

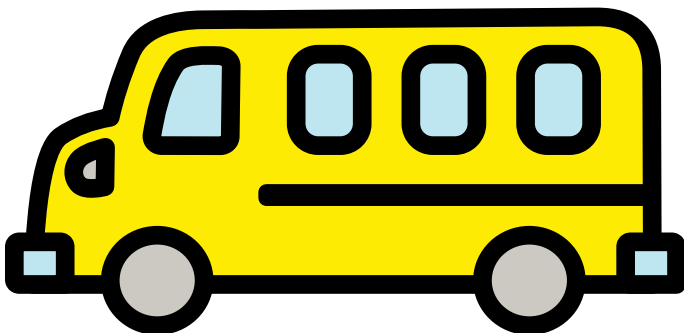
Shelter in the Midst

Overview

You have come up with an idea to build a bus shelter in your neighborhood. Students will demonstrate their understanding of scale by creating a visual representation of their bus shelter structure.

Scenario

While waiting for your school bus one rainy day with your friends, you come up with an awesome idea. Your neighborhood needs a bus shelter! You and your friends receive permission from the landowners at your stop to build a structure on a 6' x 8' area of flat land at the front of their property. They do not want an eyesore in their front yard, so they have asked that you provide them with a scale model of the structure before it is built. Your parents have agreed to help fund the structure if you can get it approved by the landowners. Since you like to dream big, and you experience all kinds of weather conditions in your area, you and your friends have decided to create a basic model as well as a luxury model for consideration.



Driving questions

The driving questions were developed to encourage you to explore the current realities of communities and individuals to be served. The questions will aid you in developing empathy to understand how others might be feeling about a problem, circumstance, or situation.

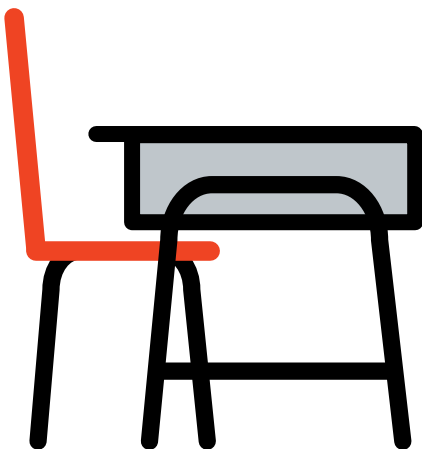
1. What are the necessary design requirements of a bus shelter?
2. What would be considered a luxury design element at a bus shelter?
3. How big is a 6-foot by 8-foot space?
4. What is a scale model?
5. What needs to be completed prior to making a scale model?
6. What is a reasonable size for a model to show the necessary detail?
7. Why is it necessary to make the model to scale?
8. Will you make the luxury model and the basic model the same size?

Understanding,
Research, Define,
and Ideation
(U-RDI)

Understanding

Understanding is the process of gathering information to inform what you need to know about a topic. The use of a graphic organizer can help you analyze two aspects of a problem. We are suggesting a T-Chart to explore your “know” and “need to know”.

Know	Need to know
<ul style="list-style-type: none"> • You have come up with an awesome idea while waiting for your school bus one rainy day with your friends. Your neighborhood needs a bus shelter. • You have received permission from the landowners to build the bus shelter. • You are permitted to build a structure on a 6’x8’ area of flat land at the front of the property. • The landowners do not want an eyesore. • The landowners would like you to provide a scale model of the structure before it is built. • Your parents will fund the final structure once it is approved by the landowners. • You like to dream big. • You experience all kinds of weather conditions in your area. • You and your friends have decided to build a basic and a luxury model. 	



Research

Research is the process of examining as much data as possible to have an informed idea for your problem.

Problem specific resources

- [AIA - Designing for Equitable Communities](#)
- [10 Key Components for Building Healthy, Equitable Communities](#)
- [EPA - Creating Equitable, Healthy, and Sustainable Communities](#)
- [Tips for Connecting Learners to their Community](#)
- [The 7 Universal Design Principles](#)
- [Engaging Everyone](#)
- [Designing More Equitable Cities](#)
- [Simple Machines Article](#)

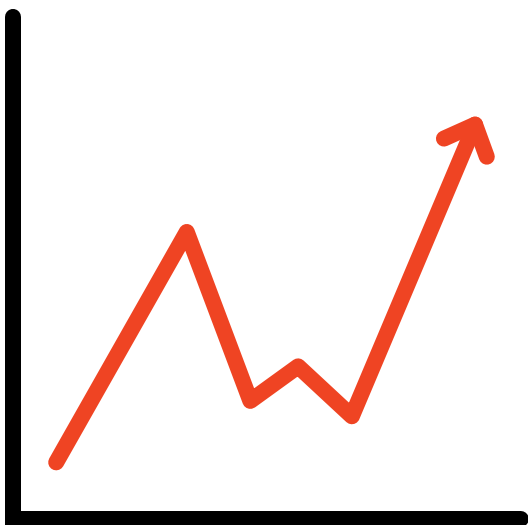
Hands-on activity

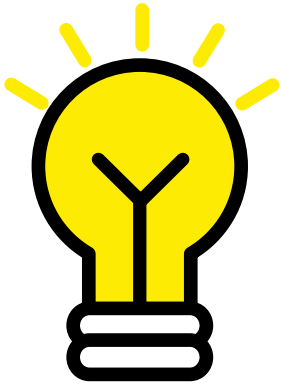
- [Simple Machines Activities](#)

Define your problem using empathy

Architects work to define problems before coming up with a solution. They use empathy in defining a problem. This allows them to define a problem using multiple perspectives.

Now that your research is done, define your problem!





Ideation

During ideation you will develop as many possible solutions as possible to the problem based on your defined problem. Do not limit your solutions!

Once you have listed all your possible solutions in the box below, cross out those that are extreme or refine them to be more practical.

Possible solutions: