

# Engineering Design Process Outline

**Step 1—Define the problem:**

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**Step 2—Identify the criteria and constraints (think about the following—money, time, size, environmental impact, materials):**

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**Step 3—Brainstorm:**

- Use the Research pages to conduct and plan your research.
- Based on your research create three different design solutions that meet the needs of your problem and record them on the following Design Solution pages.
  - Make sure to include a detailed drawing of each solution and how the design functions.

**Design Solution #1:**

**Design Solution #2:**

**Design Solution #3:**

**Step 4—Plan: Evaluate your design solutions and choose one you want to build.**

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**Materials (list any materials and equipment you will need to build your design):**

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## Build and Test Your Design

**Step 5—Build:** Use the materials to follow your plan. Make sure you are staying within the criteria and constraints of the problem. Take pictures of your model as you build.

**Step 6—Test:** Test your design solution and gather data on how well it works. Does your solution solve the problem and meet all criteria and constraints?

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If your design does not solve the problem, use the space below to draw a picture and explain what you had to do to redesign your solution.

**Step 7—Redesign:**