



PROJECT 1 : Designing a City of the Future

PROJECT-BASED LEARNING ASSIGNMENT OVERVIEW
STUDENT PLANNING SHEET

Name: _____

Date: _____

Directions: Alone or with a group, use this planning sheet to design your city of the future. Use the notes and planning sheets that you completed through the lessons to help with your development. The format for your final project will be directed by your educator.



OVERVIEW

Now that you have explored sustainability, climate change, and efficient, healthy, and resilient cities throughout the three lessons offered, you are ready to work independently or in groups to design your concept for a city of the future. Use the content developed in lessons 1, 2, and 3 as you develop your designs.

1. Before you begin the project, learn more about the discipline of environmental engineering. Read the section, "What is Environmental Engineering?" (pages 1-2) and "Building on a Remarkable Legacy" (pages 2-3) in the [report introduction](#).

Create a list of the different types of people/careers that will have to be involved in the design and development of your city:

Person/Career	Ways they will contribute to city design



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- 2. Students should incorporate infrastructure (such as water, transportation, and energy) into their planning and consider the roles of green infrastructure, smart system technology, and distributed systems in their designs. Research these components by in [Grand Challenge 4](#) in the report, specifically:
 - a. Re-envisioning Urban Infrastructure (pages 56-57)
 - b. Advancing Smart Cities (pages 57-60)
 - c. What Can Environmental Engineers Do (pages 63-65)

- 3. To help in your design, create a bullet point list of those elements you want to be sure to include in your city to address each of the following aspects – be sure to include ways to address equity in each category.



Sustainably supplying food, water, and energy

Mitigating and adapting to climate change



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Making your city efficient, healthy, and resilient

Blank area for student planning and design notes.

- 4. Your final presentation of your design will be done according to the instructions you receive from your educator.

Remember, this may be a city you and your family will live in someday in the future - what do you want to see in the design to make life better for all?

QUESTIONS TO CONSIDER

- What types of tradeoffs do city planners face to accomplish the goals of making a city efficient, healthy, and resilient?
- How can your design ensure that benefits are provided to all city residents, regardless of income, race, or ethnicity?
- How might you overcome challenges to move from today's infrastructure to a better one in the future?

