

Teaching the Social Determinants of Health: An Environmental Justice Curriculum



APHA:
Increasing Environmental
Health Literacy session

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PHP Mission statement



The Population Health Project promotes dialogue, debate, and action around the ways in which political, economic, and social inequalities interact to affect the health of our society. We educate youth and adults about the links between social justice and health equity, and use this knowledge to advocate for social change.

Today's Talk

- PHP approach/theory
- PHP introductory modules
- Environmental Justice curriculum
- Findings
- Discussion



Population Health Approach

- Improve health of entire population or sub-population rather than individuals
- Population indicators (e.g., life expectancy, infant mortality, happiness)
- Necessitates reducing health inequalities between population groups

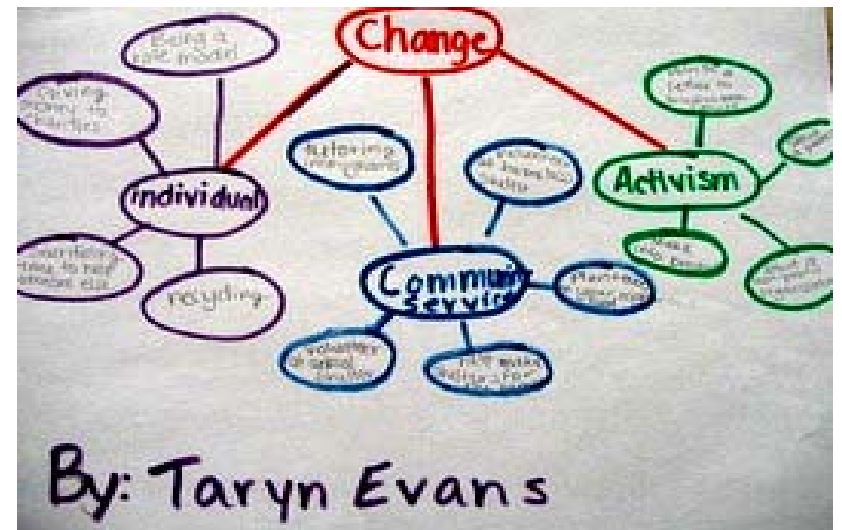
Case for population health approach

1. Individual behavioral factors explain **small** proportion of disease compared to societal factors
2. Individual health behavior approach -limited effect in disadvantaged pops because fails to address issues of **why** behaviors are adopted
3. “Blame the victim” – disadvantaged blamed for illness when responsible factors are **outside their control**

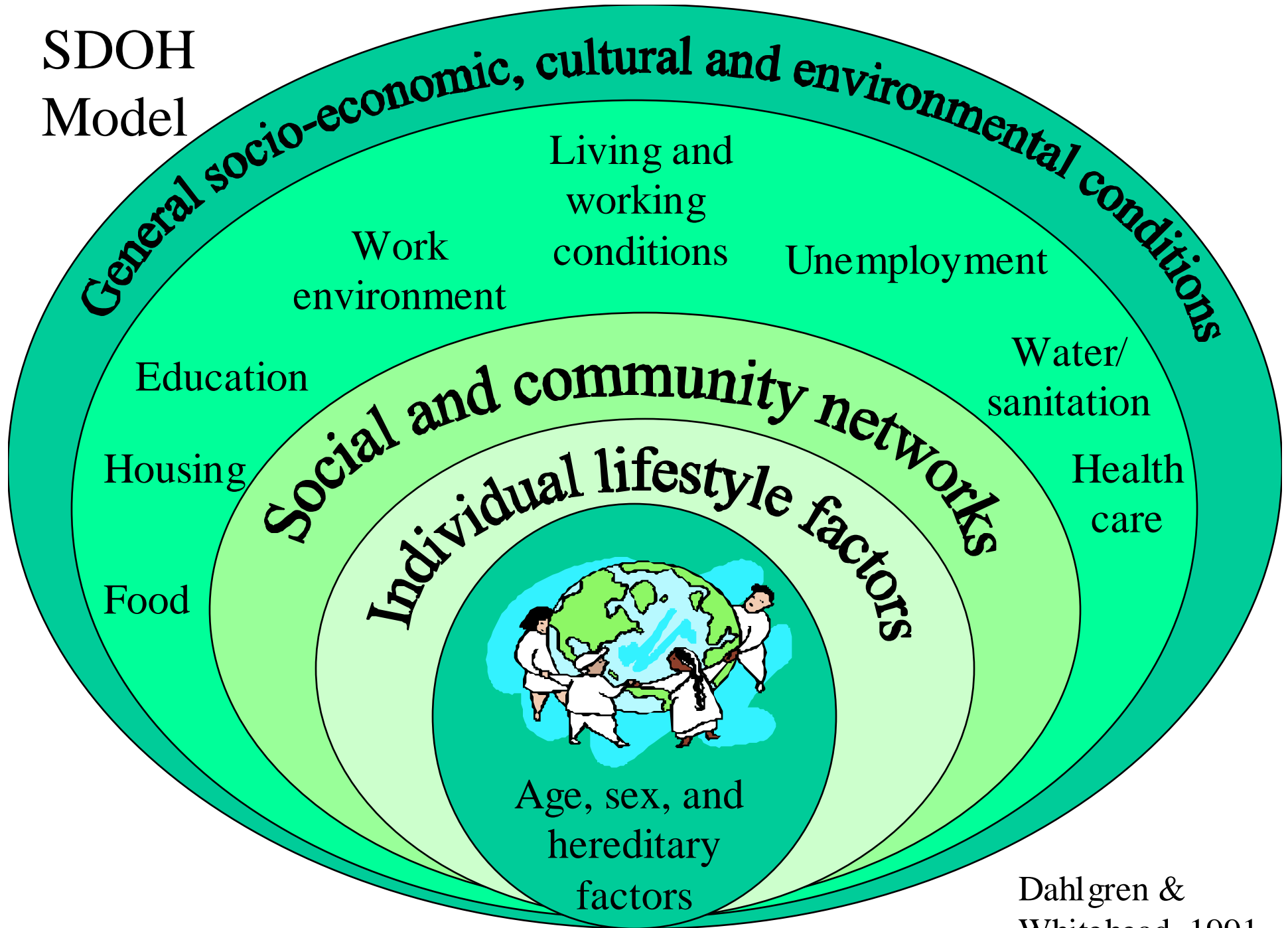
Raphael, 2003, Health Promotion International, Vol 18, No 4

PHP Framework

1. *Social Determinants of Health (SDOH) and Health Disparities*
2. *Civic Engagement/Advocacy*



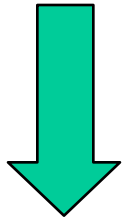
SDOH Model



Dahlgren &
Whitehead, 1991

Three Levels of Health Literacy

1. Functional



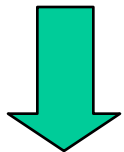
Transmission of factual information (AIDS, drugs, tobacco)

2. Interactive



Develop personal skills – problem solving, communication, decision making. Act independently on advice received

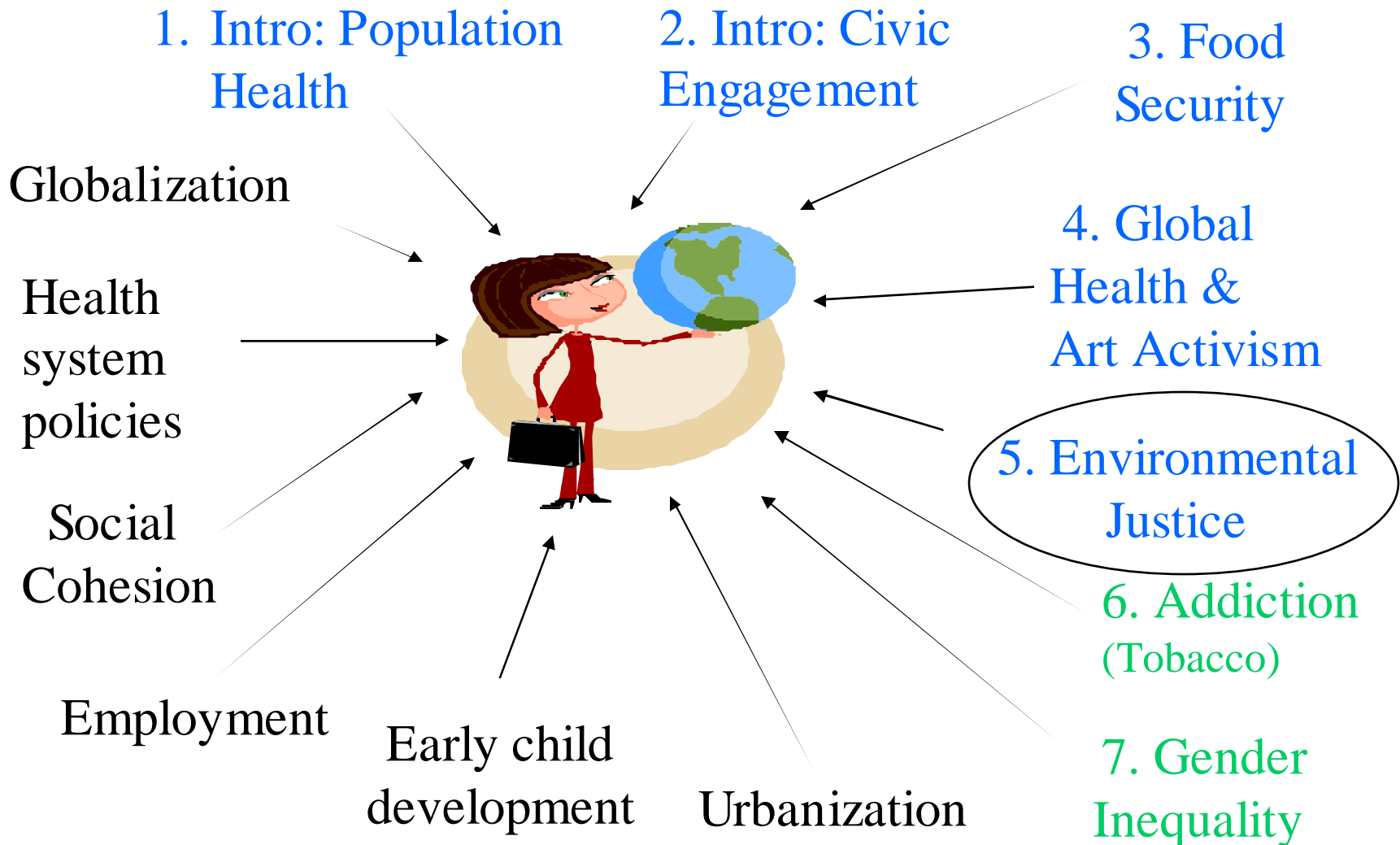
3. Critical



*Individual and community capacity to **understand** and **change** how social, economic, and political forces affect health – social action on policies and practices*

PHP Vision

Population Health Curriculum Manual



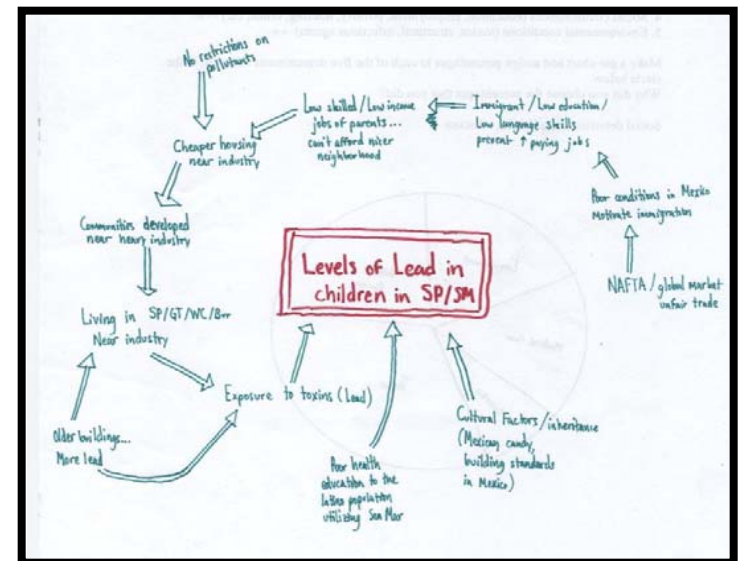
1. Introduction to population health

- What is pop health?
- How is it measured?
- What are sdoh?
- What are our values around inequality?
- What are health disparities?

(measurement, graph analysis and interpretation)

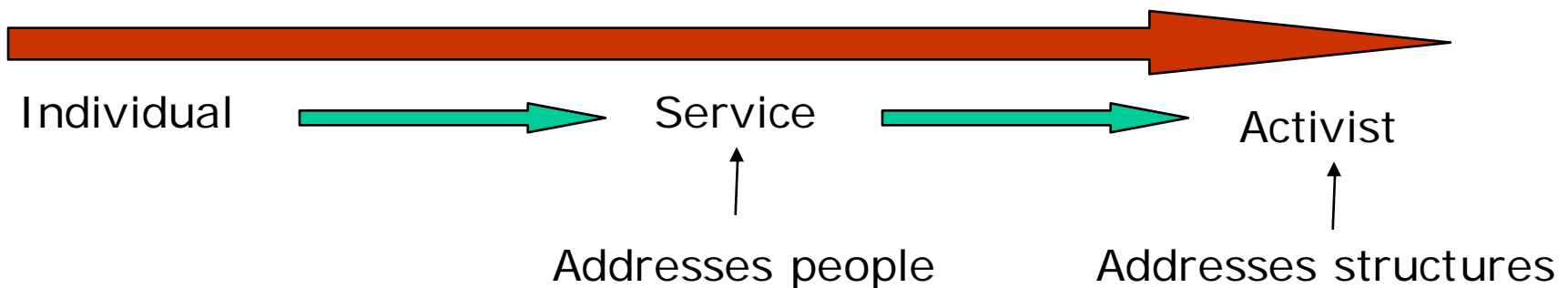
- What are the root causes of the disparity?

(Causes of Causes diagramming, policies and practices)



2. Civic Engagement/Advocacy- Taking action

- What is social change?
- Defining civic engagement
- Intro to advocacy framework
- Criteria for choosing “right” action plan
- Methods - implementing action plan
- Culturally competent entry into community





Pilot Site: Seattle Girls' School

- Independent all-girls' middle school (5-8 grade) in Seattle's Central District
- 30-40% of students receive financial aid
- Integrated, project-based curriculum
- PHP collaborates with core subject teachers (not a separate health curriculum)
- Population Health Curriculum at SGS:
 - Food Security (6th graders, Winter/Spring 2005)
 - **Environmental Justice (7th graders, Spring 2006)**
 - Advocacy Framework (7th graders, Spring, 2007)



EJ Curriculum Overview

Class 1: Intro to EJ

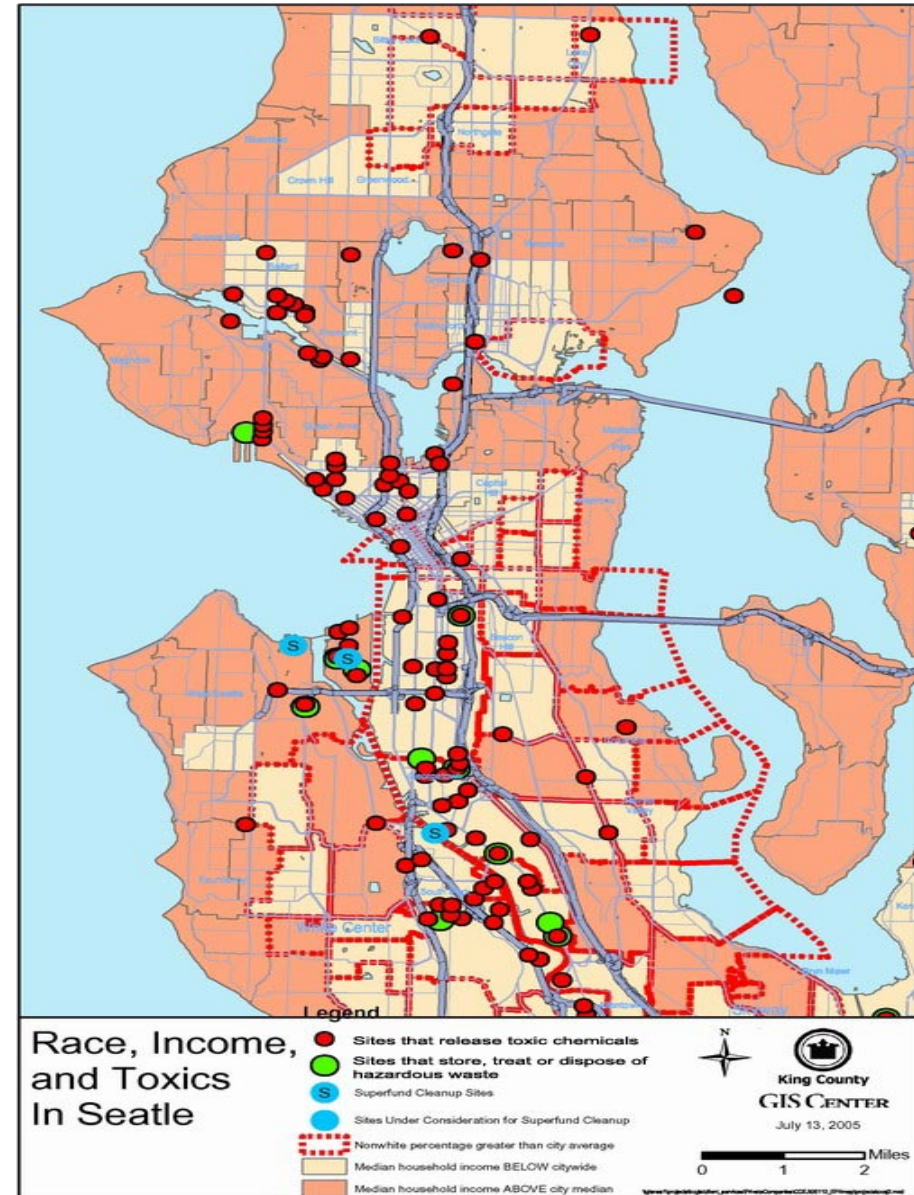
Class 2: Field trip to
Duwamish River Superfund
Site

Class 3: Environment and
Health

Class 4: Toxicology and Toxin
Exposure

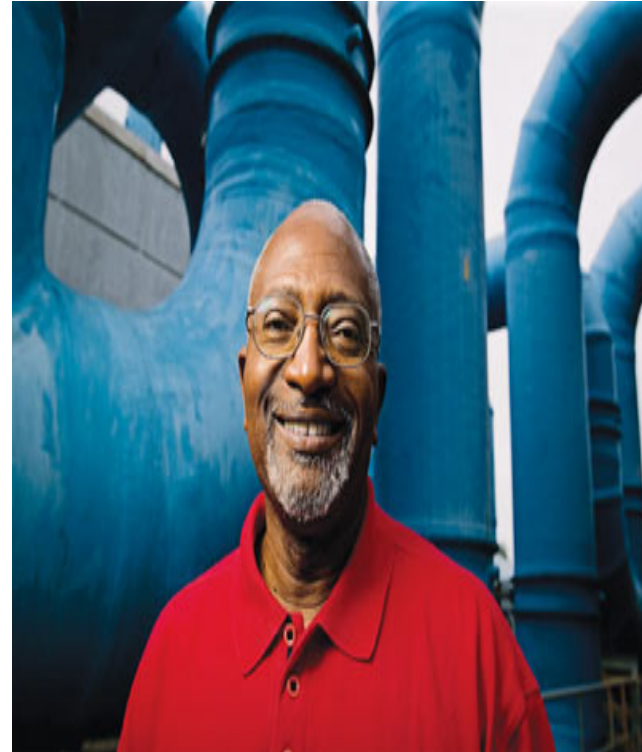
Class 5: Duwamish River
Superfund Site
Contaminants of Concern

Class 6: Duwamish River
Superfund Site Cleanup
Public Meeting



Environmental Injustice defined

People of color and
low income are
disproportionately
affected by
pollution,
environmental laws,
regulations, policies
and practices.



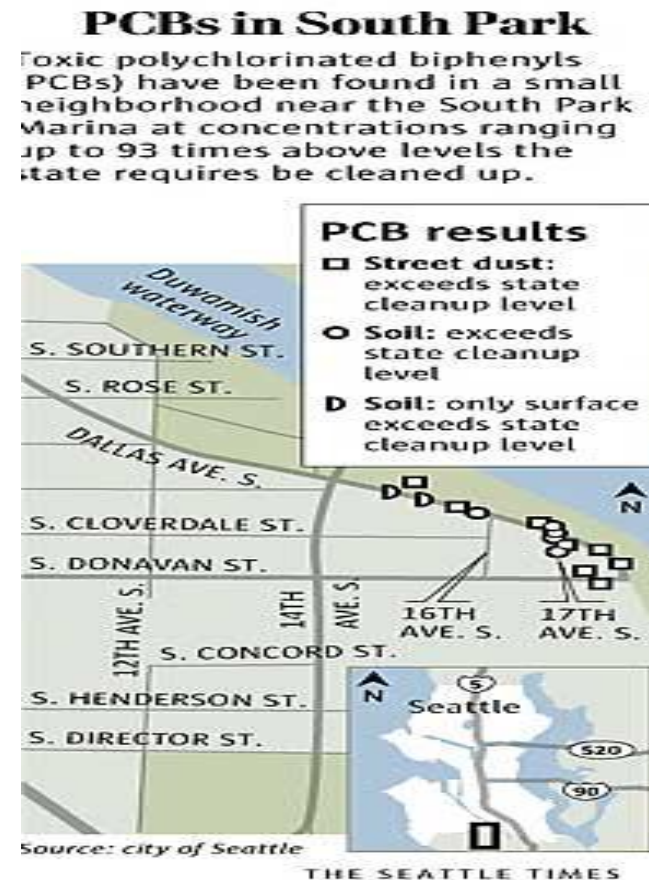
The environment is everything: where we live, work, play, go to school, as well as the physical and natural world. And so we can't separate the physical environment from the cultural environment.

(Robert Bullard 1999)

Class 1: Introduction to Environmental (in)Justice

Essential Question: What does it mean for a community to have/lack a voice?

Activity: Four corner toxic waste exercise



Class 2: Field Trip to Superfund Site

Essential Question:
What is a Superfund Site?

Activities:

- Meet with EJ experts
- Look at contaminated site
- Observe community
- Take water samples



Duwamish River industrial corridor THEN



Duwamish River industrial corridor NOW



Class 3: Environment and Health

Essential Question: What is the relationship between environment and health?

Activities:

- Review field trip
- Defining environment
- EJ community exercise



EJ Community Health Exercise

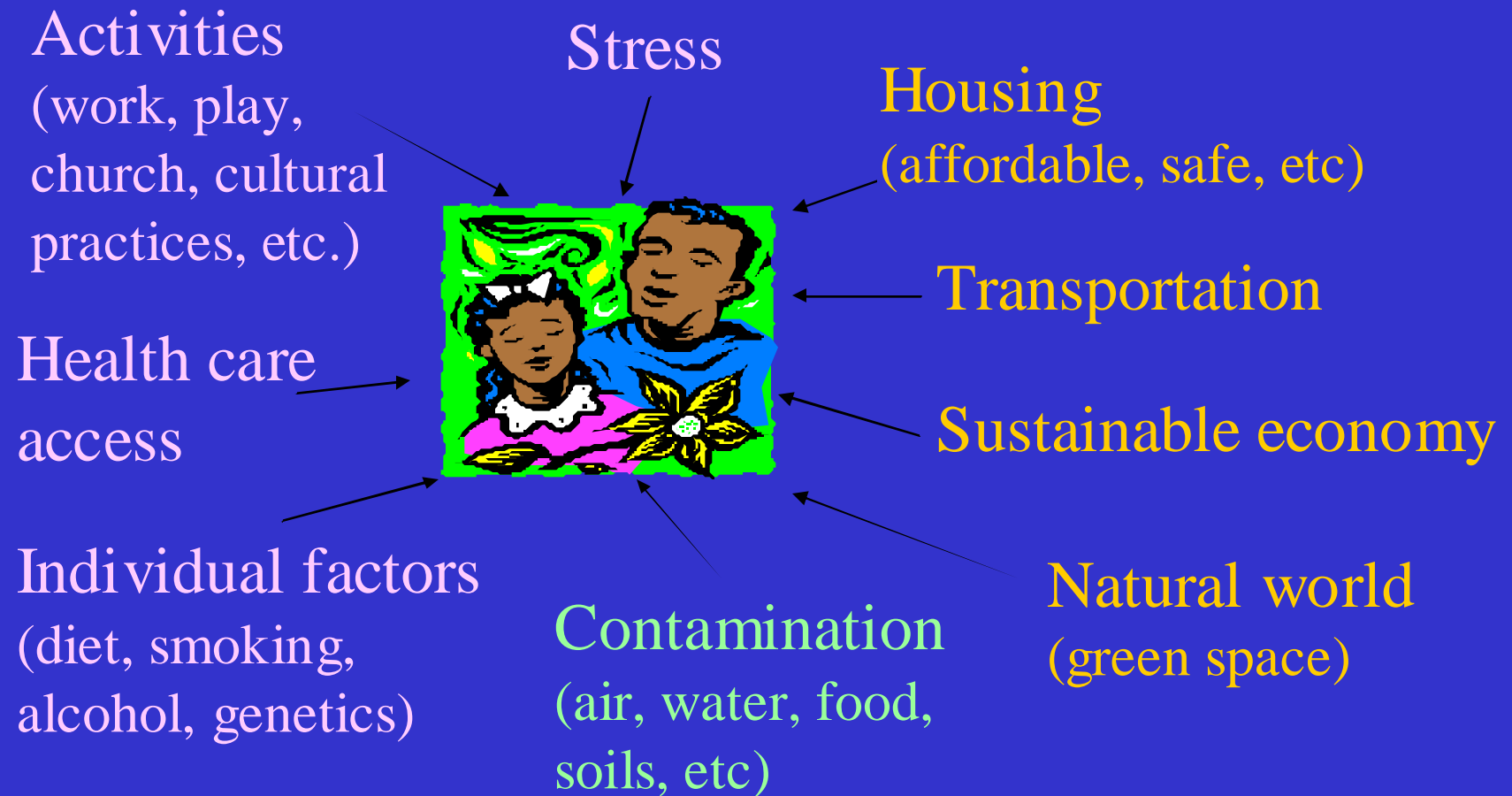
- 3 communities (real data)
 - One rich
 - Two low income/minority
 - Toxic waste in one of the two
- BUT different EJ issues in both low income/minority communities (transportation, places to play, crime, immigrant status, drugs)

TABLE 1: ENVIRONMENTAL JUSTICE AND COMMUNITY HEALTH

Indicator	South Park (98108)	Bainbridge Island (98110)	Central District (98122)
Median household income	\$38,400	\$70,100	\$32,000
Per capita income	\$17,100	\$37,500	\$26,500
Percent poverty	13%	3%	15.6%
Race information	25% white 15% black 42% asian 7% other race 7% ≥2 races 2% AI/AN	93% white 0.1% black 2% asian 0.1% other race 3% ≥2 races 0.1% AI/AN	57% white 25% black 8.0% asian 3% other race 5% ≥2 races 2% AI/AN
Toxic waste production 2004	642,700 pounds (3)	0 pounds (0)	0 pounds (0)
Public transportation	2	1	2
Safe, affordable housing	2	0	2
Life expectancy	1	0	2
Parks/play grounds	1	1	1
Cars- one or more per family	2	0	2
Places to walk/skate/bike	3	1	2
Traffic free	3	1	2
Good jobs	2	0	2
Crime free	2	0	3
College Graduate	2	0	1
Speak English at home	2	0	1
Stay at home parent	2	0	2
Health care	3	0	3
Smoke free	1	0	2
Alcoholism free	1	1	3
Hunger free	2	0	2
Stress free	3	1	3
Community Cohesion	2	0	2
Cancer deaths	2	1	3
Heart attack deaths	2	1	3

TOTAL

Political, Economic, Social, and Cultural/Spiritual Context to EJ

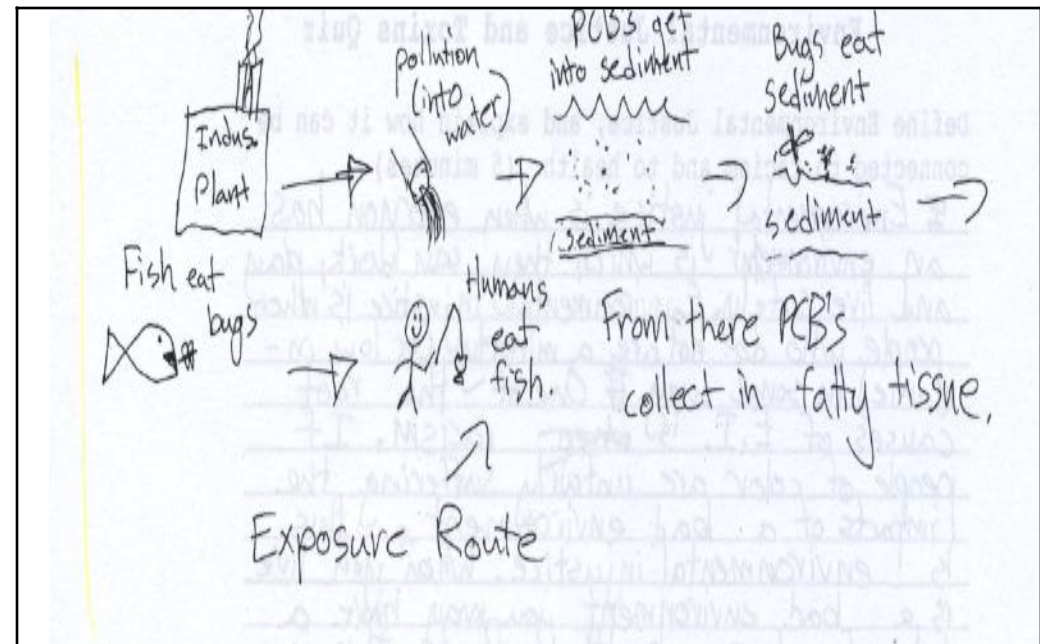
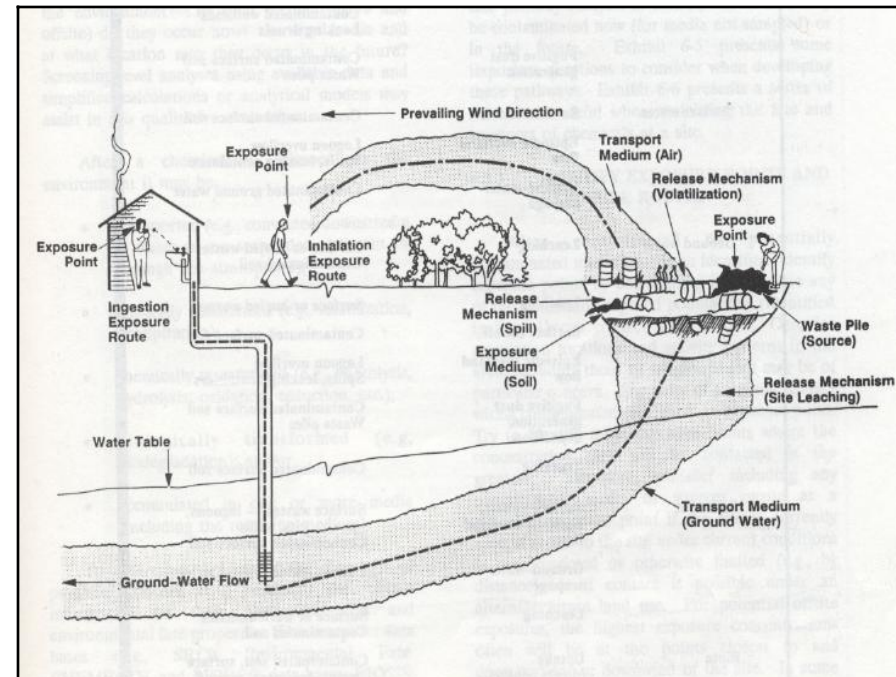


Class 4: Toxicology and Toxin Exposure

Essential Question: What toxins are in our environment and how do they affect us?

Activities:

- Contaminated media
- How exposure occurs
- Dose
- Exposure pathway diagramming



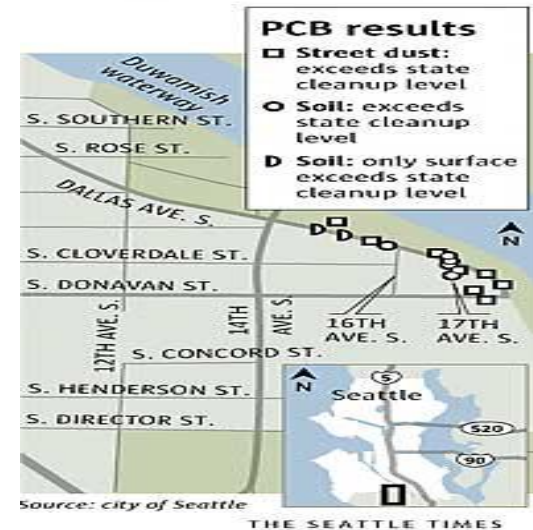
Class 5: Duwamish Superfund Site Contaminants of Concern

Essential Question: What toxins are present at the Superfund site and why are we concerned about them?

Activities:

- PCB fact sheet
- Phthalate fact sheet
- Plastics exposure exercise
- PCBs vs phthalates dose exercise
- Precautionary Principle

PCBs in South Park
Toxic polychlorinated biphenyls (PCBs) have been found in a small neighborhood near the South Park Marina at concentrations ranging up to 93 times above levels the state requires be cleaned up.



Class 6: Duwamish Superfund Site: Public Meeting/Debate

Essential Question:

What is at stake in deciding
how much remediation
should occur?

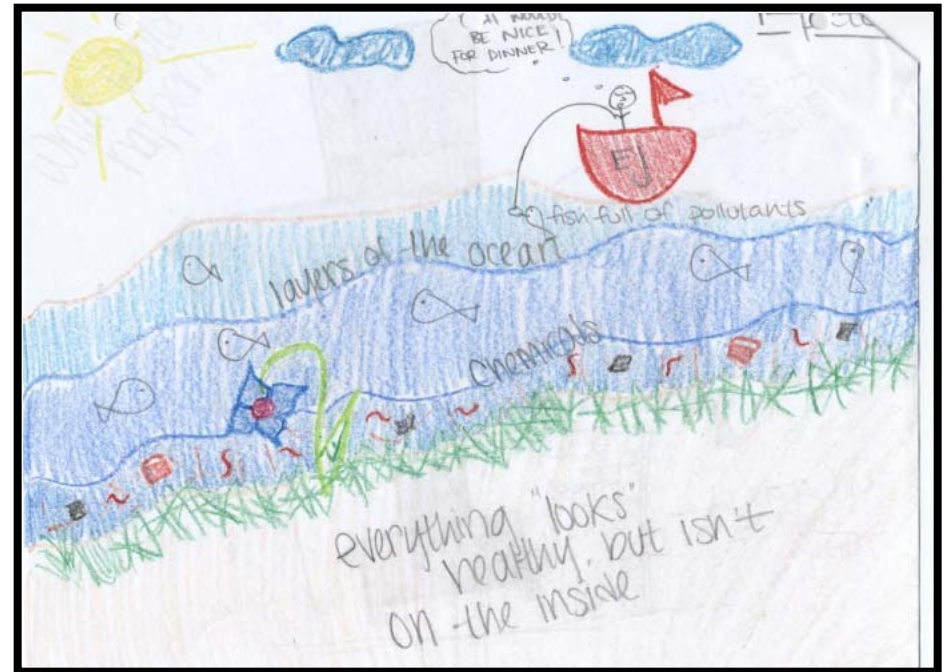
Activity:

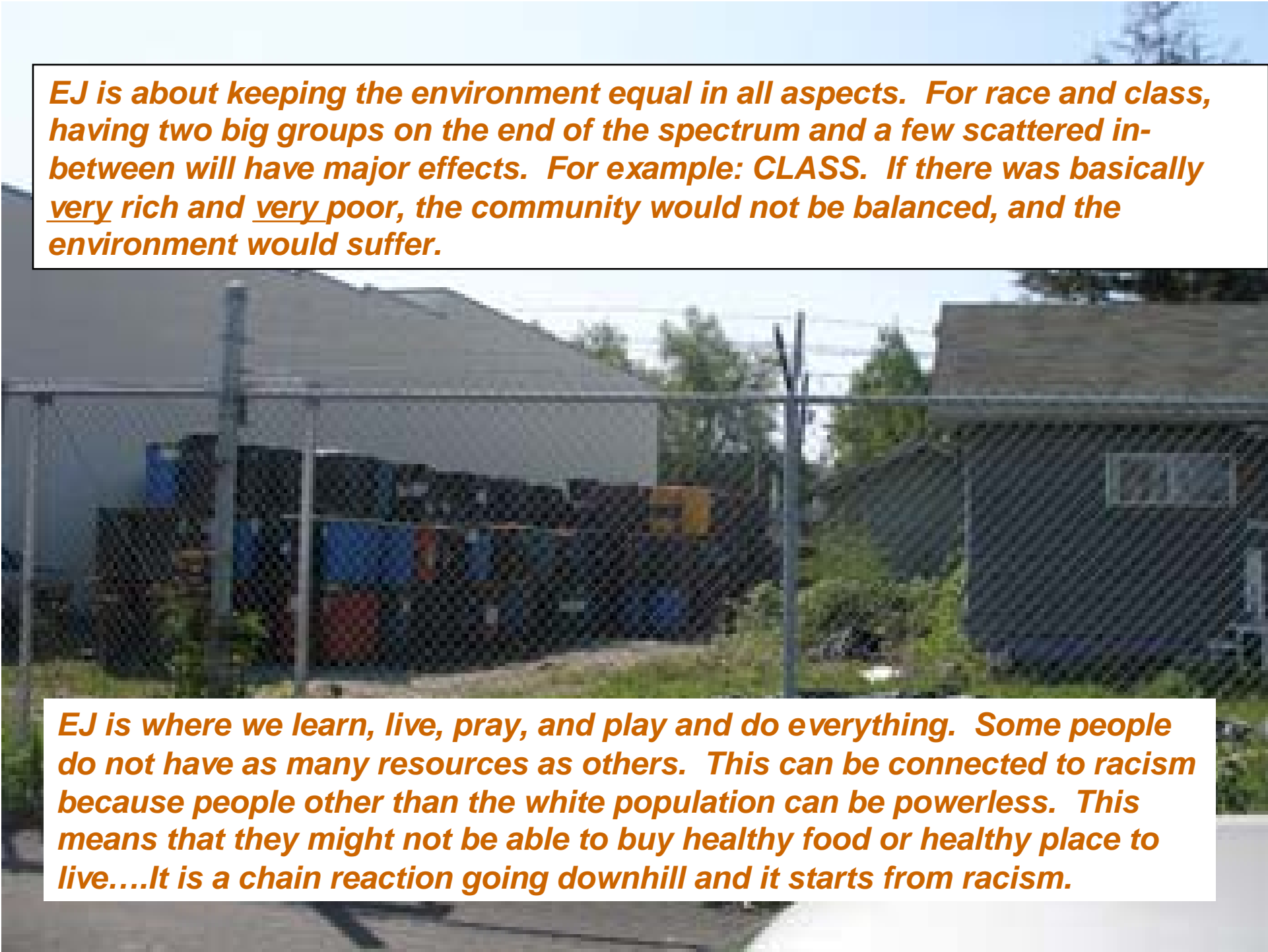
Stakeholder debate and
rebuttal (industry; govt.
agencies; tribes;
concerned community
citizens)



Outcomes – Tests showed:

- Most students able to define EJ (30/32)
- Link EJ with low income and people of color and issues of \$/power
- Understand health disparity link to EJ
- Link community cohesion and ability to take action
- Critically evaluate whether Superfund site presented EJ issues and why



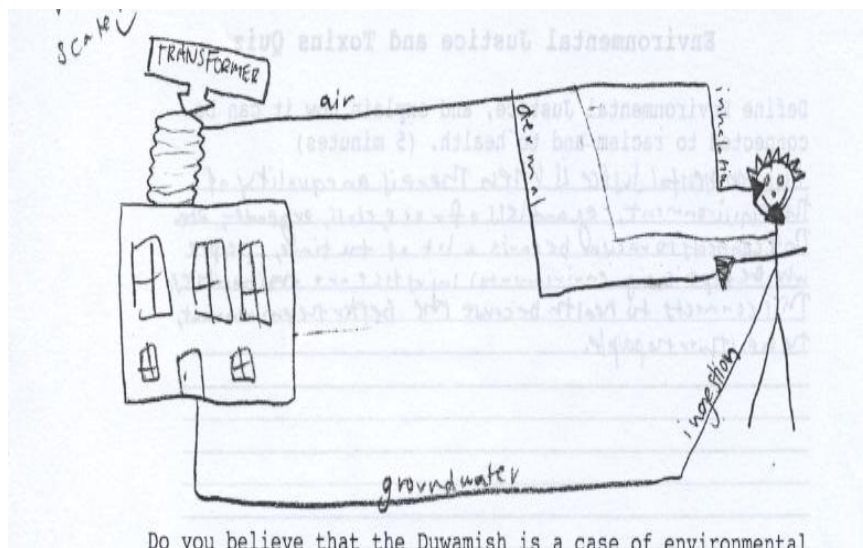


EJ is about keeping the environment equal in all aspects. For race and class, having two big groups on the end of the spectrum and a few scattered in-between will have major effects. For example: CLASS. If there was basically very rich and very poor, the community would not be balanced, and the environment would suffer.

EJ is where we learn, live, pray, and play and do everything. Some people do not have as many resources as others. This can be connected to racism because people other than the white population can be powerless. This means that they might not be able to buy healthy food or healthy place to live....It is a chain reaction going downhill and it starts from racism.

How has your EJ understanding changed?

Before this class, I thought EJ was based only on the environment and how polluting was bad. But after the class, I learned that EJ had a big deal to do with race and how that affected the environment. This helped me be more interested in how the river actually got polluted, why and why not it was the communities fault.



In order to have good EJ, there needs to be equality in equal access to resources and other things....there are many aspects that make up EJ, like the social, behavioral and toxic part.

How did the public meeting go?

- *One thing that was hard for me was having to argue the industry's side of the issue because I did not agree with some of their reasoning.... Now I can see how complex the issue of pollution in the Duwamish River is”*
- *This public meeting helped me understand the point of views of people I disagree with.*



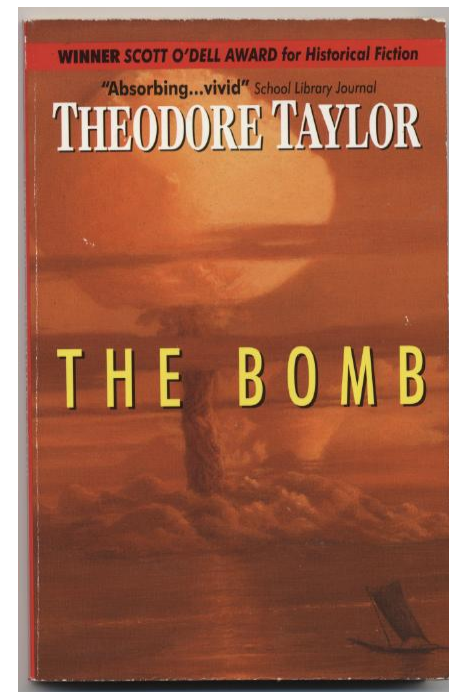
Curriculum Challenges

- Getting EJ activists to come in and talk. Capacity of grassroots orgs limited – need to be paid.
- Sensitive issues –
 - PHP teachers are white
 - Territory
- Integration of civic action component not complete.



More EJ Curriculum

- Other venues: UW School of Public Health, UW School Urban Planning
- History of EJ movement
- The evidence – disproportionate exposure
- EJ and health disparities – causal link between exposure and disease
- Global EJ
- Climate change and EJ
- EJ literature





THANK YOU

Acknowledgements:

My PHP colleagues

Seattle Girls School

Contact:

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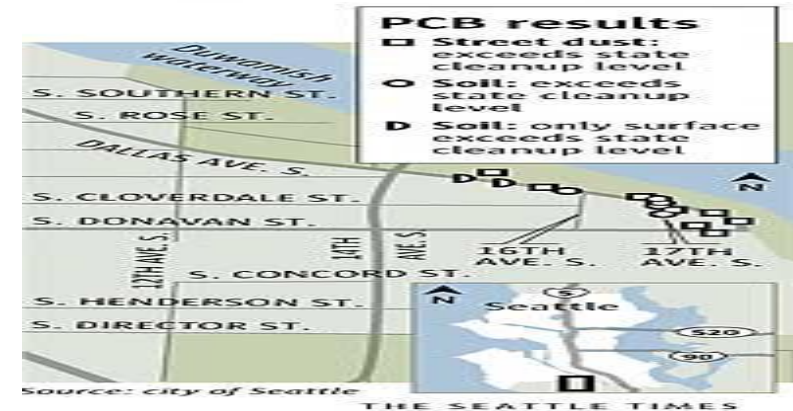
www.populationhealthproject.org



EJ issues in Washington State



PCBs in South Park
 Toxic polychlorinated biphenyls (PCBs) have been found in a small neighborhood near the South Park Marina at concentrations ranging up to 93 times above levels the state requires be cleaned up.



EPA and WA State Board of Health EJ Definition

“The fair treatment and meaningful involvement of all people regardless of color, national origin, or income with respect to development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people should bear a disproportionate share of negative environmental consequences from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”