

BIOMIMICRY

YOUTH DESIGN CHALLENGE

Define the Challenge

The first step in any design process is to define the problem or opportunity that you want your design to address. Defining the challenge (also sometimes called “scoping”) is preparatory work done before any actual design work begins. It is a period of exploration, questioning, and goal-setting. Use this worksheet to define your challenge and generate a design question.

Frame your challenge: The goal of this step is not to decide what you will make or design but to understand what your design needs to do, for whom, and what criteria and constraints need to be considered. It may take several rounds of questioning to reach the right challenge question.

Here are some tips and suggestions to guide you:

1. **State the challenge as a question.** Once you have an idea of what you want to work on, try stating your challenge in one sentence. In order to avoid jumping to conclusions about what you will design, try stating the challenge as a question that begins with, “How might we...?”. For example:

How might we... connect food surpluses to those in need?

How might we... reduce flooding in urban areas?

How might we... make urban cyclists more visible to drivers at night?

2. **Make sure you are considering context.** Context is part of the criteria that needs to be considered and provides specificity with which to work. Context can include many factors, but it’s essential to identify the needs of your stakeholders (those who will be impacted) and the location or setting in which your design will be used. Asking the right question at the beginning of your project will guide you in your research and give you a better chance of arriving at an innovative and impactful solution.

3. **Using the information above, phrase your challenge as a question:**

How might we _____?

4. **Test the question:** Is it too broad? Your question should give a sense of the context in which you are designing as well as the impact you want to have and what/who it benefits. If it doesn’t, it may be too broad. Is it too narrow? Your question should be somewhat open-ended to ensure you haven’t jumped to conclusions about what you are designing. If your question is very specific, it may be too narrow. Try again, if necessary:

How might we _____?