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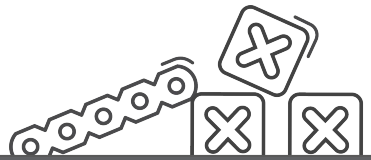
Make! We Can

# Develop your Solution

Ideate stage: Step 3



# Why?

A good solution will address the problem and have a real-world impact.

This section will help you refine your solution by helping you think about it in more depth, such as its strengths and weaknesses, who will benefit from it, and how.

# Introduction

In the previous steps of the problem-solving process, you should have identified a problem and researched the topic to come up with potential solutions. In the development phase, we start to refine the solution.

Take a look at your proposed solution(s) and start to interrogate it:

- What are the pros?
- What are the cons?
- Who is it for?
- Why would it help them?

# Write a compelling headline about your solution.

Can you describe your solution in just one line? Communication is key — if you can’t explain it, maybe it needs some more work.

Remember: the person who may read about your project (or use your end product) may not be a scientist or engineer, so you need to think about how you can explain your idea clearly to a range of people.

Summarize your solution into a headline.

# What Next?

## Define your Solution

# Activity 1: Answer 5 W’s

| Headline | | | | |
|---|---|---|---|---|
| **Who** | **Why** | **What** | **Where** | **How** |
| ...is your audience / will it impact?<br>...causes the problem?<br>...can help?<br>...could you collaborate with? | ...is this important to solve?<br>...is this solution better than others? | ...supporting materials are you going to need?<br>...are your next steps? | ...will the solution work best?<br>in the home? On a device? nationally?<br>In the community? | ...will you make your solution a reality? |

**Question Time:**

Once you’re done, get ready to answer quick questions from the class:

- Have you considered…
- Why have you chosen…
- Have you thought about…
- Maybe you could look at…
- As an alternative you could…
- In terms of impact…

# Activity 2: SWOT Analysis

- Explain that now students have feedback, they can analyze it to inform next steps.
- Ask:
  - What are the strengths of your solution?
  - What are the weaknesses of your solution?
  - What opportunities arise from this solution?
  - What threats are there to it?
- Ask students to complete **Activity 2: SWOT analysis**.


# Refine Your solution more:

- Students will now have considered their solution with different focus points via starbursting, feedback from their peers and a SWOT analysis to recognize any areas for further development.
- Encourage students to use the intel from the three activities to refine their idea.
- These questions could help them:
    - What works well?
    - Could this be mirrored elsewhere?
    - What can you do about the identified weaknesses and threats?
    - How will you embrace any opportunities that have been highlighted?
    - What suggestions can be incorporated into your solution?
- Explain that refining your solution is key to innovation - they can go through this process more than once if they feel like there is more to explore.

# Storyboard

Show how your solution improves the lives of people around you

- Students should now have a clear picture of their solution, which has evolved from what it originally was.
- At this stage, a storyboard is a nice technique to keep the solution in context, reminding students it is not just the solution and the subsequent design of it that are important, but who it impacts and how it fits into the bigger story.
- The main character is the user, so students must create a storyboard that shows how the user would interact with the product/idea/solution in an environment or situation that that is typical for the design.
- Students break down and draw out the sequence of events that the user would take to overcome the problem through the use of their solution.
- They should show how the user interacts in the environment or the experience of using the the product or system that they have designed.
- Students can use this to break down their final design and take it forward into testing.

# Now that you have your solution, it’s time to Prototype your idea.

Step 3: Make Prototype of your Solution