

**AIR
IT
OUT**

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POLLUTED AIR

contains tiny particles which make it hard to breathe

In the spring of 2013, CUP teaching artist Heidi Neilson worked with James Burke's 8th grade science class (802) at Lyons Community School to explore who is responsible for air quality in the school's neighborhood.

Air is almost impossible to see, and it moves around, so identifying who is polluting the air can be difficult.

To investigate, we went out of the classroom into the neighborhood and took air quality readings, we looked at the clean air act, and we interviewed an environmental lawyer.

This booklet reports our findings on who's responsible for making air pollution in our neighborhood, and all the different levels of people, government agencies, and businesses that are responsible for cleaning it up and keeping it healthy for everyone.

Our neighborhood in East Williamsburg, Brooklyn has really high asthma rates—some of the worst in New York City.

Q: Who is responsible for making it?

A: →

OTHER PLACES

Lots of air pollution blows into NYC from outside the city. We only researched the pollution sources below.

TRAFFIC

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BUILDINGS

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Q: Who is responsible for controlling it?

A: ↘

FEDERAL GOVERNMENT

THE CLEAN AIR ACT is a federal law designed to control air pollution on a national level. It requires the Environmental Protection Agency (the EPA) to develop and enforce regulations to keep air clean to protect our health.

STATE GOVERNMENT

THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION carries out both the state and federal air pollution control and monitoring programs.

CITY GOVERNMENT

PLANYC is a city initiative to reach the clean air standards set by the Clean Air Act. What it does:

- reduces emissions from cars, trucks, and buses by promoting fuel efficiency, cleaner fuels, and cleaner or upgraded engines
- seeks federal legislation to allow state and local governments to provide incentives for fuel-efficient vehicles
- uses federal funding to continue converting diesel and other vehicles to cleaner fuel sources
- enacts regulations to phase out the dirtiest heating oils burned in buildings

TRAFFIC

burns gasoline and diesel fuel

What can the Federal Government do? The Clean Air Act requires manufacturers to build cleaner engines and requires vehicle inspection and maintenance programs, since maintained engines burn fuel better. It also regulates fuels, since cleaner fuels burn with less pollution.

What can the state do? New York State requires vehicles to be inspected and to meet the emissions standards set by the EPA.

Our neighborhood has a lot of truck traffic. We have the Brooklyn Queens Expressway nearby, and our streets connect to the industrial area near Newtown Creek. We counted 28 trucks on Metropolitan Avenue in 2 minutes!

Diesel engines used by trucks and buses pollute much more than cars.

Idling cars and trucks on the street increase air pollution.

What can the city do? New York City has a 3-minute idling limit. The city can fine violators for not turning their engine off while loading or unloading.



What can people do? People can choose to buy electric cars or cars with efficient engines, which would improve air quality.

INDUSTRY, POWER PLANTS

burn fuel and release toxic chemicals

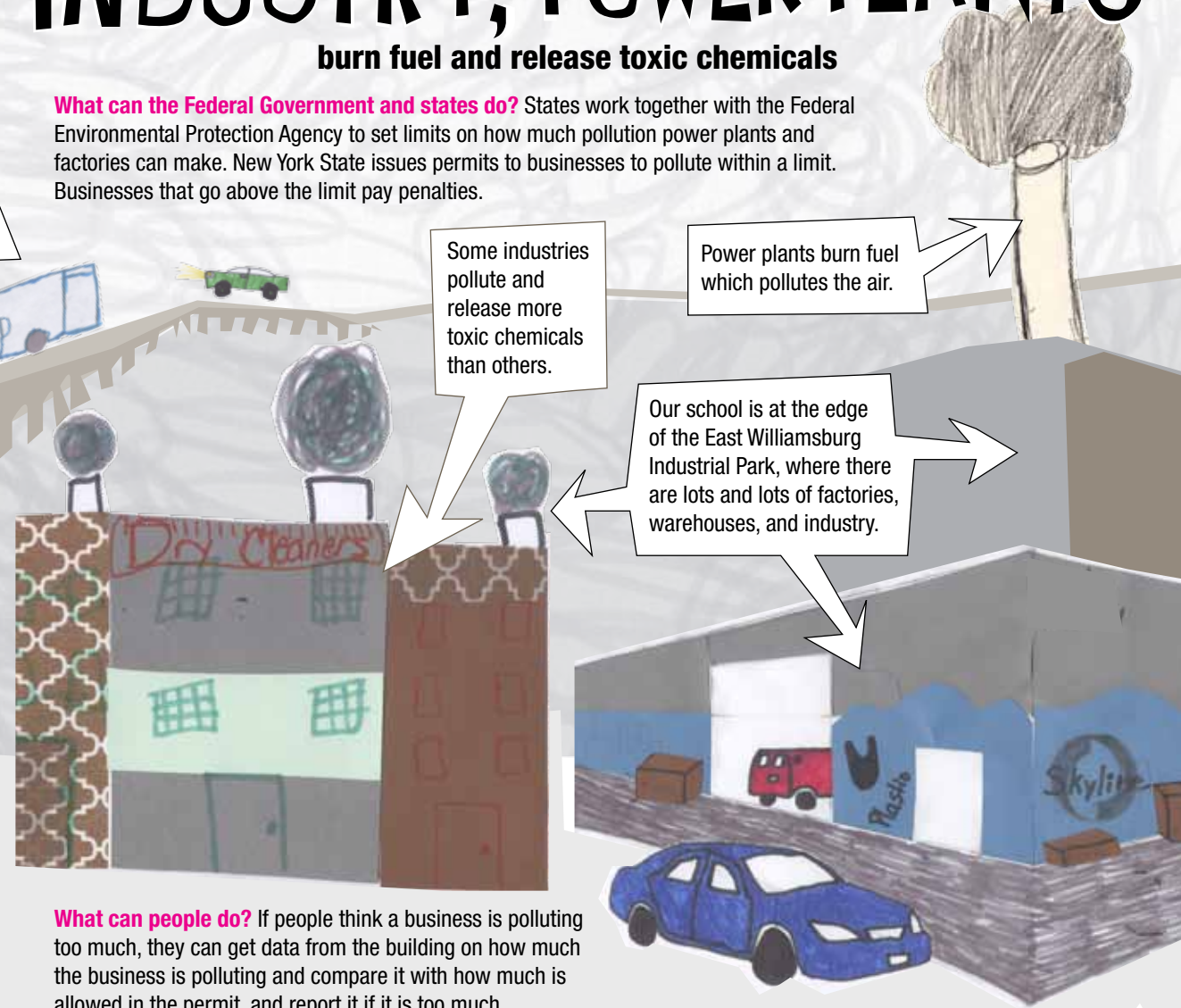
What can the Federal Government and states do? States work together with the Federal Environmental Protection Agency to set limits on how much pollution power plants and factories can make. New York State issues permits to businesses to pollute within a limit. Businesses that go above the limit pay penalties.

Some industries pollute and release more toxic chemicals than others.

Power plants burn fuel which pollutes the air.

Our school is at the edge of the East Williamsburg Industrial Park, where there are lots and lots of factories, warehouses, and industry.

What can people do? If people think a business is polluting too much, they can get data from the building on how much the business is polluting and compare it with how much is allowed in the permit, and report it if it is too much.



BUILDINGS burn heating oil

Buildings burn fuel for heat, and some fuel makes more pollution than others. Natural gas burns more cleanly than fuel oil, and fuel oil comes in different grades—higher grade numbers mean the fuel is less refined and pollutes more.

What can the Federal and State Governments do? New York State issues permits to building owners to regulate how much they pollute.

What can New York City do? New York City has made a rule that requires all boilers in NYC to burn cleaner fuel in the coming years.

YAY!

Our school heats using gas and No. 2 oil!

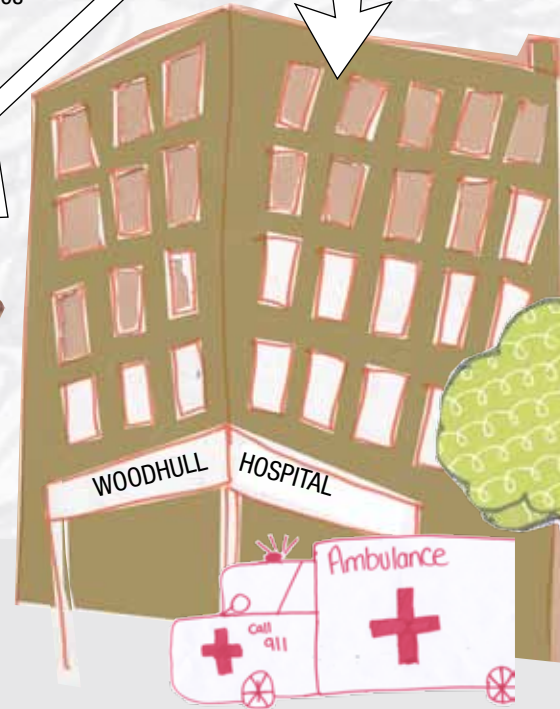
We compared three different types of buildings to find out how much they pollute.



About one third of all schools burn No. 4 or No. 6 heating oil.

So-So

The local hospital burns primarily natural gas and No. 6 fuel as their alternate.



Trees have many environmental benefits including helping air quality—trees remove dust and other pollutants from the air.

BOO!

A big apartment building in our neighborhood burns No. 6 fuel oil.

No. 6 is the dirtiest type of fuel oil—it creates toxic pollution when burned.



Buildings burning No. 4 and No. 6 heating oil are 1% of the total buildings in the city but make more tiny particle air pollution than all cars and trucks in the city combined.

Building owners probably choose to use polluting fuel because when the building's boiler was installed, they didn't know it polluted so much. To change the boiler now would cost a lot of money and that means building owners probably won't change boilers unless they are forced to by the city.

The Center for Urban Pedagogy (CUP) is a nonprofit organization that uses the power of design and art to increase meaningful civic engagement.

City Studies are CUP's project-based in-class and afterschool programs that use design and art as tools to research the city.

To learn more about CUP, visit welcometocup.org

Lyons Community School is small school in East Williamsburg, Brooklyn, committed to providing a broad, stimulating experience in the liberal arts, and preparing students in grades 6 – 12 for college, healthy adulthood and life-long learning.

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