

# THE DESIGN PROCESS

## TECHNOLOGY EDUCATION



1. Identify the need or problem
2. Identify specifications
  - Are there any limitations?
  - What materials and tools can you use?
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3. Develop possible solution(s)
  - Brainstorm possible solutions
  - Draw on mathematics and science
  - Articulate the possible solutions in two and three dimensions
  - Refine the possible solutions
4. Analyze each idea and select the best possible solution(s)
  - Determine which solution(s) best meet(s) the original requirements
  - List strengths and weaknesses of each idea
5. Construct a prototype
  - Model the selected solution(s) in two and three dimensions
6. Test and evaluate the solution(s)
  - Does it work?
  - Does it meet the original design constraints?
7. Communicate the solution(s)
  - Make an engineering presentation that includes a discussion of how the solution(s) best meet(s) the needs of the initial problem, opportunity, or need
  - Discuss societal impact and tradeoffs of the solution(s)
8. Redesign
  - Overhaul the solution(s) based on information gathered during the tests and presentation

