

# Green Infrastructure Detective Toolkit

## Challenge Objective:

Uncover the hidden ways your community manages stormwater and supports nature.

## Challenge Overview:

Through this toolkit, you'll become a green infrastructure expert. You can do this on your own, with friends, as a club, or with your class. You can...

- Search your area for bioswales, rain gardens, or permeable pavement
- Diagram how they work & talk to the people who maintain them
- Create a youth guide to help others spot this hidden green engineering



## Short on Time? Choose Your Path:



### Explorer:

Check out the Research and Explore steps.



### Storyteller:

Focus on the Explore and Document steps.



### Researcher:

Do the Research and Expert Interview Steps.



### Advocate:

Skip to the Document and Take Action steps.

# RESEARCH

## Goal:

Learn how green infrastructure helps protect waterways and communities.

## Activity:

Explore stormwater pollution and how green infrastructure can help. Try one or more of the following:

- Watch a short video or read an article about how stormwater runoff impacts local ecosystems.
- Research examples such as rain gardens, bioswales, green roofs, or permeable pavement.
- Look online for local examples of green infrastructure projects in your city or neighborhood.



# EXPLORE

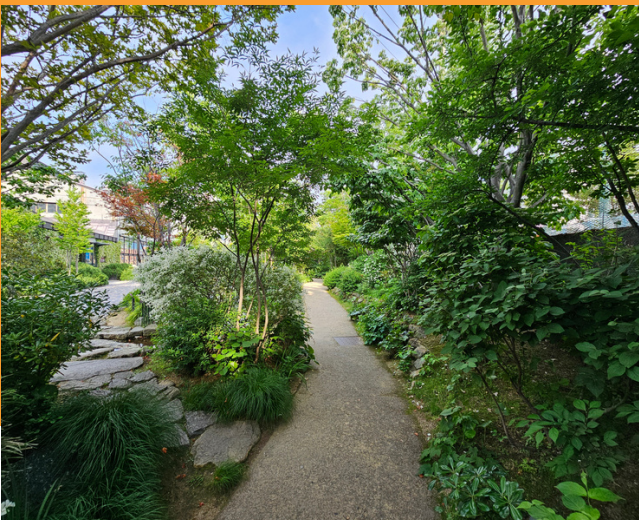
## Goal:

Hunt for green infrastructure in your community.

**Take a walk around parks, parking lots, school grounds, or another site of your choice to see how the area manages rainwater. Look for features like:**

- Drains with plants or gravel (these may be rain gardens or bioswales).
- Slopes or channels that guide water into planted areas.
- Porous surfaces like bricks, gravel, or special pavement that let water soak in.

Sketch or photograph what you find and note how these features help absorb or slow down water. Use our Field Sheet template to guide your observations!



***Tips:*** Can't go outside or short on time? Use Google Street View or local park maps to find and document green infrastructure.

# LEARN FROM AN EXPERT

## Goal:

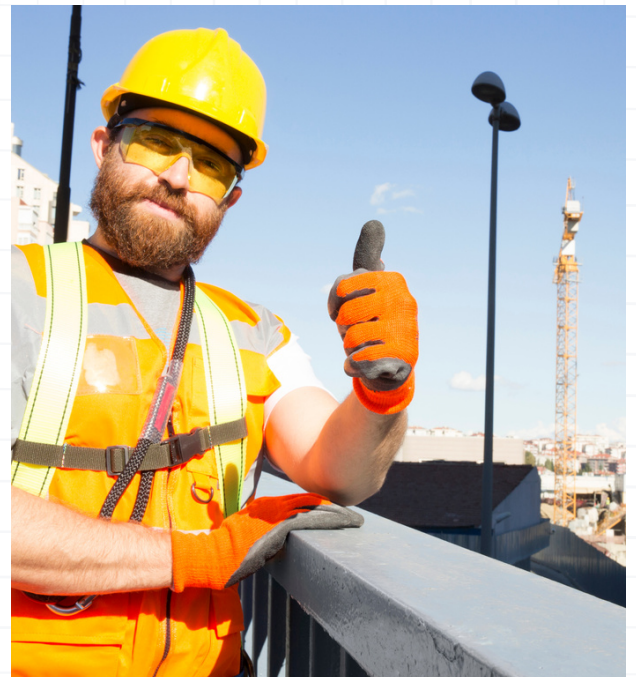
Understand how and who maintains these green systems.

## Activity:

Interview or email with maintenance staff, city workers, or a local environmental organization to get insights from the pros.

## Sample Questions:

- How often are bioswales, rain gardens, or other green infrastructure features cleaned, checked, or maintained?
- What challenges do you face in keeping these systems effective?
- Are there opportunities for the community to help care for these systems?



# DOCUMENT YOUR FINDINGS

## Goal:

Design a “Youth Guide to Hidden Nature Engineering.”

## Include:

- Diagrams/sketches of the green systems you found
- Photos, labels, and short explanations showing how they work
- *Optional enhancements:* arrows, color coding, overlays, or comparisons to show water flow and function

## This can be compiled into:

- A physical or digital flipbook
- A social media carousel
- A flyer, poster, or infographic
- Short video tours
- A collage or mixed media guide
- An “engineering diary” from nature’s perspective



# TAKE ACTION

## Goal:

Share your discoveries to help inform your community.

**Find a way to bring this to your community. Check out the ideas below or come up with your own creative approach!**

- Host a “hidden nature walk” where you lead friends, classmates, or neighbors to spot green infrastructure in your community
- Turn your guide into an interactive workshop for younger students, neighbors, or community groups
- Create a simple online map showing where features like rain gardens or bioswales are located
- Set up a temporary display at a farmer’s market, park, or community event where people can explore your guide hands-on



# REFLECTION

## Ask yourself:

- What impressed or surprised you about how green infrastructure functions in your community?
- Did you notice any areas where these systems could work better, and how might they be improved?
- What challenges or obstacles do you think a city might face when installing or maintaining green infrastructure?

Reflect on what you've learned and observed. How could your insights, ideas, and creativity help your community design, improve, or protect its green infrastructure for a healthier, more resilient environment?

