PART 1: INTRODUCTION TO ENVIRONMENTAL JUSTICE, EQUITY, AND HEALTH[1]

Lesson Plan 2: Whose Backyard? Toxic Waste Management Meeting and Environmental Injustice

Goal: This interactive "role-play" exercise helps participants examine how the benefits and burdens of society are distributed. It explores the social, political, and economic systems that create inequality based on race and class, and how this can lead to disparate burdens of pollution in communities.

Learning Objectives:

By the end of this lesson plan, participants will be able to:

- List three reasons why people may not participate in decision-making
- List three ways to encourage communities to participate in decision-making
- List three ways communities can make their voices heard

Materials:

- Waste basket (as the metaphor for toxic waste)
- Two to three copies of the worksheets for each of five groups
- Chalk/White board to record the vote

Time required: 30-50 minutes

Background:

We would like to thank Kari Serpa who provided us with the idea for this exercise. She referred to it as the "four-corner toxic waste activity" and used it as an introduction to Environmental Justice for primary school students. Just Health Action has adapted it and tried it with diverse audiences (youth, adults, 8-50 people) as an introduction to the principles and concepts of Environmental Justice and community voice and power. Participants are divided into four communities (four corners of the room) with different amounts of income, race/ethnicity makeup, and environmental burdens and benefits. The community information is actual data taken from the *Duwamish Valley Cumulative Health Impacts Analysis,* which we explore in detail in Lesson Plans 5 and 6. The four Seattle communities include: Community 1 in Magnolia (ZIP 98199); Community 2 in Georgetown/South Park/Beacon Hill (ZIP 98108); Community 3 in the University District (ZIP 98105); and Community 4 in Eastlake (ZIP 98102).

The exercise can easily be adapted into a country exercise with three "developed" countries and one "undeveloped" country. This lesson could examine environmental racism and injustice internationally, between nations and transnational corporations (e.g., Shell Oil in Niger Delta, Union Carbide in India). For more information see Robert Bullard's paper listed below.

[1]*This product was funded through a grant from Washington State Department of Ecology. While these materials were reviewed for grant consistency, this does not necessarily constitute endorsement by Ecology.*

Suggested Preparation for the Teacher/Facilitator

Recommended reading:

- Bullard, R. D., (2014, April 21). *Poverty, pollution, and environmental racism: Strategies for building healthy and sustainable communities*. http://archive.today/LHBko.

Other useful materials:

- Basel Action Network: http://www.ban.org/ (for country contamination).
- Environmental Justice Resource Center Atlanta University website: http://www.ejrc.cau.edu/.
- EPA Environmental Justice website: http://www.epa.gov/environmentaljustice/.
- Gould, L., Cummings, B.J. (March 2013) Duwamish Valley Cumulative Health Impacts Analysis. Seattle, WA: Just Health Action and Duwamish River Cleanup Coalition/Technical Advisory Group. http://justhealthaction.org/wp-content/uploads/2013/03/Duwamish-Valley-Cumulative-Health-Impacts-Analysis-Seattle-WA.pdf. Note: this website link contains the full report, a poster, and appendices: http://justhealthaction.org/resources/jha-publications/
- Iblefty1951. (2012, May 16). *Protests in Warren County, North Carolina in 1982 against a landfill contaminated with PCB soils*. https://www.youtube.com/watch?v=1iCxh0BYjgI

Word Wall:

Environmental racism: "refers to environmental policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color. Environmental racism is reinforced by government, legal, economic, political, and military institutions." (From: Bullard, R. D, *Poverty, Pollution, and Environmental Racism: Strategies for Building Healthy and Sustainable Communities*. http://archive.today/LHBko).

Environmental Justice (EJ): EPA defines EJ as, "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work." (http://www.epa.gov/environmentaljustice/).

Suggested Preparation for the Facilitator/Teacher:

1) Divide the room into groups of five. (We usually have them count 1, 2, 3, 4, 5 around the room so that participants are not with their friends). Send groups 1-4 to the four corners of the room. Group 5 is the toxic waste management team, who makes the final decision about where the toxic waste will go. Note: if your group is small, the teacher/facilitator can act as Group 5.
2) Tell the whole group that they represent specific communities. You are the owner of a waste management company and you are holding a public meeting to help decide where toxic (contaminated) waste should go.

3) Place the toxic waste basket in a prominent place and tell them it's full of contaminated waste that can cause cancer, chronic diseases, and get into the environment through the soils, air, water, etc.
4) Hand out community descriptions to each group (below).
5) Community 2 is secretly designated as the "vulnerable" community that has not been given the opportunity to vote. You will need to talk with them and make sure they understand their instructions and that they should not speak until given a sign that is it okay to talk (e.g., touching your earlobe).
6) Be sure to wander around to each group and answer questions, etc.
7) Use a chalk/white board to record responses and votes.

Toxic Waste Placement Meeting

Instructions to class *(either print these out or put them up on a projector or board)*

Prompt:

1) I am the Manager of *Waste Management Development Company* and we would like to truck a container of extremely toxic waste to one of the communities in the room (meant to represent a city/county/state).
2) The toxic waste must go to ONE of the communities in this room. It cannot go anywhere else. It cannot be split up.
3) By the end of the discussion, you will have to cast ONE vote per community deciding where the toxic waste will go. Our toxic waste managers (Group 5) will make the final decision.
4) This exercise occurs in six parts:

Section 1: Community descriptions. (5-10 min)

You have five minutes to discuss your community and make up what you want about it. (I have given you a little bit of information about your community in your community sheets that I have passed out). Then be prepared to tell the other communities in the room the following:

1) Given the data in your tables is this community high, middle, or low in terms of:
   a) Income
   b) Race/ethnicity
   c) Speaking other languages than English
   d) Levels of pollution
   e) Green space
   f) Health

If you are working with a group that may not be familiar with indicators, they can be reviewed at the board at the beginning. In addition, you can draw a line of an example indicator to show how to rank the indicator as low, medium or high.

No college degree – city range is between 24-72%

_____

24% (low) 48% (medium) 72% (high)

If your community is 24% without a college degree, what does that mean?

2) Given the information above, pick a name for your community.
3) Where do you think this community fits in terms of how much decision-making power it has (high, medium, low)?

Section 2: Tell the room who you are (3 minutes each)

Pick one or two people from your group to describe your community. Do not just read off the information that I have given you, be more descriptive/creative.

Section 3: Who gets the toxic waste? (3 minutes)

You have just heard about the other communities in the room. It is now time to come to a consensus about where you want the toxic waste to go. Your community gets ONE vote.

Section 4: Come back and cast your vote (5-10 minutes)

Pick someone in your community to explain:

- Cast your vote on which community should get the toxic waste
- Give your reasoning.

Section 5: Waste managers (Group 5): final decision

What is your final decision based on what you read and heard?

Section 6: Discussion (15-20 minutes)

Depending on the audience, there is a list of questions that the facilitator can ask participants. Below is a set of questions that we have asked in the past:

1) To communities 1, 3, 4
   a) What do you think happened?
   b) Why did it happen?
   c) Why did the vote go the way it went?
   d) IF Groups 1, 3, and 4 did NOT vote for the "vulnerable" community, do you think this is what would happen in real life? Why or why not?
2) Waste Managers (if there is a Group 5)
   Why did you make this decision?
3) "Vulnerable" Community (Community 2):
   Give Community 2 the signal that they can talk now (e.g., touch your earlobe)
   a) Tell us who you are. Describe your community.
   b) How did you feel when you were not able to talk?
   c) What were you experiencing (mentally, physically)?
   d) How do you think it affected you to not be able to speak up (individually and your community)?
   e) Was it fair?
   f) What are situations in real life where people might not be able to speak up?

Environmental justice/racism[2]

1) Was the meeting fair? Why or why not?
2) What was wrong with this meeting?

[2] Note and warning: The discussion of racism is very important here and depending on the audience, takes a skilled facilitator to navigate. We will often use JHA's "Causes of the Causes," a root cause exercise, to explore racism, and other isms (see Lesson Plan 4).

3) What might you do to change the meeting (e.g., interpreters; set up meeting at an appropriate time and place that all constituents can attend; have an "expert" in attendance to explain the contamination problem, etc.)?
4) How might you address the problem that communities with EJ concerns are currently living in contaminated areas with more environmental burdens than environmental goods? Think back to Lesson Plan 1: What makes a community healthy?
5) Review the Environmental Justice definition. Does it make sense? What are the main criteria of the definition?
   Note: It is worth spending a few minutes working through this definition and how it relates to this example.
6) Think about some (current and past) events where some people are able to vote or not and how it affects what they are able to do with the rest of their lives (having been in prison, identity cards, voting, etc.).

Extension:

1) See Lesson Plan 4: Causes of the Causes: What are the root causes of this problem?
2) Some questions that could be asked are:
   a. Why was Community 2 given the toxic waste?
   b. Why do some communities have more power than others?

   Note: Participant/s may have questions that arise during this session that could then be used for this exercise.

COMMUNITY 1

INDICATOR	YOUR COMMUNITY	CITY RANGE	RANK Does this seem high, middle or low to you in comparison to the rest of the city?
Percent non-white population	14%	13-71%	
Below 200% poverty level (percent living on an income two times the federal poverty level, or in 2014 approximately $48,000/year)	12%	12-40%	
No college degree (percent of adults 25 years old and older)	32%	32-72%	
Percent foreign born	11.6%	8-42%	
Exposure to air pollution (diesel particulate matter ug/m^3)	1.03	1.03-2.3	
Risk ranking for confirmed and suspected contaminated sites	22	3-142	
Amount of park area per resident (ft^2/resident)	1634	61-1634	
Amount of tree canopy (percent)	27%	4-27%	
Heart disease death rate per 100,000	127	104-188	
Child (0-17 yr) asthma hospitalization rate per 100,000	161	129-299	

Questions

1) What is the name of your community? (Make up a name)
2) Is this community high, middle, or low in terms of:
   a) Income?
   b) Race/ethnicity?
   c) Speaking languages other than English?
   d) Levels of pollution?
   e) Green space?
   f) Health?
3) Where do you think this community fits in terms of how much decision-making power it has (high, medium, low)?

You have about five minutes to come up with some thoughts about this and then pick one or two people to come back and share some characteristics of your community.

COMMUNITY 2

INDICATOR	YOUR COMMUNITY	CITY RANGE	RANK Does this seem high, middle or low to you in comparison to the rest of the city?
Percent non-white population	71%	13-71%	
Below 200% poverty level (percent living on an income two times the federal poverty level, or in 2014 approximately $48,000/year)	32%	12-40%	
No college degree (percent adults 25 years old and older)	72%	32-72%	
Percent foreign born	42%	8-42%	
Exposure to air pollution (diesel particulate matter ug/m^3)	2.3	1.03-2.3	
Risk ranking for confirmed and suspected contaminated sites	142	3-142	
Amount of park area per resident (ft^2/resident)	454	61-1634	
Amount of tree canopy (percent)	6%	4-27%	
Heart disease death rate per 100,000	123	104-188	
Child (0-17 yr) asthma hospitalization rate per 100,000	299	129-299	

Questions

1) What is the name of your community? (Make up a name)
2) Is this community high, middle, or low in terms of:
   a) Income?
   b) Race/ethnicity?
   c) Speaking languages other than English?
   d) Levels of pollution?
   e) Green space?
   f) Health?
3) Where do you think this community fits in terms of how much decision-making power it has (high, medium, low)?

You have about five minutes to come up with some thoughts about this and then pick one or two people to come back and share some characteristics of your community.

You are NOT permitted to speak to the rest of the class during this entire exercise. Even when I prod you to speak, do NOT respond. You are NOT allowed to vote in Part 2 of this exercise.

COMMUNITY 3

INDICATOR	YOUR COMMUNITY	CITY RANGE	RANK Does this seem high, middle or low to you in comparison to the rest of the city?
Percent non-white population	29%	13-71%	
Below 200% poverty level (percent living on an income two times the federal poverty level, or in 2014 approximately $48,000/year)	40%	12-40%	
No college degree (percent adults 25 years old and older)	24%	24-72%	
Percent foreign born	15%	8-42%	
Exposure to air pollution (diesel particulate matter ug/m^3)	1.3	1.03-2.3	
Risk ranking for confirmed and suspected contaminated sites	22	3-142	
Amount of park area per resident (ft^2/resident)	125	61-1634	
Amount of tree canopy (percent)	19%	4-27%	
Heart disease death rate per 100,000	104	104-188	
Child (0-17 yr) asthma hospitalization rate per 100,000	273	129-299	

Questions

1) What is the name of your community? (Make up a name)
2) Is this community high, middle, or low in terms of:
   a) Income?
   b) Race/ethnicity?
   c) Speaking languages other than English?
   d) Levels of pollution?
   e) Green space?
   f) Health?
3) Where do you think this community fits in terms of how much decision-making power it has (high, medium, low)?

You have about five minutes to come up with some thoughts about this and then pick one or two people to come back and share some characteristics of your community.

C**OMMUNITY** 4

INDICATOR	YOUR COMMUNITY	CITY RANGE	RANK Does this seem high, middle or low to you in comparison to the rest of the city?
Percent non-white population	18%	13-71%	
Below 200% poverty level (percent living on an income two times the federal poverty level, or in 2014 approximately $48,000/year)	22.5%	12-40%	
No college education (percent adults 25 years old and older)	32%	24-72%	
Percent foreign born	11	8-42%	
Exposure to air pollution (diesel particulate matter ug/m^3)	2.2	1.03-2.3	
Risk ranking for confirmed and suspected contaminated sites	18	3-142	
Amount of park area per resident (ft^2/resident)	175	61-1634	
Amount of tree canopy (percent)	8	4-27%	
Heart disease death rate per 100,000	111	104-188	
Child (0-17 yr) asthma hospitalization rate per 100,000	182	129-299	

Questions

1) What is the name of your community? (Make up a name)
2) Is this community high, middle, or low in terms of:
   a) Income?
   b) Race/ethnicity?
   c) Speaking languages other than English?
   d) Levels of pollution?
   e) Green space?
   f) Health?
3) Where do you think this community fits in terms of how much decision-making power it has (high, medium, low)?

You have about five minutes to come up with some thoughts about this and then pick one or two people to come back and share some characteristics of your community.

Toxic Waste Managers Data

INDICATOR	Community #1	Community #2	Community #3	Community #4	City Range
Percent non-white population	14%	71%	29%	18%	13-71%
Below 200% poverty level (percent living on an income two times the federal poverty level, or in 2014 approximately $48,000/year)	12%	32%	40%	22.5%	12-40%
No college degree (percent adults 25 years old and older)	32%	72%	24%	32%	24-72%
Percent foreign born	11.6%	42%	15%	11	8-42%
Exposure to air pollution (diesel particulate matter ug/m^3)	1.03	2.3	1.3	2.2	1.03-2.3
Risk ranking for confirmed and suspected contaminated sites	22	142	22	18	3-142
Amount of park area per resident (ft^2/resident)	1634	454	125	175	61-1634
Amount of tree canopy (percent)	27%	6%	19%	8	4-27%
Heart disease death rate per 100,000	127	123	104	111	104-188
Child (0-17 yr) asthma hospitalization rate per 100,000	161	299	273	182	129-273

Questions

1) Which community is high, middle, or low in terms of:
   a) Income?
   b) Race/ethnicity?
   c) Speaking languages other than English?
   d) Levels of pollution?
   e) Green space?
   f) Health?
2) You will be listening to what the other communities say about themselves to help inform your decision. Where do you think it will be easiest to put the toxic waste with the least amount of opposition?
3) Why do you think this community will complain less than the others?