Flood:ED School Greening Simulator

School Greening: Investigating Simulator Solutions (SR)

Analyze and apply climate adaptation strategies using the Flood:ED School Greening Simulator to develop informed, community-based solutions for extreme heat and flooding!

Learning Outcomes

- Investigate local and global strategies to reduce flooding and heat impacts.
- Analyze the effectiveness, feasibility, and equity of climate solutions.
- Develop and communicate evidence-based recommendations for climate resilience.

Vocabulary

As you work through the Flood:ED School Greening Simulator, write down any words that are new to you! Take a minute to look up what each word means, and write the definition in your own words.

Example:

Albedo Effect – *the ability of a surface to reflect sunlight; light-coloured surfaces have higher albedo and reflect more sunlight, keeping the area cooler.*

Step 1: Exploring Flood Solutions with the Flood:ED School Greening Simulator 💧

🔍 *Click on a solution (like "bioswales") and read how it works.*
📝 *In the chart, describe (in your own words):*

- *What the solution is*
- *How it helps with flooding*
- *What to consider before using it*

Table 1: **Flood Solutions**

Solutions	What It Is	How It Helps	Things to Consider
Bioswales /Ponds			
Ground Material			
Tree / Shrub Planting			
Other solution *(pick one more from the simulator):* _____			

Step 2: Exploring Heat Solutions with the Flood:ED School Greening Simulator ☀️

🔍 *Choose a strategy and see how it reduces extreme heat.*
📝 *In the chart, explain (in your own words):*

- *What the solution is*
- *How it helps with heat*
- *What to consider before using it*

Table 2: Extreme Heat Solutions

Solutions	What It Is	How It Helps	Things to Consider
Building Colour			
Trees / Shrubs			
Green Roof			
Other solution *(pick one more from the simulator):* _____			

Step 3: Environmental Projects with the Flood:ED School Greening Simulator 🪴

🔍 Explore a project that supports a sustainable environment.
📝 In the chart, describe (*in your own words*):

- What the project is
- How it helps the environment
- What to consider before using it

Table 3: Schoolyard Projects

Project	What It Is	How It Helps	Things to Consider
Pollinator Garden & Composting			
Bike Racks			
Student Initiative			
Other solution *(pick one more from the simulator):* _____			

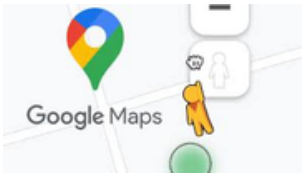
Step 4: Climate Solutions, Local Action 🌍

Zoom In On Your Community!

💡 Choose a solution from the simulator that you've seen locally — like a rain garden, solar panels, more trees, or a green roof.

👣 Use *Google Maps* Street View to explore your area:

- Type in a place you know (your school, your street, or a park)
- Drag the yellow Street View person onto the map to "walk" around and spot your solution — or imagine where it could go!



1. 🌿 What climate solution did you choose, and how does it reduce flooding, extreme heat, or help the environment?

2. 📍 Where in your community did you find it — or where do you think it could be added? Why is this a good location?

3. ⚠️ What challenges might come up when trying to use this solution in your area? *(cost, space, weather, city rules or policies, or if people would support it, etc.)*

Step 5: Take Action, Your Way 🌱

Your ideas can make a difference. Let's turn learning into action!

You've explored the climate challenges. Now it's your turn to choose a project and use your voice, ideas, or design skills to show how we can reduce the impact of climate challenges.

Pick one option below:

Real-World Events, Real Consequences 🌍

How are cities and communities around the world responding to climate disasters?

Research one major flood OR extreme heat event from the past 20 years.
Include:

1. 📍 Where did it happen?
2. 📅 When did it occur?
3. 💥 What were the main impacts on people, infrastructure, and the environment?
4. 🌡️ Did climate change make the event more severe or more likely?
5. 🧩 What solutions were used to either prevent or respond to the event? If none, what could have helped?

Lead the Change 🧠

You're in charge—and your city has the funds. You get to decide how they're spent.

- Choose one solution for flooding and one for extreme heat.

Write a 5-7 sentence pitch explaining why each solution is a smart investment.

- Use local data, such as financial considerations, to support your choices.
- Highlight how your solutions will benefit vulnerable groups or those with less access.

Design a Climate-Safe Zone 🏞️

Create a visual layout for a schoolyard, neighborhood, or public space designed to withstand flooding, heat, and environmental impact.

- Include at least three solutions from the Flood: ED School Greening Simulator to address flooding or heat.
- Add one environmentally friendly project to promote sustainability.
- Design by hand or use digital tools (Canva, Minecraft, Google Slides, Tinkercad, etc.).

Build a Social Media Campaign, or send an eCard 📱

Create a social media post (Instagram, TikTok, or X/Twitter/ Threads) that:

- Showcases a climate solution you believe in
- Links it to a local area (real or potential) where it could be implemented
- Encourages action by asking others to support or adopt the solution
- Share your message as an eCard with GreenLearning's eCard