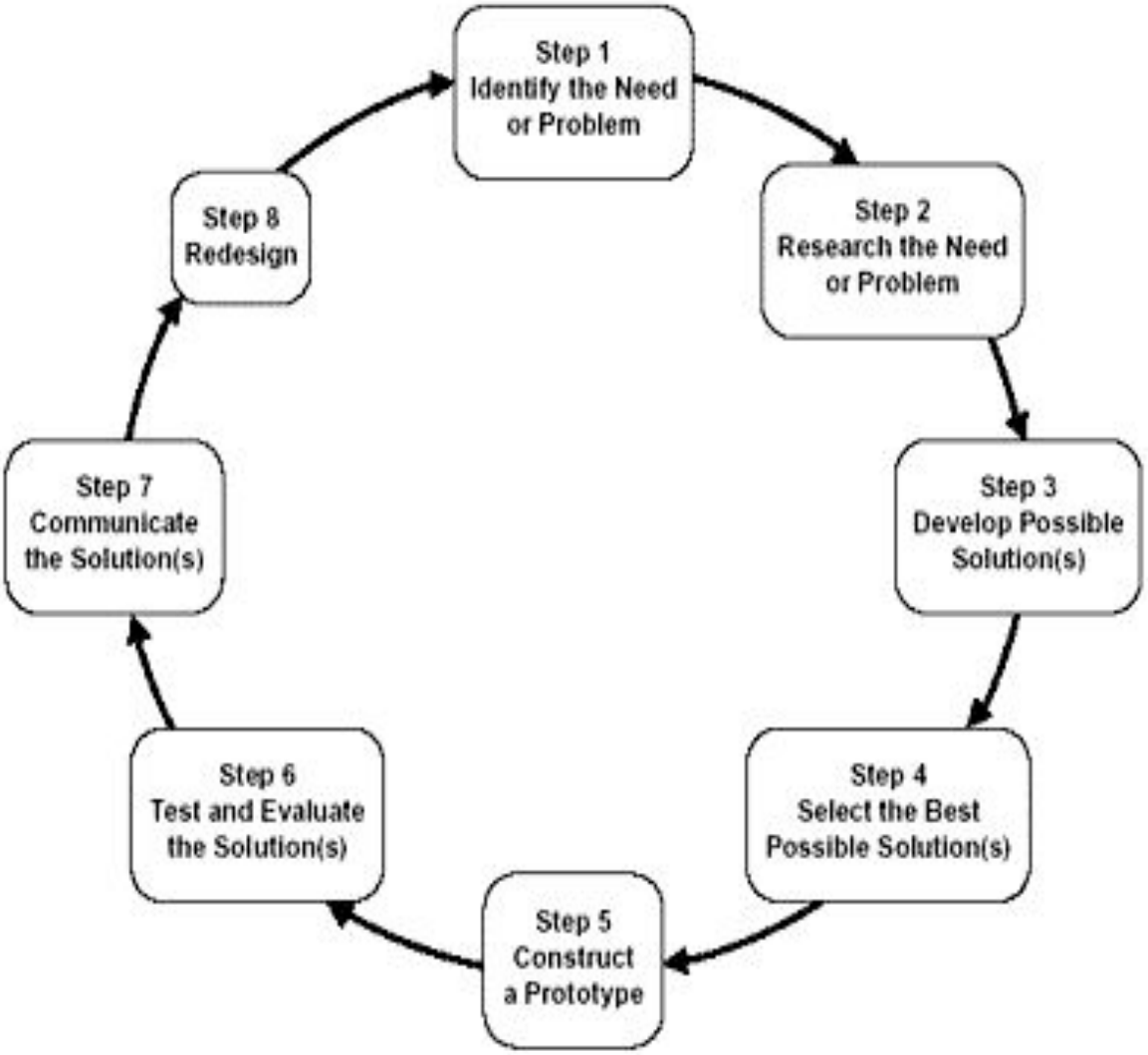
Steps of the Engineering Design Process



1. Identify the need or problem
2. Research the need or problem
    - Examine the current state of the issue and current solutions
    - Explore other options via the internet, library, interviews etc.
3. Develop possible solution(s)
    - Brainstorm possible solution(s)
    - Draw on mathematics and science
    - Articulate the possible solutions in two and three dimensions
    - Refine the possible solutions
4. Select best possible solution(s)
    - Determine which solution(s) best meet(s) the original requirements
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