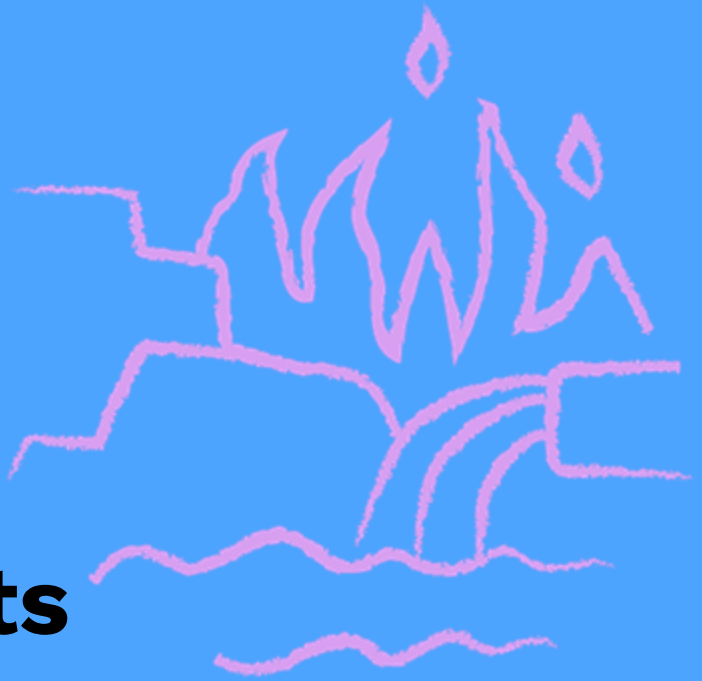


Lesson 4 - Part 1:

Getting to the Roots

Objective: In the first part of this lesson, students learn about **root cause analysis** in order to apply it to their chosen local environmental problem. They start to research the root causes of their chosen problem using resources from the **climate justice video library.**

Key Terms

Weed: A plant that grows in a place where humans do not want it.

Local Environmental Problem: An issue that affects the air, water, soil, or general health of a particular neighborhood, community, city, or region.

Symptoms: The signs, impacts, or results of a local environmental problem.

Root Causes: The deepest reason(s) for a problem. Identifying and addressing the root cause of a problem can make the problem less likely to return.

Root Cause Analysis: Digging beneath the surface of a problem to find its deeper reasons for existing.

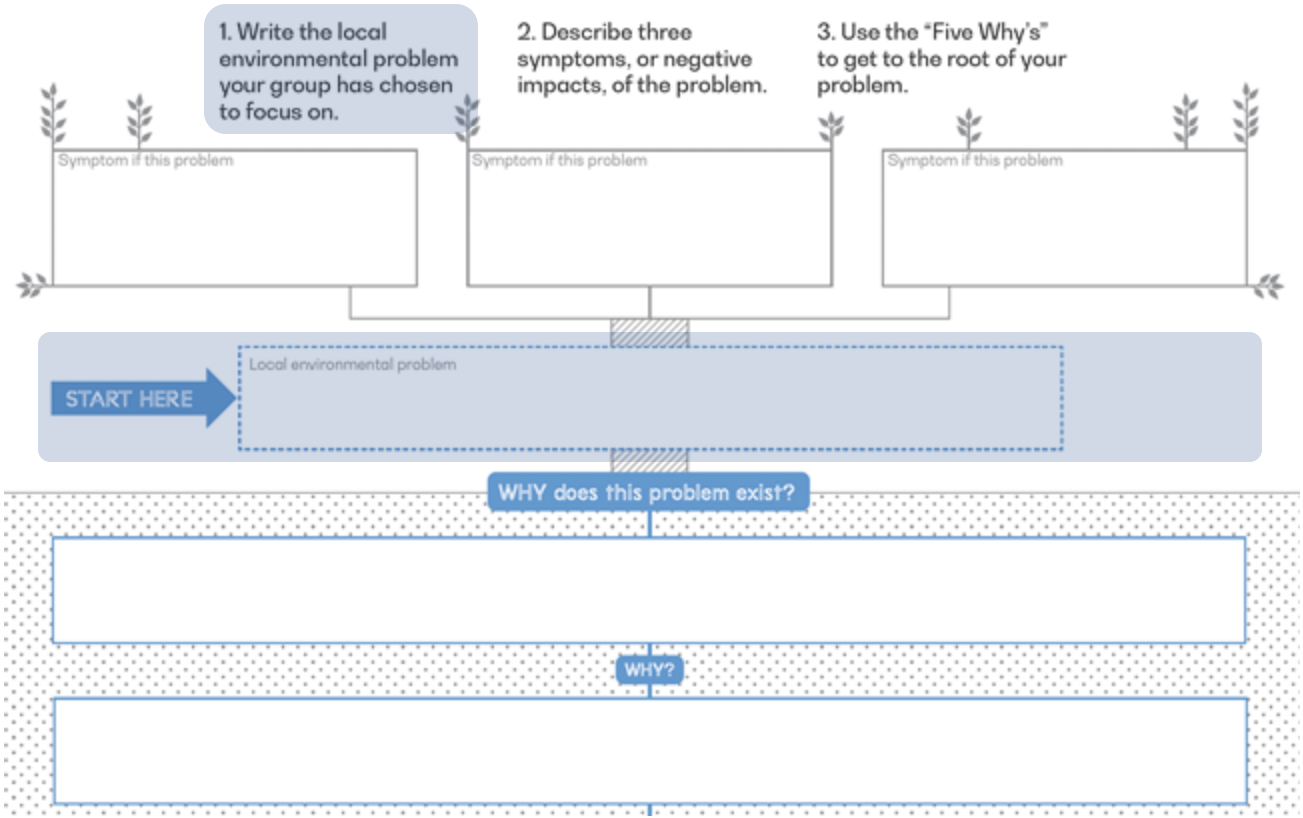
Five Whys: A method that continues asking ‘Why?’ many times (sometimes more than 5) in order to find the roots of a problem.

How to Properly Pull Weeds from Your Yard

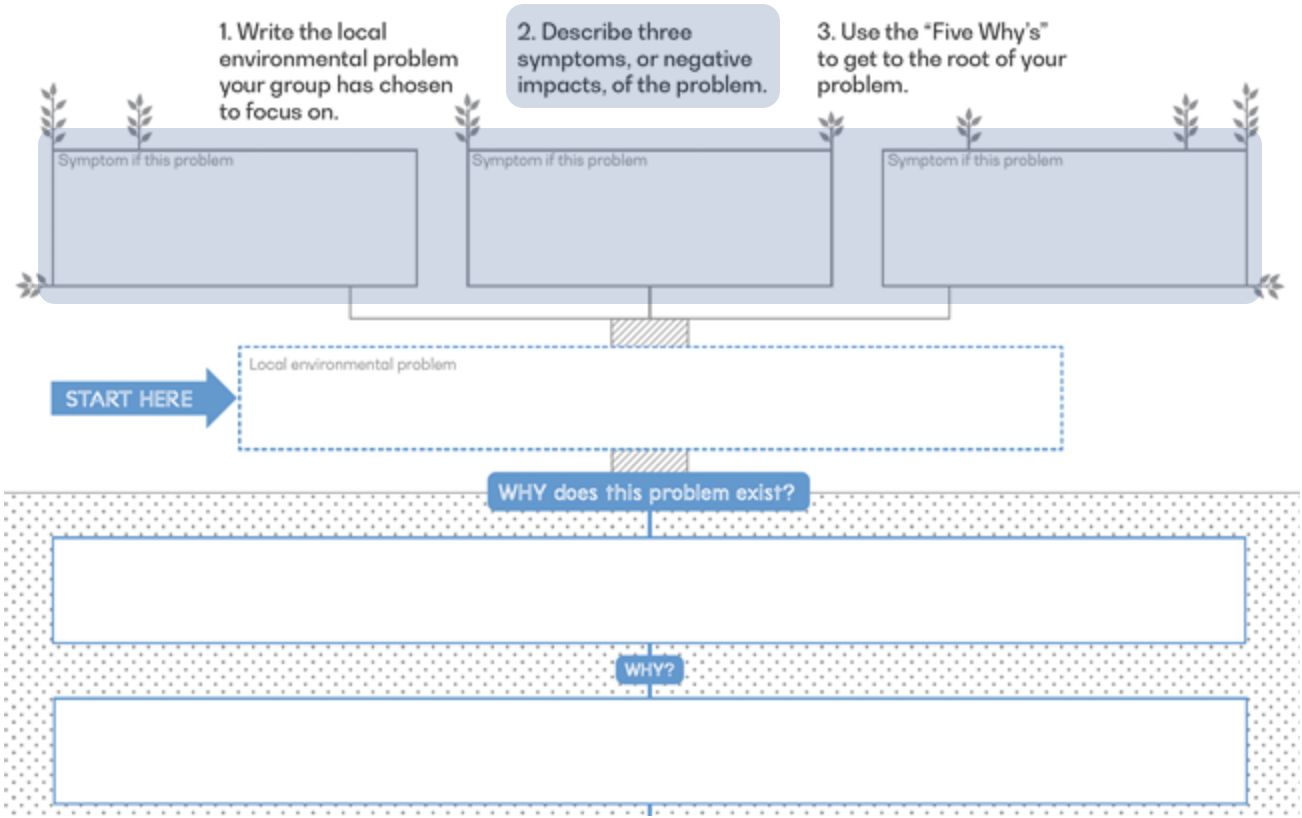
Raise your hand to answer:

- What does it mean to “get to the roots” of something?
- What do you think would happen if a gardener pulled out the leaves of a weed, but left its roots in the soil?
- How is this video related to the local environmental problem your group chose?

Getting to the Root graphic organizer



Getting to the Root graphic organizer



15 | 18 | 22

Getting to the Root graphic organizer

1. Write the local environmental problem your group has chosen to focus on.

2. Describe three symptoms, or negative impacts, of the problem.

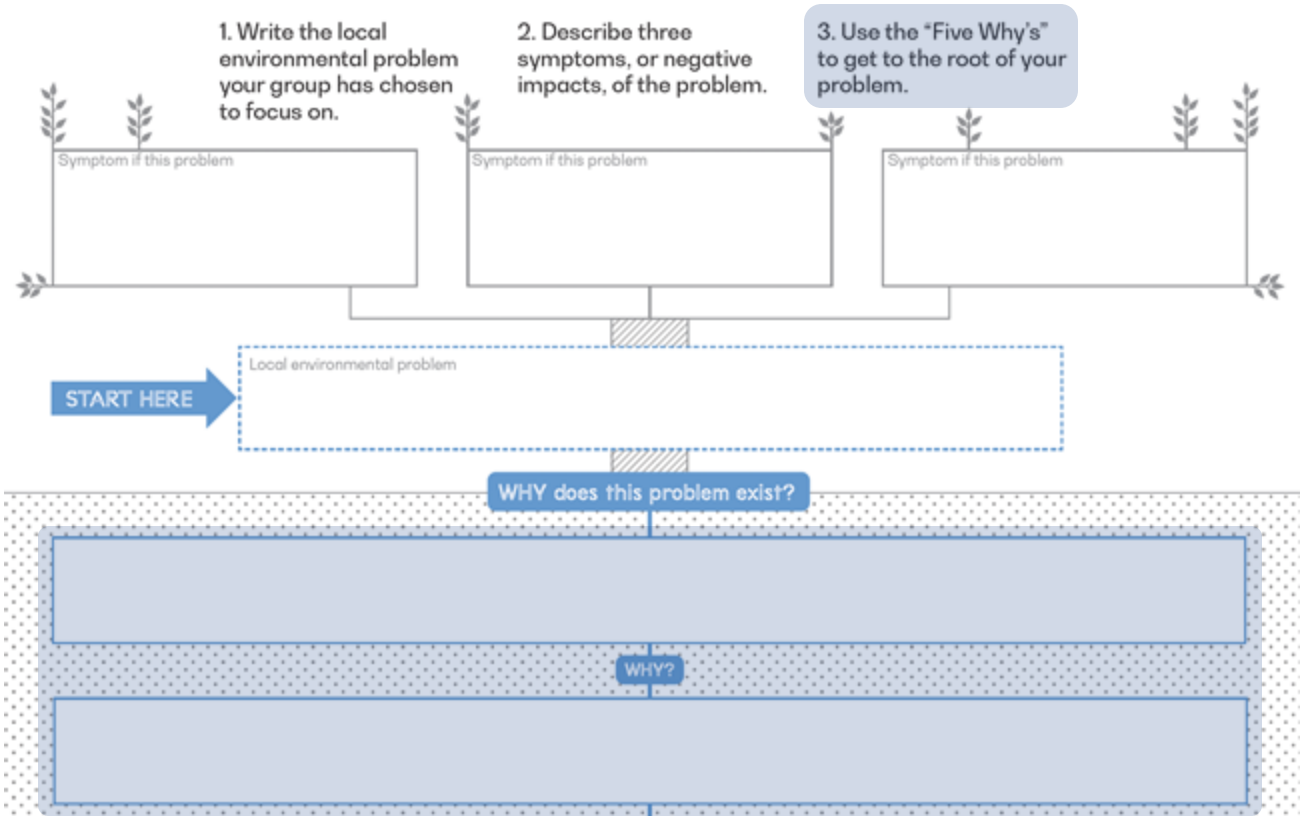
3. Use the "Five Why's" to get to the root of your problem.

Five Whys Jefferson Memorial Example

Raise your hand to answer:

- What does the root cause of the Jefferson Memorial's stone deteriorating?
- How did the park rangers arrive at this root cause?
- What happened when the park rangers solved the root of the problem?

Getting to the Root graphic organizer



Tips for completing your Five Why's:

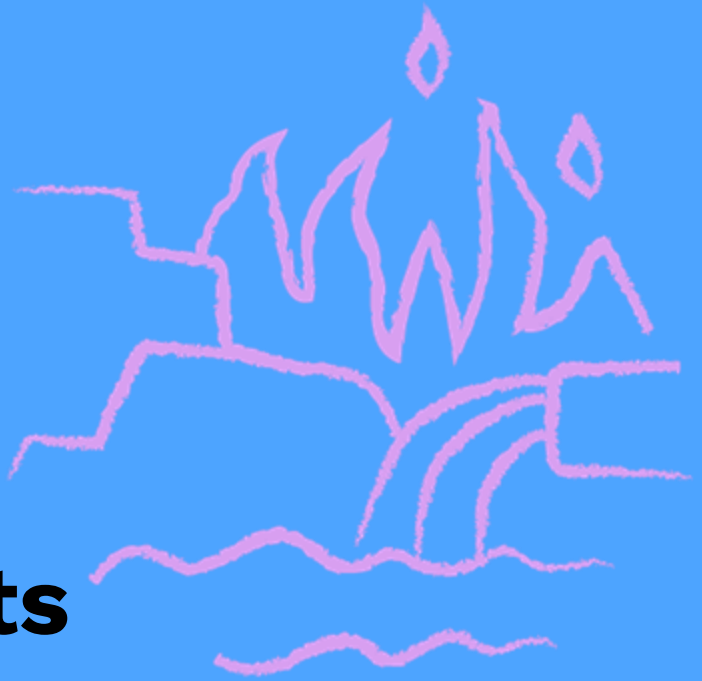
- Try to avoid "blaming the victims". The people who are harmed by environmental problems are usually not the people who caused the problems in the first place.
- Ask yourself: What would environmental justice look like for your issue?
- If you don't know why, it's probably time to do some research! It's okay to leave some of your 5 why's blank for now and fill them in later.

It's time to learn more about your chosen local environmental problem! Visit **ClimateJusticeInitiative.com/all-teachins** and read the descriptions of the Land Circle, Air Circle, and Trash Circle. Choose the one that best fits your chosen topic.

Then, read the descriptions of each video on that page. Choose **one** video that most closely matches your chosen topic. Watch the video and take notes on the back of your handout. Pay special attention to the **author's point of view or purpose** in the video.

Share what you've learned with the class!

Source of information	Notes (facts, information)	Author's Point of View / Purpose	Questions for further research



Lesson 4 - Part 2:

Getting to the Roots

Objective: In the second part of this lesson, students apply the **Unit Project Rubric** to two example projects in order to improve their own final projects. Then they continue to research their chosen local environmental problem.

3	5	7				

Read the Unit Project Rubric

	Approaches Standard	Meets Standard	Exceeds Standard
Rigor	The project **does not explain** the local environment **problem, symptoms, root causes, possible solutions,** or **action steps** using **grade-appropriate vocabulary** and/or **images.** The project does not contain any **statistics** related to the local environmental problem.	The project explains the local environment **problem,** as well as its **symptoms, root causes, possible solutions,** and **action steps,** using **grade-appropriate vocabulary** and/or **images.** The project contains at least one **statistic** related to the local environmental problem.	The project meets the standard for rigor, **and**: ... uses appropriate **evidence** and **reasoning** to **support claims** about the problem, symptoms, root causes, solutions, and action steps. ... includes appropriate visual representations (such as a **graph**) and an appropriate **citation** for each **statistic**.

Any Questions?

Read the Unit Project Rubric

	Approaches Standard	Meets Standard	Exceeds Standard
Persuasion	The project **does not convince the audience** that the local environmental problem is important and concerning, or that the root causes are accurate and connected, or that the suggested actions are meaningful and effective.	The project convinces the audience that the local environmental problem is **important and concerning**, that the root causes are **accurate and connected**, and that the suggested actions are **meaningful and effective**.	The project meets the standard for persuasion, **and**: ... describes **how** and **why** the suggested actions will **improve** the local environment. ... makes it **easy and fun** for the audience to take action.

Any Questions?

Read the Unit Project Rubric

	Approaches Standard	Meets Standard	Exceeds Standard
Impact	The project **does not invite the audience** to take action, or: ... the actions suggested by the project are **vague** and **not specific**, or ... the actions address the problem's **symptoms**, but not its **root causes**.	The project invites the audience to take at least one **specific, reasonable action**. The actions address the **root causes** of the problem, and not just the **symptoms** of the problem.	The project meets the standard for effectiveness, **and**: ... suggests a **sequence of actions**, including some that are simple and some that are more complex. ... includes a way for the audience to **share** the impacts of their action steps, creating positive **ripple effects**.

Any Questions?

Use the rubric to evaluate an example.
Then, share your score and reasoning with the class.

	Approaches Standard	Meets Standard	Exceeds Standard
Rigor	The project **does not explain** the local environment **problem, symptoms, root causes, possible solutions,** or **action steps** using **grade-appropriate vocabulary** and/or **images**. The project does not contain any **statistics** related to the local environmental problem.	The project explains the local environment **problem,** as well as its **symptoms, root causes, possible solutions,** and **action steps,** using **grade-appropriate vocabulary** and/or **images**. The project contains at least one **statistic** related to the local environmental problem.	The project meets the standard for rigor, **and**: ... uses appropriate **evidence** and **reasoning** to **support claims** about the problem, symptoms, root causes, solutions, and action steps. ... includes appropriate visual representations (such as a **graph**) and an appropriate **citation** for each **statistic**.
Persuasion	The project **does not convince the audience** that the local environmental problem is important and concerning, or that the root causes are accurate and connected, or that the suggested actions are meaningful and effective.	The project convinces the audience that the local environmental problem is **important and concerning**, that the root causes are **accurate and connected**, and that the suggested actions are **meaningful and effective**.	The project meets the standard for persuasion, **and**: ... describes **how** and **why** the suggested actions will **improve** the local environment. ... makes it **easy and fun** for the audience to take action.
Impact	The project **does not invite the audience** to take action, or: ... the actions suggested by the project are **vague** and **not specific**, or ... the actions address the problem's **symptoms**, but not its **root causes**.	The project invites the audience to take at least one **specific, reasonable action**. The actions address the **root causes** of the problem, and not just the **symptoms** of the problem.	The project meets the standard for effectiveness, **and**: ... suggests a **sequence of actions**, including some that are simple and some that are more complex. ... includes a way for the audience to **share** the impacts of their action steps, creating positive **ripple effects**.

Use the rubric to evaluate another example. Then, share your score and reasoning with the class.

Air example - p. 60

Land example - p. 62

Check with your group:

- Do you understand how the rubric will be used to evaluate your unit project?
- Do you understand what your group needs to do in order to get a high score on the unit project rubric?

Group research time!

- Continue taking notes in your notes organizer.
- Make sure you are collecting information that will help your group score well on the unit project rubric. There is a checklist at the bottom of the notes organizer.
- If you need help finding reliable sources, raise your hand to ask your teacher.

Do you have all the pieces you need for a successful final project?

- ☐ Local environmental problem
- ☐ Symptoms of the problem
- ☐ Root causes of the problem
- ☐ Possible solutions to the problem
- ☐ Action steps
- ☐ Appropriate vocabulary
- ☐ Appropriate images
- ☐ At least one statistic
- ☐ Citations

End of Lesson 4:

Thank You!

CLIMATE JUSTICE INITIATIVE

Mural Arts Philadelphia