	789	77	12	2	726	89	20	78
1230	Bryant, William C. ES	421	55	0	0	462	69	23	255	468	93	18	45
1250	Catharine, Joseph W. ES	531	63	21	5	630	69	373	320	617	81	35	640
1260	Comegys, Benjamin B. ES	510	71	0	1	577	62	15	48	550	49	2	3
1280	Alexander, Sadie-Penn ES	577	32	0	0	615	65	20	178	549	69	21	13
1290	Hamilton, Andrew ES	539	88	0	16	603	77	30	12	595	92	20	102
1300	Harrington, Avery D. ES	491	64	0	0	563	85	7	1	541	93	22	10
1340	Lea, Henry C. ES	553	106	12	37	594	103	748	102	543	123	32	251
1350	Longstreth, William ES	412	87	0	0	518	126	17	265	497	129	25	123
1360	McMichael, Morton ES	387	33	0	0	418	54	7	39	414	56	9	157
1370	Mitchell, S. Weir ES	522	109	0	11	609	132	35	8	678	133	36	33
1380	Morton, Thomas G. ES	634	75	0	12	722	81	22	102	668	87	25	30
1390	Powel, Samuel ES	268	62	0	12	301	62	29	11	289	57	26	6
1400	Patterson, John M. ES	578	66	0	5	731	98	19	26	693	110	49	87
1410	Rhoads, James ES	555	98	1	30	607	84	35	72	525	60	12	120
1420	Washington, Martha ES	363	93	0	27	424	114	26	8	436	125	31	120
1440	Penrose ES	527	58	0	0	658	71	18	10	610	91	22	19
1460	Anderson, Add B. ES	472	101	0	0	531	110	24	55	538	106	23	152
1470	Locke, Alain ES	442	46	0	0	482	67	1	0	468	84	15	3
1490	Blankenburg, Rudolph ES	449	98	0	6	492	90	23	3	477	86	18	1

current asthma among adults aged >=18 years - 2014



“Visible physical evidence of rodent activity (fresh and old mouse droppings) observed along the kitchen floor...”

OBSERVATIONS AND CORRECTIVE ACTIONS	
Item Number	Violations cited in this report must be corrected within the time frames below.
11	Violation of Code: [48.201] Mouse droppings observed on food storage shelves in the dry food storage area. New Violation.
26	Violation of Code: [48.1028] Open bait observed on the floor of the dry food storage room. New Violation.
36	Violation of Code: [48.981(k)(1)] Visible physical evidence of rodent activity (fresh and old mouse droppings) observed along the kitchen floor and food storage floor perimeters, and on food storage shelves in the dry storage area. New Violation.
45	Violation of Code: [48.671] Unused and defective equipments were observed in the kitchen area. New Violation.
45	Violation of Code: [48.652] Walk-in cooler not properly sealed to the wall and does not permit adequate space for proper cleaning. New Violation.
47	Violation of Code: [48.714] Walk-in cooler unit is not clean to sight. New Violation.
48	Violation of Code: [48.805] Hot water at handwash sink in the food preparation area observed at 78°F. New Violation.
Summary Statements	<p>This inspection has revealed that the establishment is not in satisfactory compliance. Corrective action is required to eliminate these violations. Compliance status will be assessed upon reinspection.</p> <p>You are required under Section 6-502 of the Philadelphia Health Code to correct the violations listed as noted above. Your failure to correct these violations may result in the revocation of your health license and other legal action. Reinstatement of a revoked health license will require payment of another license fee. An appeal to these orders may be made to the Board of License and Inspection Review, Municipal Services Building, 1401 JFK Boulevard Philadelphia, PA 19102-1617</p>
Person in Charge (Signature) Margaret Young Jackson ServSafe exp. 6/9/2022	
Date: 11/01/2017	
Inspector (Signature) Sasha-Gaye Anglin (215) 685-7342	
Date: 11/01/2017	

SEARCH A SCHOOL

THE HAZARDS ▾

ABOUT THE TOOL

SEARCH A SCHOOL

THE HAZARDS ▾

ABOUT THE TOOL

School Checkup

Find detailed reports on hazards inside Philadelphia classrooms.

Select a school to see its report

Search for a school... GO

MAP: Search by location ▶

Search by type (Elementary, Middle, High) ▶

Many of Philadelphia's 130,000 public-school students spend their school days inside buildings that can make them sick and miss school and even send them to the hospital. Children are at higher risk from school hazards as lead dust, damaged asbestos and asthma triggers such as mold, mouse feces and urine, and cockroach parts - all found in far too many Philadelphia classrooms.

(Updated April 2018)



Students are dismissed for the day at Lewis C. Cassidy School, located at 6523 Lansdowne Ave. in Philadelphia, Tuesday, May 1, 2018.

JESSICA GRIFFIN / Staff Photographer

◀ Browse schools

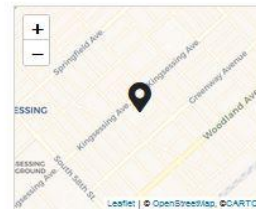
SHARE
SCHOOL



S. Weir Mitchell

5500 Kingsessing Ave.
215-400-7880

School built: 1915
School Level: Elementary
Enrollment: 522 students



Rate of reports per 100 students:

NO REPORTS BELOW AVERAGE AVERAGE ABOVE AVERAGE

Lead paint residue

197 REPORTS

Damaged asbestos

12 REPORTS

Asthma triggers

51 REPORTS

Lead in drinking water

3 REPORTS

Lead paint residue

Lead dust and residue from peeling paint can cause permanent neurological damage, including intelligence loss, hyperactivity and behavioral problems, especially in young children. The district assumes paint in schools built before 1978 contain lead. The deficiencies listed assume the presence of lead paint, based on description and age of the school.

■ DISTRICT ENVIRONMENTAL MAINTENANCE REPORTS ◊ SIX-MONTH BUILDING SURVEYS

LOCATION	DESCRIPTION	DATE ISSUED
Room B6	Flaking paint was observed on the radiator covers. Recommended action: The flaking paint should be removed from the radiator covers and repainted using lead safe work practices. Issue status: closed	11/30/2017 ■
Room B6	Paint and plaster debris were observed on the window sills, conduit, and floors. Recommended action: The paint and plaster debris should be removed from all horizontal surfaces using lead safe work practices. Issue status: closed	11/30/2017 ■
Room B6	Efflorescence was observed on sections of the window wall. Recommended action: The efflorescence should be removed from the walls and repainted as needed.	11/30/2017 ■

**Government/school data
only took us so far. We
wanted more.**

**So we spent a day at a lab
learning how to take
dust-wipe samples to test
for lead and asbestos.**

**But with no access to school
buildings, we needed to
enlist and train staffers.**

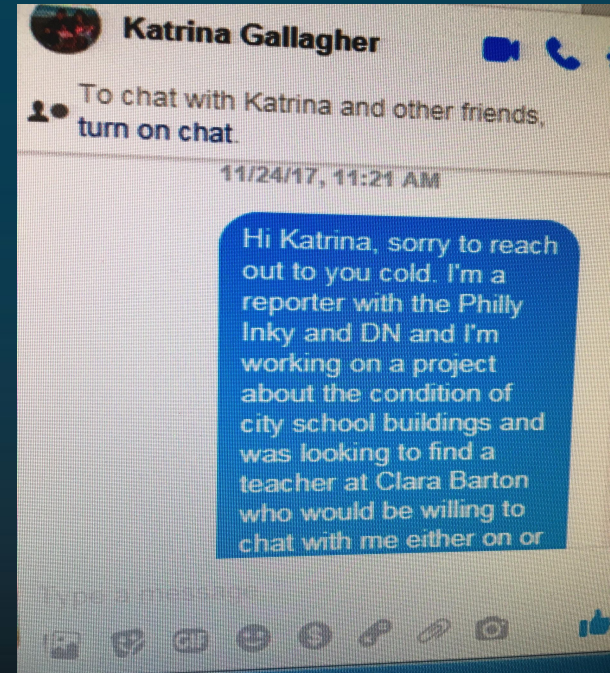


**Finding teachers willing to take samples for us
was like...**



We used a database of school salaries to identify teachers/staff in the worst schools with the worst classrooms. Then, we:

- **Cold called**
- **Sent DMs through social media**
- **Chatted up teachers at union meetings and conferences**



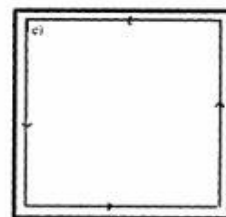
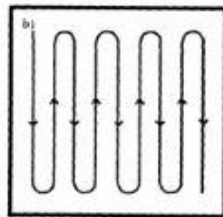
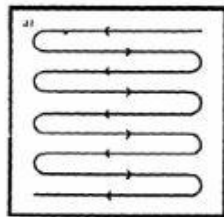
We purchased lab equipment and made testing kits with written instructions for teachers and staff



SAMPLING FOR ASBESTOS FIBERS WITH A DUST WIPE

Thank you for assisting our research project looking at the potential for asbestos fibers in settled dust. Follow these easy steps to complete this test:

1. Find a place on the floor, a shelf, a desk top, a windowsill, a cubbyhole, or another area that appears to have dust or is located near and deteriorated asbestos and is accessible to small children and teachers. (You're looking for damaged or chipped floor tiles, pipe insulation, ceiling tile, plaster, spackle.) If you can, take a photo of the area prior to wiping.
2. Put on a pair of disposable gloves. Open the dust wipe sample packet and unfold the wipe.
3. In a square area that is about 4 by 4 inches (or 10 by 10 centimeters), make as many S-like motions as needed to wipe the entire sample area, moving from side to side and top to bottom of the 4 by 4-inch square. Apply firm pressure on the wipe.
4. Fold the wipe in half, keeping the dirty side in, and repeat the wiping procedure. (see below). Flip the wipe and repeat.
5. Now fold the wipe into an even smaller square (roughly the size of the wipe packaging) and repeat again, concentrating on collecting dust from the edges and corners of the sample area.
6. Stuff the wipe into the sample tube. Put the cap tightly on the container. On the label, write the school name, time and date, room number and specific area from which the sample was taken (such as Rm. 101, floor tile, under window ledge).



We taught them not only *how* to test but *where* to test, thanks to the data

For asbestos fibers, we relied heavily on school AHERA reports (Asbestos Hazard Emergency Response Act):



Asbestos Hazard Emergency Response Act
"AHERA"

THREE-YEAR RE-INSPECTION 2015-2016
and
ASBESTOS MANAGEMENT PLAN
for the

Glacy Elementary School

ELSEVIER

5044 North Warner Street

27428

New Building (1990)

January 2011

Chlorinated and Aromatic Waxes

Accredited Environmental Technologies Incorporated

Criteria Laboratories, Incorporated

G & C Environmental Services, Incorporated

Department of Mathematics, University of Illinois at Chicago, Chicago, IL 60607

LOA Environmental Management, Inc.

The Feltex Company, Inc.
222
222
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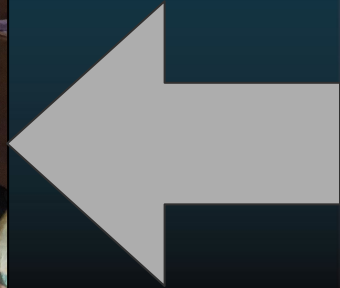
7400 Olney ES 2015 2016 AHERA Three-Year Report.xls

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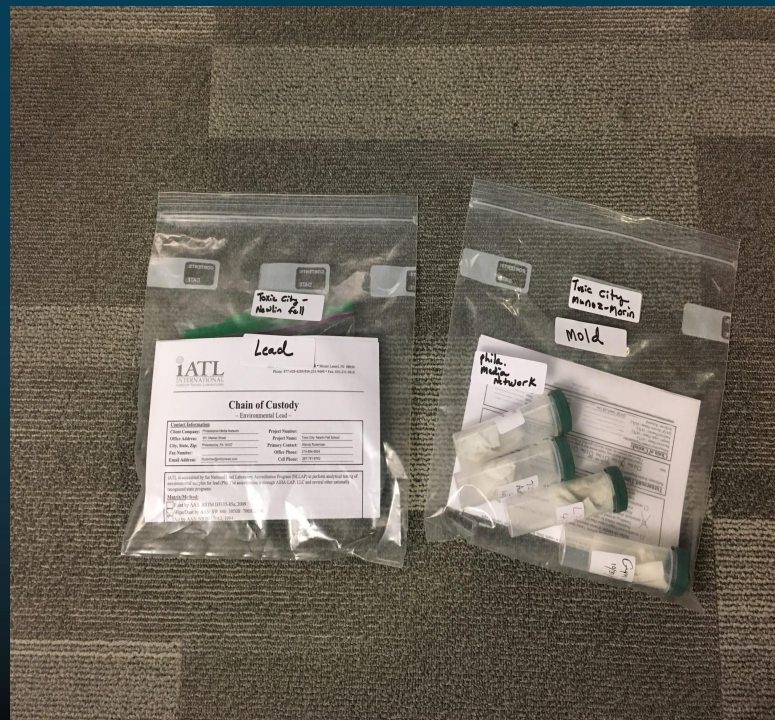
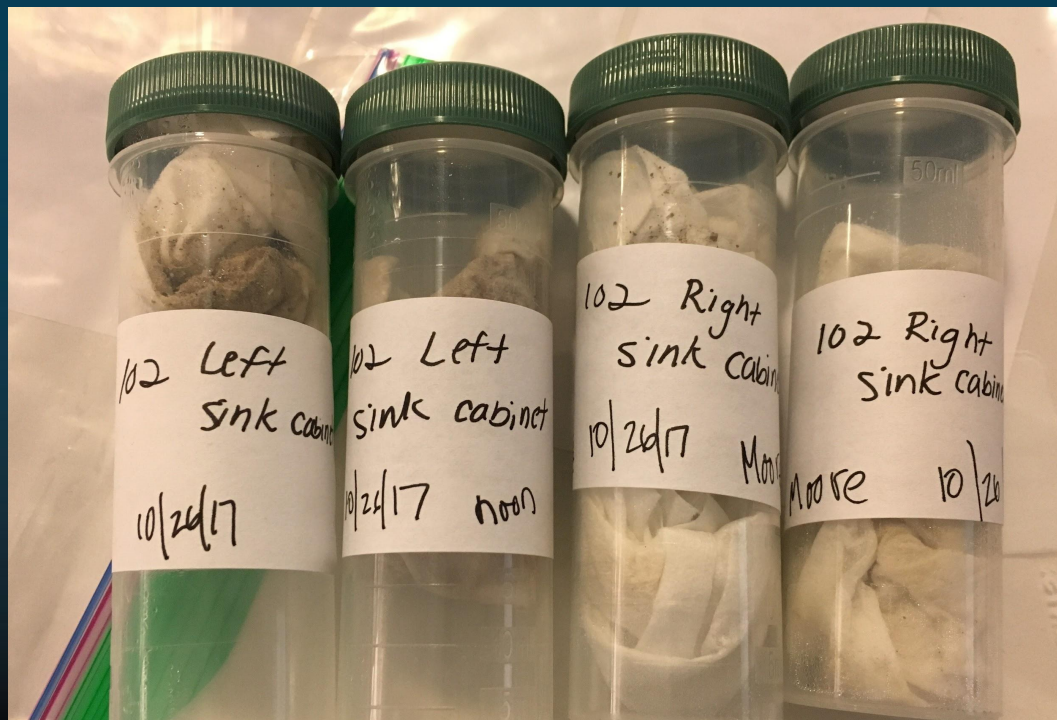
We asked teachers and staff to take photos of where they tested. This helped verify their work

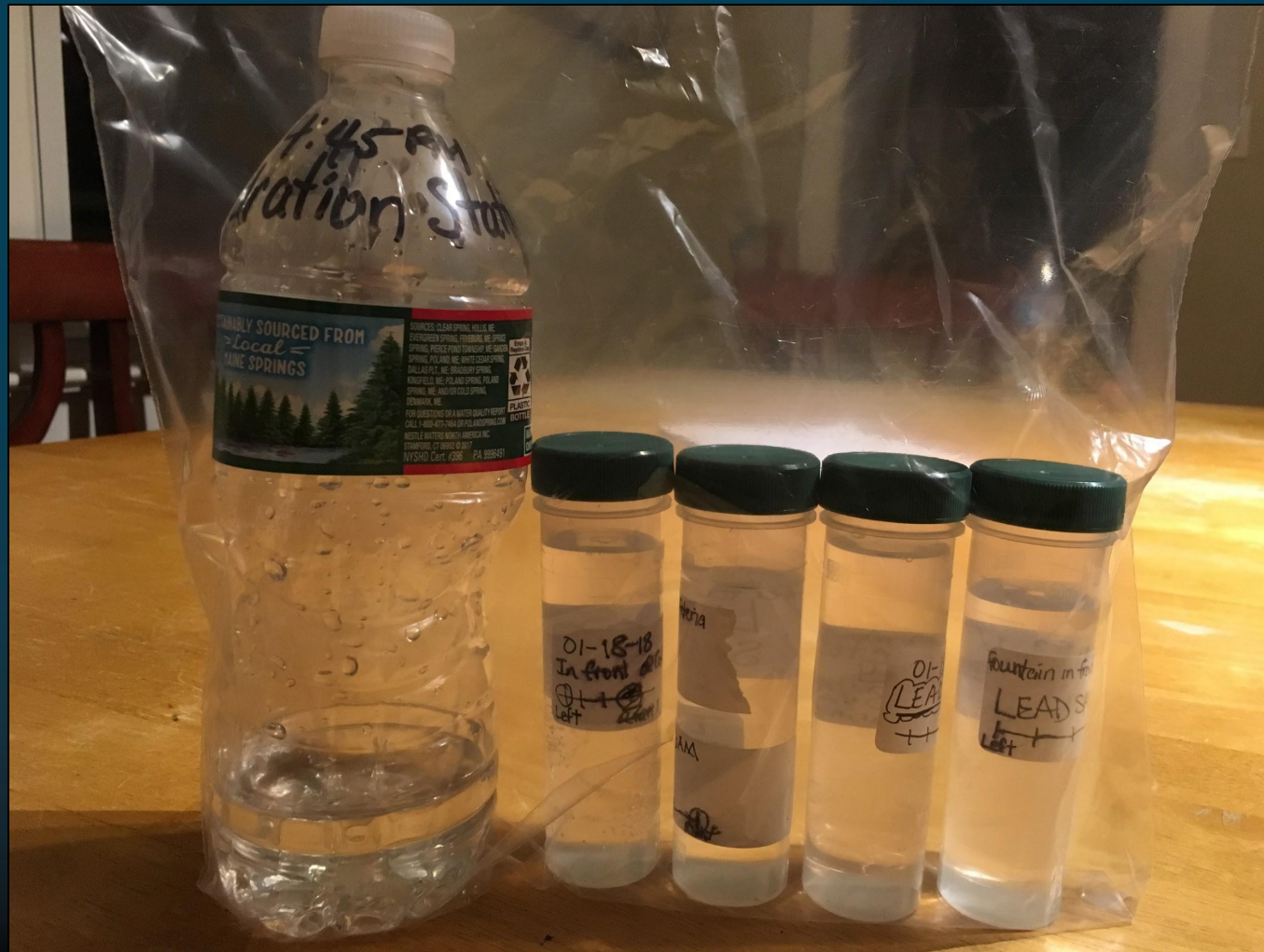


Damaged
asbestos tiles
in a school
auditorium

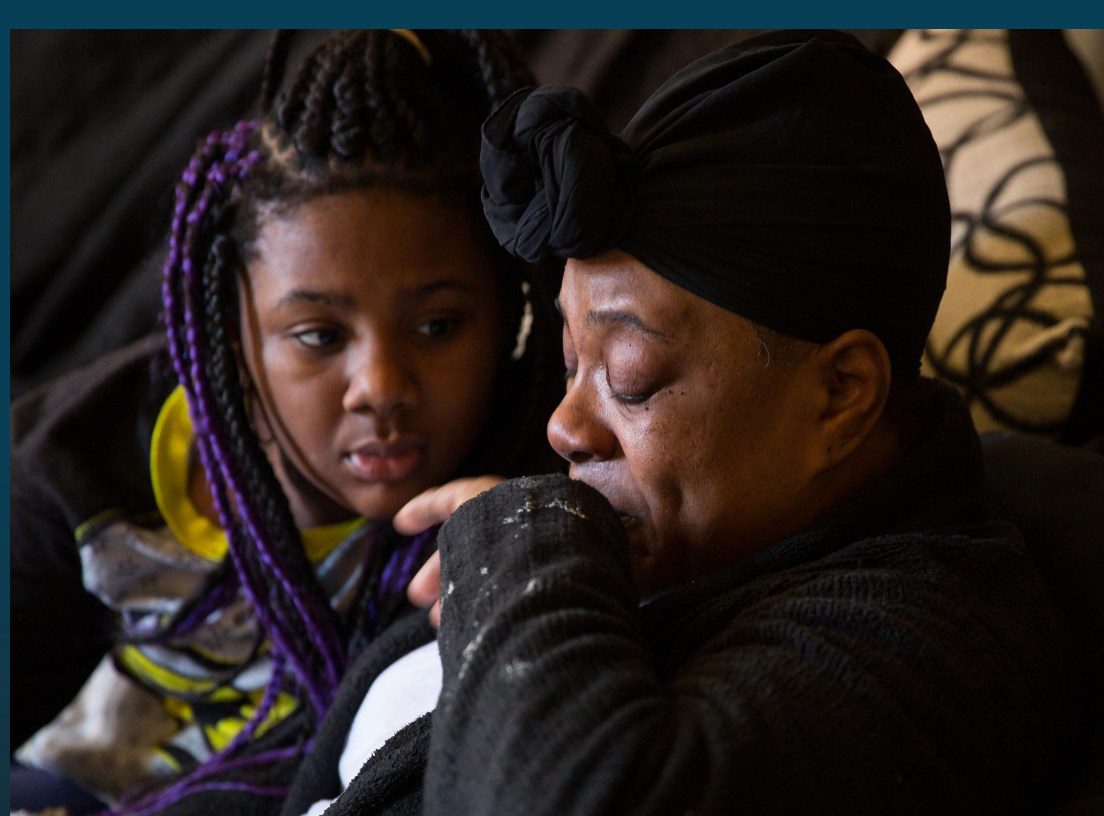


There was some trial and error...





For
instance,
regular
water
bottles
were fine
and MUCH
MORE
DISCREET



This mom was upset that her 10-year-old daughter, who suffers from developmental delays and autistic spectrum disorder, regularly drank from a water fountain at her school that tested at 44.6 ppb.

**8.5 million
cancer-causing
asbestos fibers
in settled dust**



CERTIFICATE OF ANALYSIS


Client: Philadelphia Media Network
801 Market Street, Ste 300
Philadelphia PA 19107
Client: PHI001


Report Date: 6/7/2018
Report No.: 564984 - TEM Dust Wipe
Project: TOXIC CITY: A.S. Jenks
Project No.:

TEM WIPE SAMPLE ANALYSIS SUMMARY

Lab No.: 6522683 Client No.: 1	Location: 106 Closet Floor Near Pipe Area (cm ²): 100 Density (s/mm ³): 942	Concentration (s/cm ³): 4530000 Asbestos Type(s): Chrysotile
Lab No.: 6522684 Client No.: 2	Location: Floor 106 With Scratch Area (cm ²): 100 Density (s/mm ³): 3920	Concentration (s/cm ³): 1890000 Asbestos Type(s): Chrysotile
Lab No.: 6522685 Client No.: 3	Location: Closet Tile Near Pipe Area (cm ²): 100 Density (s/mm ³): 4310	Concentration (s/cm ³): 4140000 Asbestos Type(s): Chrysotile Amosite
Lab No.: 6522686 Client No.: 4	Location: 106 Closet Near Pipe In Front Of Locker Area (cm ²): 100 Density (s/mm ³): 885	Concentration (s/cm ³): 567000 Asbestos Type(s): Chrysotile
Lab No.: 6522687 Client No.: 5	Location: Missing Tile 106 Closet Near Pipe Area (cm ²): 100 Density (s/mm ³): 590	Concentration (s/cm ³): 2840000 Asbestos Type(s): Chrysotile Amosite
Lab No.: 6522688 Client No.: 6	Location: Tile Next To Back Pipe Closet 106 Area (cm ²): 100 Density (s/mm ³): 654	Concentration (s/cm ³): 3150000 Asbestos Type(s): Chrysotile
Lab No.: 6522689 Client No.: 7	Location: Back Tile 106 Closet Near Pipe Area (cm ²): 100 Density (s/mm ³): 1460	Concentration (s/cm ³): 1410000 Asbestos Type(s): Chrysotile
Lab No.: 6522690 Client No.: 8	Location: Scratch Floor 106 Room (Classroom) Area (cm ²): 100 Density (s/mm ³): 154	Concentration (s/cm ³): 74000 Asbestos Type(s): Chrysotile

Please refer to the Preface of this report for further information regarding your analysis.

Date Received: 6/1/2018
Date Analyzed: 06/07/2018
Signature: 
Analyst: Mark Stewart

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

These are asbestos results from an elementary school in South Philly.

Scary amounts of asbestos fibers:

- 4.5 million
- 1.89 million
- 4.1 million
- 567,000
- 2.8 million
- 3.2 million

OVER 100,000 is DANGER LIMIT







We got the crazy idea to test for silica. I'm not kidding. And we did.....





