



Lesson Plan: Agrochemicals, Harm, and Social Justice

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Keywords: agrochemicals, environmental racism, and environmental justice

Lesson Objective: Use the article, “Agrochemicals, Harm, and Social Justice,” to engage with students in discussions about where pesticides come from, where they are used, and how they impact poor, Black, and Latinx communities. Encourage students to use history and geography to explore and question where, how, and why agrochemicals impact the world around them.

Lesson Argument: Agrochemicals are both a source of environmental racism and environmental justice in Black and Latinx communities in the United States.

Lesson Materials: The summary and illustration on agrochemicals, harm, and social justice for exercises one and two and an internet source for exercise three.

Exercise 1: Discussing environmental racism and environmental justice (30-45 mins.)

Materials: Summary on “Agrochemicals, Harm, and Social Justice.”

Activity: Takes 5 to 10 minutes to carefully read and analyze the summary on agrochemicals. Discuss in groups of two or more.

1) What and where are agrochemicals?

Definition: An agrochemical is a chemical used in agriculture like pesticides and fertilizers.

Geography: Agrochemicals like pesticides and fertilizers mostly enter our communities, our bodies, and our environments through food systems that prioritize large-scale and capital-intensive agriculture.

Engagement questions:

1. What are agrochemicals and where are they produced, and where are they used?
2. What impact do pesticides have on human and natural environments?
3. What has encouraged the development of new agrochemicals in US history?
4. Does the United States have a unique relationship with agrochemicals?

2) What and where is environmental racism?

Definition: any policy or practice that unequally affects, disadvantages, or ignores individuals, groups or communities based on their race.

Geography: Agrochemicals are a root cause of environmental racism in states like California, Texas, and Mississippi, where the physical burden of both spraying crops and living in



agrochemical zones of harm is placed squarely on low-income Latinx and Black communities.

Engagement questions:

1. Where and how are agrochemicals and environmental racism connected and why?
2. Where was the highest concentration of agrochemical-use in the nineteenth century and why? Who used agrochemicals primarily and why? How has agrochemical-use changed in the twentieth and twenty-first century?
3. How does the production of agrochemicals and other industrial chemicals affect vulnerable urban communities?

3) What and where is environmental justice?

Definition: environmental justice is a social movement and a conceptual framework that emphasizes social justice in environmental issues like waste management, agriculture, food access and distribution, and infrastructure.

Geography: Environmental justice and environmental injustice often compete for the same geography. As a grassroots social movement, environmental justice against agrochemical abuse usually involves communities advocating for equal environmental protections from the government and agribusiness.

Engagement questions:

1. Where and how are agrochemicals and environmental justice connected and why?
2. From the summary, where can you place environmental justice against agrochemicals in the United States?
3. How do communities respond to environmental injustice? Is environmental justice another burden for communities to carry?

For further exploration: Jayson M. Porter, "Arsenic in North America," *Discurso*, May 31, 2020.

Exercise 2: Seeing environmental racism and environmental justice (20-25 mins.)

Materials: Alissa Ujie Diamond's illustration titled, "Agrochemical Racism in the San Joaquin Valley."

Activity: Take 3 to 5 minutes to carefully view and analyze the illustration. Discuss in groups.

Engagement Questions:

1. Does this illustration tell a story? How might you narrate this story's beginning, middle, and end?
2. Does this illustration make an argument, and if so, what is it?
3. Look at the definition of pesticide drift in the summary. How does the artist illustrate pesticide drift? What and whom does pesticide drift impact? Do you see other forms of environmental injustice?



4. How does the illustration show environmental justice?
5. What does this illustration say about how society values food, farm workers, and the environment? Do you see competing values?
6. Beyond people, what other animals and plants might feel the effects of pesticides?
7. With the summary in mind, think back to the stories you see in this illustration. What parts of the story that you saw are not in the illustration?
8. Food: What crops do you see in the illustration and why do you think the artist chose them for this story? (Answer: kale and almonds)
9. Art: How does the illustrator use color and perspective to tell a story of agrochemicals?

For further exploration: "Blacktown/Whitetown" an illustration by billy dee (Commissioned for Louise Seamster and Danielle Purifoy (2020), "What is Environmental Racism For?" *Environmental Sociology*).

Exercise 3: Mapping Agrochemical Harm and Justice (25-30 minutes)

Materials: An internet source

Activity: In groups of two or more, take a few minutes to respond to each question below. First, research and map where agrochemicals are made and used near you and determine which communities carry the burden or that environmental injustice? Second, research and map where agrochemical harm has inspired grassroots environmental justice efforts.

Takeaway lessons: Geography is not neutral. Agrochemical production and use is a good way to measure and map the uneven across geography.

Research questions:

1. Where is the produce you eat grown and who grows it? (Check your kitchen if possible)
2. Where does industrial agriculture take place in your community or state? What are the demographics of those agricultural-producing areas?
3. Are industrial chemicals produced in your community or city? What are the demographics of the communities located near those industrial areas?
4. Do agrochemicals seem to impact your community or its surrounding environment?
5. Where does waste in your community or city come from and where does it "go"? Can "dispose" of its waste? Does waste collection take place in your community, if not where and whom does it impact?
6. Has environmental racism or environmental injustice inspired any forms of grassroots environmental justice in your community or city? Is the local government or any local businesses involved in any environmental justice initiatives near you?

For further exploration: See the lesson plan the "Arsenic in North America," in the educational resources section from Teaching Water and Environmental Justice Workshop at the University of Michigan's Center for Latin American and Caribbean Studies: <https://ii.umich.edu/lacs/outreach/edu-resources.html>