Example Project Planning Student Sheet (Teacher Resource)

Lesson 7 > Part 2 > Making Our School More Resilient

Note: This resource provides an example of a project to address flooding of school parking lots by installing pervious pavement and is intended for the instructor only. Use the sample answers and tips to help you guide students as they create their project plans.

Respond to each prompt with at least two sentences and with as much detail as possible. Some prompts will require a more lengthy response than others. Your answers on this worksheet will be included in the final school resilience plan.

Project Title: *Improving Our School Parking Lots with Pervious Pavement*

(Title should be appropriate for the project and provide insight into the problem addressed as well as what the project is)

Section 1: Define the Problem

Your specific project will address a problem on your school campus. Use the questions below to provide more details about the problem.

1. What problem does your project address? How would you describe the problem in 1-2 sentences?

Student answers should provide details about their school problem. For example, if campus flooding is the problem, students should include the location and extent of flooding. They should also explain how the flooding impacts the students and members of the school community. Answers should provide enough detail to explain the problem clearly.

2. What are the causes of the problem?

Student answers will vary depending on the problem their project will address. Students should refer back to learnings from Project Resilience lessons 1-4 about the causes of different environmental problems facing coastal communities, as well as their own community knowledge to answer this question. For example, campus flooding could be related to multiple causes: areas of the school campus subsiding, paving the campus with concrete, increased flooding in the area due to hydrologic modification (levees, dams, channeling) of a nearby river, or the increased severity of storms due to climate change.

3. How does the problem relate to the larger environmental risks facing your community?

Student answers will vary depending on the problem their project will address. Similar to question 2, students should refer back to Project Resilience lessons and their community knowledge. For example, the subsidence that leads to campus flooding is experienced by the larger community as well. Residents of the area surrounding the school campus may also be experiencing increased flooding during storms. Flooding can lead to property damage, and land loss due to subsidence threatens the long term stability of the community.

4. What are the current impacts of the problem? Are there future impacts? What is the level of impact (individual/species, community, etc.)? Make sure to include this problem's sphere of impact (economic, environmental, social, etc.).

Student answers should include an understanding of who/what is impacted now and in the future. Current impacts, if using the subsidence example, include flooding on parts of campus. Future impacts include increased flooding on campus and damages to campus building foundations as the subsidence continues. This flooding due to subsidence is a problem that impacts the school community, the town, and even the parish. It also affects individuals and households. As flooding increases over time, all community members will be affected, some more than others, depending on where they live. Flooding impacts the economy because flood mitigation is expensive, and the potential loss of businesses and structures due to flooding has an economic toll. Sensitive environments, such as wetlands, are also impacted by subsidence. Louisiana is currently losing more wetlands than any other coastal US state.

5. Describe specific example(s) of the problem. Where else has this problem occurred, and what has been done about it?

Students will need to refer back to the previous lessons for examples of their problem. With our subsidence example, students could list Terrebonne Parish as an example of high subsidence rates. They might have a personal story of how flooding has affected a family member or someone from their community. Students could use the Terrebonne Parish Factsheet to provide examples of how the parish residents are addressing these subsidence rates.

Section 2: Project Details

Include as much detail as possible in your answers. Each answer should be at least two sentences long.

1. What is the goal of your project? Your goal must be clear, well defined, and attainable. To be considered attainable, projects must be able to be completed at your school and be relevant to the topic of adaptation. Your goal statement should include a description of the outcome you want to achieve and a description of what you will do to achieve your goal.

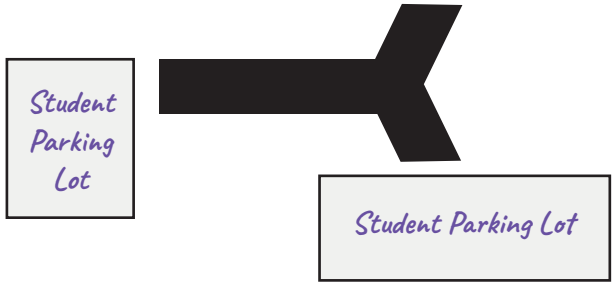
Students should create a goal statement that clearly explains what their project hopes to accomplish. The goal of the Improving Our Parking Lots project is to install pervious pavement in the two school parking lots in order to decrease the amount of flooding on campus. The project will also create green spaces surrounding the parking lots to help absorb water and catch runoff. Decreasing the amount of flooding will allow students to use the front entryway and parking lots safely at all times during the school year.

2. Are there any secondary benefits to your project? For example, does your project include an education component, provide green space, or improve water quality or habitat?

Along with installing pervious pavement, our project will incorporate green spaces into the parking lot design. The green space will come from planting vegetation in the spaces surrounding the parking lot. This vegetation will help to absorb water and reduce runoff.

3. Where will your project take place? Describe your project's location. Include pictures of your project location and a map, if possible.

The project site is the two student parking lots indicated in the image below.



If students are unable to provide a picture of their project location, have them create a drawing or a simple design like the one above.

4. How would you complete this project? List the steps that would need to be completed and a timeframe in which the steps would be completed. If your project would need future maintenance or monitoring, include this in your schedule. Include a detailed sketch or diagram of your project. Please attach additional pages if needed.

Note: Students may need help determining the completion dates for their timeline. The completion dates could be specific, like the example below, or a target date range (During the week of February 1st, for example). Creating a table is optional.

Task:	Completed by:
Talk to the school administration and get approval for the project	January 15th
Measure the parking lots & design green space options	February 1st
Research pervious pavement options and vendors	February 15th
Research plants for greenspace	February 15th
Contact vendors for cost	March 1st
Schedule installation	April 1st
Order/purchase plants	April 1st
Plant greenspaces	May 1st

5. What materials or services would be required to complete this project? Please attach additional pages if needed.

Materials & Services needed to install pervious pavement in our school parking lots:

1. *Pervious concrete pavement*
2. *Plants*
3. *Topsoil*
4. *Gardening tools*
5. *Survey of our parking lots by engineer/pervious pavement professional*
6. *Design of new pervious pavement parking lot by professional*
7. *Labor to install pervious pavement*
8. *Labor to install plants*
9. *etc....*

Section 3: Thinking Deeply About Your Project

Provide thoughtful responses to the questions below. Each answer should be at least two sentences long.

1. What excites you about this project? What is the upside?

This answer will vary depending on student interests.

2. How would this project make your school more resilient?

The pervious pavement project will decrease the parking lot flooding at the school. Students will be able to safely use the student parking lots, even during storms.

3. What special considerations would be required for your project? (Do you need permission from the principal, school board, etc.?)

All projects will need approval from the principal. Check with your principal to determine who else will need to provide approval. Many of the projects will need future maintenance, and students will need to have that written into their plan.

4. What challenges may come up with your project? How would you address them?

Potential challenges:

- *Weather delays installation (frequent storms, freezing temperatures)*
- *Supplies are unavailable*
- *Change in project location (if project interferes with school maintenance)*
- *The parking lot could need additional repair before pervious pavement can be installed*
- *The project becomes over budget*

5. What other information would you need before beginning this project's construction? Would you need to consult any professionals for the project?

Other things to think about:

- *Do we need a vendor or contractor to install this project?*
- *Do we need an engineer to design the final project?*
- *Will this project negatively affect another part of campus?*
- *Would the school's maintenance be able to help with the installation of the project?*