

Let's Design a Cleaner City

Pre-Program Assignments

WHAT ARE THE DESIGN STEPS?

In the program *Let's Design a Cleaner City*, students will use most of the steps of the Applied Design, Technology and Skills (ADST) process to design their city. Before participating in the program, watch "Saga City" and discuss the ADST steps that they model in the video.

MATERIALS

"Saga City", by Luc Chamberland, 16 minutes
https://www.nfb.ca/film/saga_city/

WATCH AND DISCUSS

In "Saga City", we see how the imaginary city of Colvert redesigns their community to increase the quality of life for its residents, as well as decrease their contribution to pollution and global climate change. We see them complete the ADST steps, from understanding the context through sharing their process. After watching the film, discuss with your students how they accomplished each step of the ADST process. Below are just some ideas, can you and your students find more examples?



ADST Step	Example in "Saga City"
Understanding Context	We saw news articles and reports on a bulletin board, showing issues facing Colvert. Also, Mayor Walker holds a townhall meeting to gather input from the citizens of Colvert.
Defining	Mayor Walker used the input from the citizens, her own observations, and help from her expert collaborators to define the main issues.
Ideating	Mayor Walker and her expert collaborators came up with ideas for how to address the issues facing Colvert.
Prototyping	Mayor Walker and her expert collaborators made models before they started building. We see their maps in the second townhall meeting.
Testing	They built one new neighborhood before building another. Do you think they could learn from the first before building the second?
Making	They built new neighborhoods, structures, and transportation options all over the city.
Sharing	Throughout the video, we see characters sharing ideas with each other. The video "Saga City" itself is a way they share their experience.

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WHAT MAKES UP A CITY?

In this program, students will be designing their own cities. Before participating in the program, have a discussion with your students about what makes up a city.

MATERIALS

A place to record students' ideas (whiteboard, large paper pad, etc).

DISCUSS

Discuss with your students what makes up a city (buildings, structures, services, etc). Use the questions below to guide your discussion.

- What kinds of things are necessary to have in a city?
- What kinds of things are optional?
- What do we have in our city that you enjoy?
- What do we have in our city that you don't enjoy?
- Where does the food in the grocery store come from?
- Where does the garbage that you throw in the trashcan go?
- What happens to the water that drains down the sink, or flushes down the toilet?
- Who makes decisions about what kinds of buildings, structures or services we have in our city? Can individual people influence these decisions?
- Do cities make pollution? What kinds of things in a city make pollution?
 - *One of the main kinds of pollution that comes from cities is different kinds of greenhouse gases (like carbon dioxide and methane). Take a moment to remind your students what greenhouse gases are and what role they play in global climate change.*

