

Welcome to the world of entrepreneurship and your Design and Pitch Challenge in STEM.

There are five main parts to designing a solution and completing the Challenge. Although these parts are numbered from 1 to 5, you do not need to complete them one after the other. Sometimes, you will need to go back to parts that you thought were completed and change them based on your new thinking.

1. Understand the Challenge and Your Users

Read the Design & Pitch Challenge and watch the Challenge Champion video. Be sure you have a clear understanding of the problem. Then do some market research to identify and understand the users - the people or organizations who need a good solution to this problem. What do users need in a solution? Why? What's wrong with the solutions they have now?

2. Research, Design, Test, and Refine Your Solution

Design a solution to your problem. Brainstorm possible solutions to the problem. Be creative and daring. Your first idea doesn't have to be perfect. Create a model or prototype of your solution to test it and demonstrate that it will solve the problem. Your prototype can be a sketch or a 3D model that explains your solution. Test your design and get feedback, then make it better based on what you learn.

3. Develop Your Key Business Proposition

Use the Business Models to explain how your solution creates value for customers. Use the Key Business Proposition to help you work through this and answer the following questions: Who are your customers? Why do they need your design? How does your solution enhance what customers like about their situation and fix what they dislike? What type of business model will you use for your product?

4. Prepare and Practice Your Pitch

Develop a pitch to convince investors that they should fund YOUR solution. You should use the information you gathered/created in the previous steps, but don't be surprised if you need to change things about your Key Business Proposition or solution design as you think about your pitch. Remember to explain why the problem is so important, how your solution will solve it, who will buy it, and why. Be sure to look at How to Build a Pitch as well as the Pitch Judging Sheet, which is what investors will use to evaluate your pitch.

5. Complete Your Technical Brief

Keep track of how your group developed your product. Use the Technical Brief to reflect on your process, report on other ideas you considered, and discuss the mathematics and science you used while conducting research. Also, the Technical Brief is where you will describe the specifics of your solution and justify why and how it works. You can use the Technical Brief Grading Rubric to make sure you've met all requirements for your solution.

