Fine Particulate Matter Air Pollution 101

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Fine particulate matter:

airborne solid or liquid particles that are less than 2.5 microns in diameter. Also known as PM2.5 or soot.

It Kills!!

50,000 deaths in the U.S. annually!!

Size Matters!!

PM10: < 10.0 microns. Penetrates upper respiratory system.

PM2.5: < 2.5 microns. Penetrates lungs.

Ultrafine PM: < 0.1 microns. Penetrates blood.

Ultrafine **< 0.1 <** Fine **< 2.5 <** Coarse **< 10.0**

Composition of PM2.5:

50% ammonium sulfate, 9% ammonium nitrate, 35% carbon, 6% soil, trace or small amounts of metals.

Sources:

diesel engines, smokestacks, burning, boilers.

Diesel PM:

is it more deadly than other PM2.5?

Policy Recommendations:

- **Retrofit Private Fleet**
- **Community Based PM Monitoring System**
- **Moratorium Mechanism**
- **Lower PM2.5 Standard**
- **Precautionary Principle**
- **Ports, Planes & Trains**
- **Alternative Energy Sources**

New Jersey Urban Air Quality Education and Awareness Initiative

Implemented by:

New Jersey Environmental Justice Alliance, Center for the Urban Environment, Clean Air Task Force

Funded by:

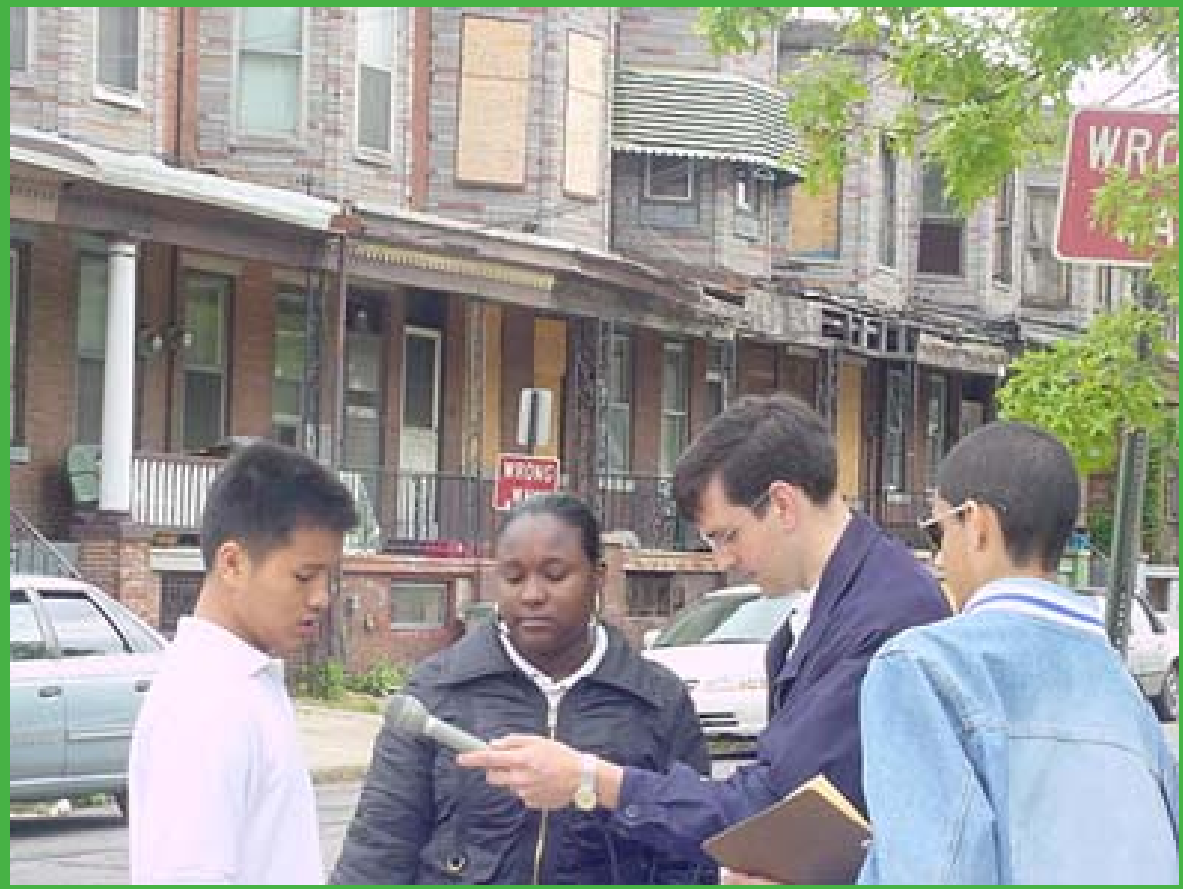
Ford Foundation

Trenton

Newark

Camden

Camden Interview



CURRICULUM:

- **BACKGROUND SCIENCE/MONITORING: SCIENCE CLASS**
- **DATA ANALYSES: MATH CLASS**
- **POLITICAL/CIVIC ACTION: SOCIAL STUDIES/CIVICS CLASS**

END???