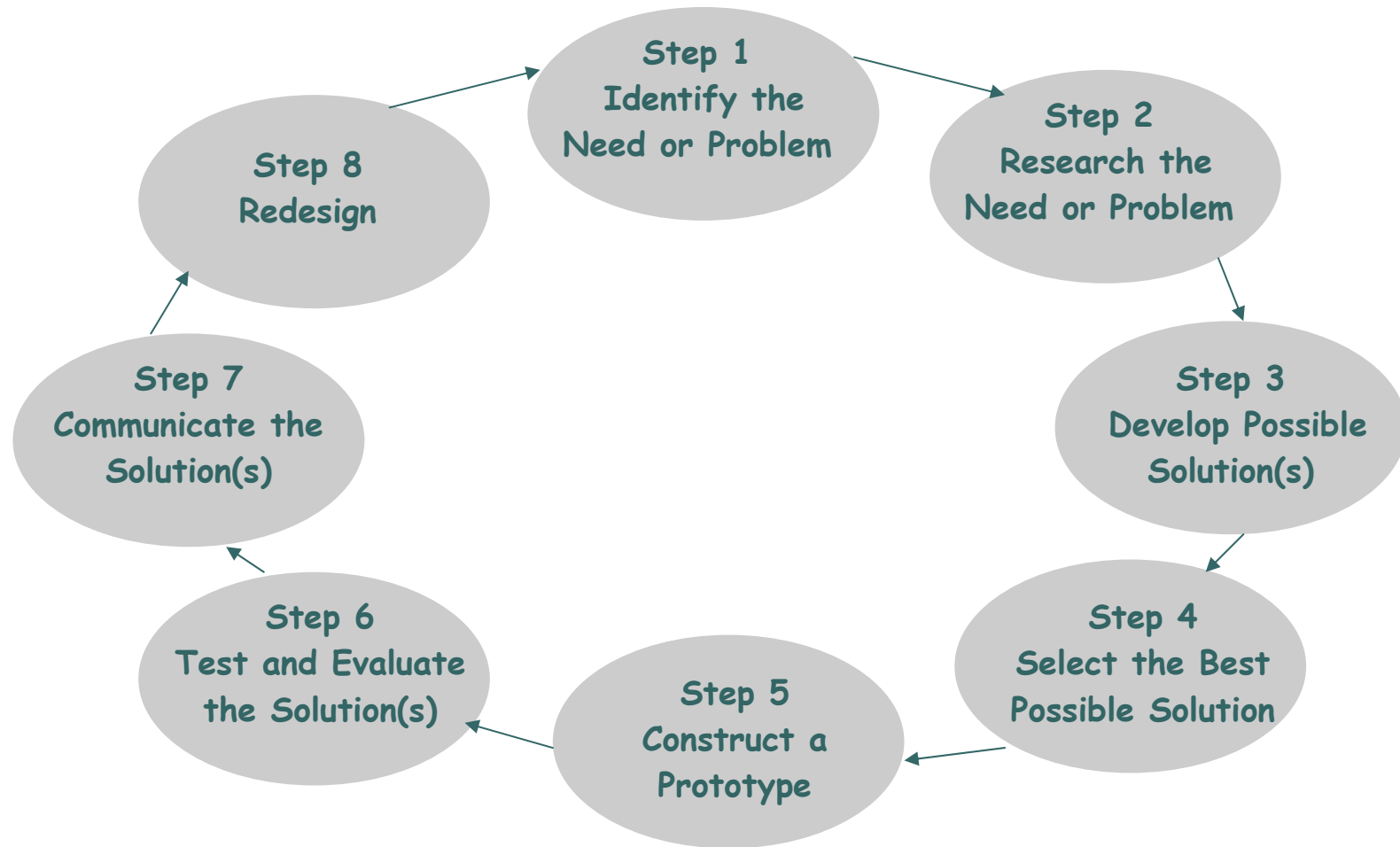


Appendix F

Engineering Design Process (EDP)



Explanation of EDP Steps

1. Identify the need or problem
2. Research the need or problem
 - Examine current state of the issue and current solutions
 - Explore other options via the internet, library, interviews, etc.
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. Select the 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