

Design Challenge #3: Define the Problem and Create an Innovation Goal

To solve a problem, one must first clearly define what the problem is and how innovation attempts to solve that problem. In this design challenge you will identify the problem you are solving and create a goal for your solution.

What You'll Need:

- Internet/Television
- Pencil/Writing Utensil
- Debugging Graphic Organizer
- SMART Goal Graphic Organizer
- Step by Step Graphic Organizer

Quick Steps Guide

1. **Review Your Interview:** Look at the notes or recordings from your interview. Think about the things you learned and the ideas that were shared.
2. **Identify a Problem:** Based on the information from the interview, think about a specific problem that you noticed. It could be something that needs improvement or a challenge that people are facing.
3. **Describe the Problem:** Write down a clear description of the problem. Explain what it is, who it affects, and why it's important to solve. Write the steps as specific as possible to the process or structure of the problem. Use the graphic organizer to help walk through the steps.
4. **Generate Ideas for Improvement:** Make a list of potential improvements or enhancements that could help solve the problem. Think about different ways to make things better. Use the debugging worksheet to help with this process.
5. **Set an Innovation Goal:** From the list of improvements, choose one that stands out as a potential goal. This should be an ambitious and exciting idea that could make a big impact.
6. **Define Your Innovation Goal:** Write down your innovation goal. This goal should explain what you want to create or change to solve the problem. Make sure it's clear and inspiring. Make your goal a SMART one. Smart is Specific, Measurable, Achievable, Relevant, and Time-Bound. For more information see the document below.

7. **Consider Necessary Information:** Think about what else you need to know to work on your innovation goal. Are there any specific facts, details, or skills you need to learn or gather?
8. **Reflect:** Think about what you've done in this challenge. Did you identify a real problem? Is your innovation goal exciting and achievable? This reflection can help you with future challenges.

Extend

Take photos using the technology available to document the areas or places where there are opportunities for innovation. Use these pictures potentially for before and after photos. If you've identified a problem that centers around a process, use a video recording or a series of photos to show how the problem progresses.

Evaluate

Have the students share their problem statements with the class, with partners or individually. Identify common themes and innovations for potential partnerships. Ensure that each innovation is aligned to the SMART goal format to help facilitate success for the students.