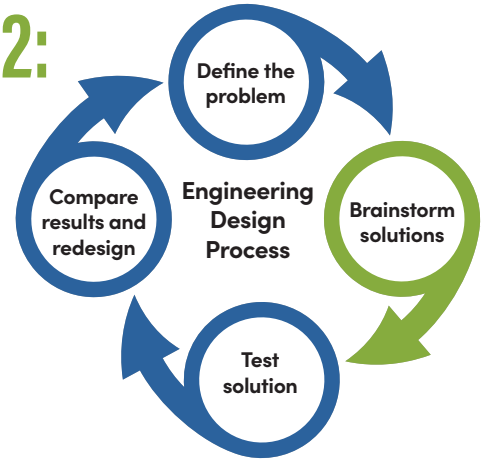


ENGINEERING DESIGN PROCESS PART 2: BRAINSTORM SOLUTIONS

Once a design problem has been defined, an engineer begins the next step of the engineering design process: *brainstorm solutions*. In this step, an engineer thinks of solutions to solve the problem, evaluates each solution, and designs a prototype of the most promising and feasible solution. A **prototype** is a model of the solution. Ultimately, the prototype will be tested and improved.



Answer the questions below.

1. Think of a solution to the problem you defined in the Part 1 worksheet. Use the graphic organizer below to explain and analyze the solution.

Why do you think this would meet the **criteria** of the project?

What are the strengths of this solution?

Does the solution work within the **constraints** of the project?

Possible Solution:
Explain your idea.

What are the weaknesses of this solution?

What materials would this solution require?

How feasible is this solution?

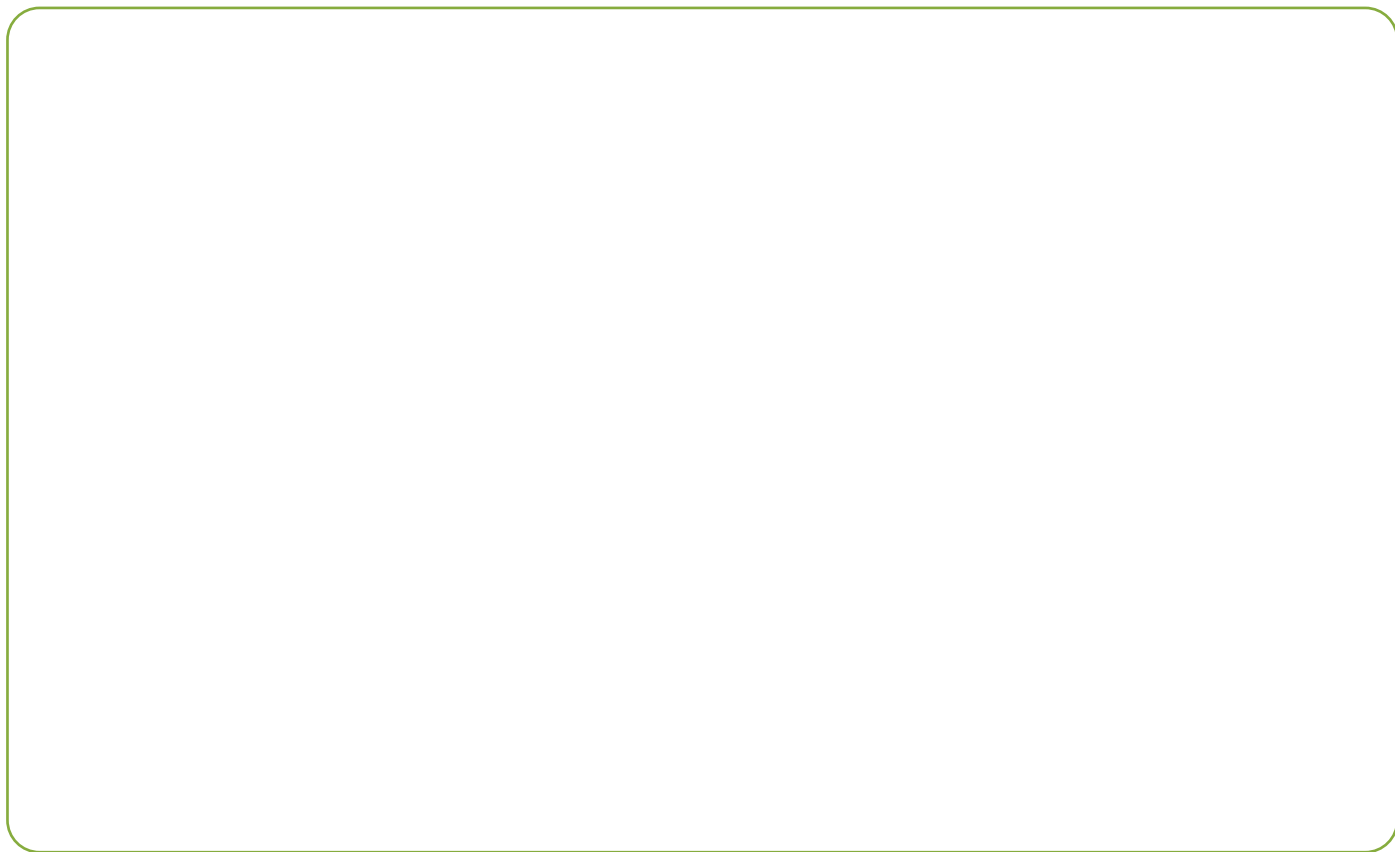
2. Think of two more possible solutions to the problem. On a separate sheet of paper, create a web like the one you completed in question 1 for each solution.

ENGINEERING DESIGN PROCESS PART 2: BRAINSTORM SOLUTIONS

Keep going! Answer the questions below.

3. Which solution do you think is most promising and feasible? Explain your reasoning.

4. Sketch a **prototype** of the solution you selected in question 3. Be sure to include elements that will help you communicate your plan such as labels, explanations, measurements, or a materials list.



5. **Think ahead:** How could you test this prototype?
