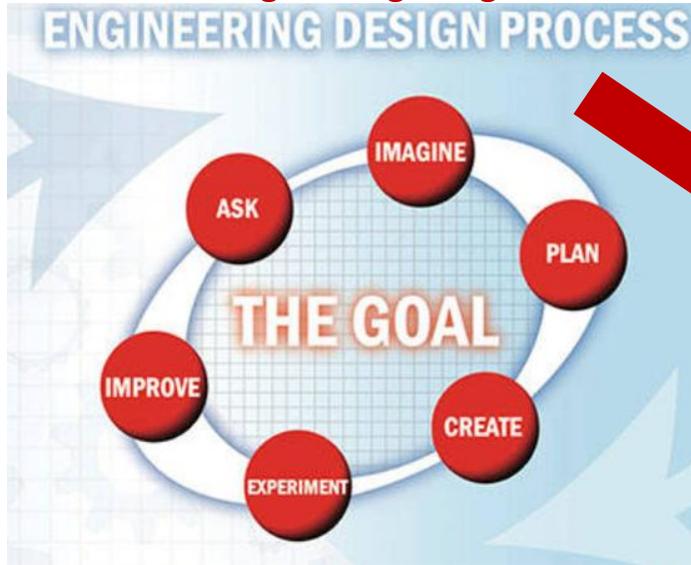


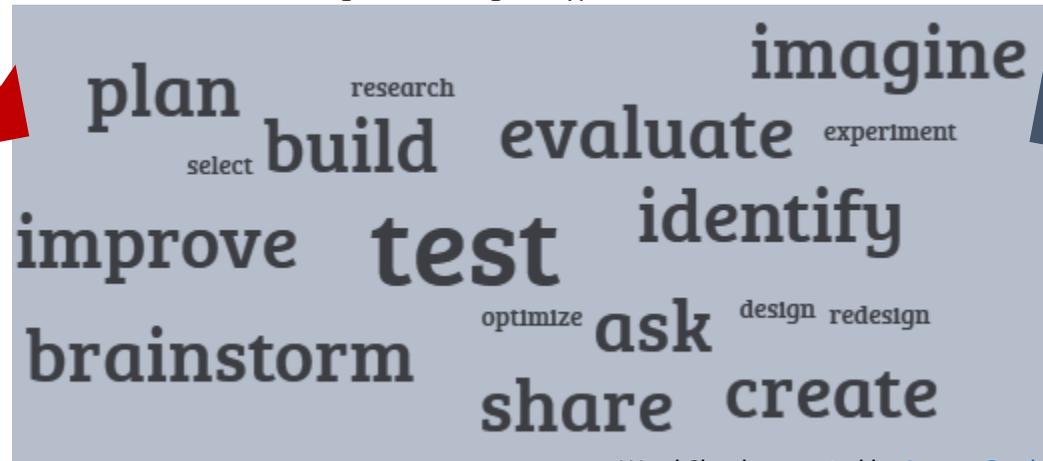
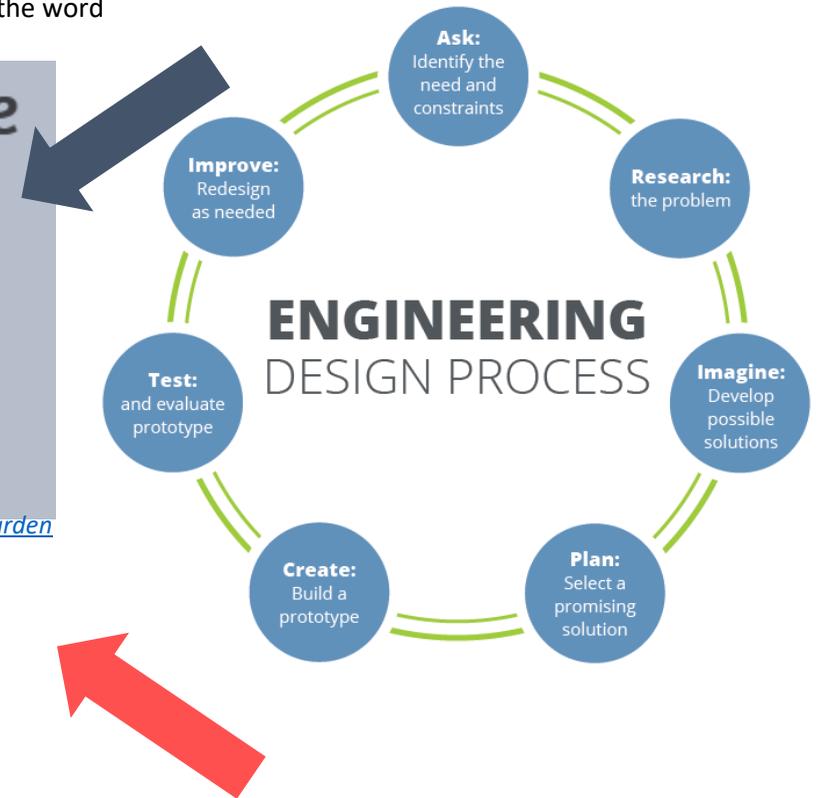
# Analysis of Design Models

To analyze the similarities among the Engineering Design Models, I located four models that were appropriate for middle school students, written with simple vocabulary, and cyclical in nature. The cyclical component was key since engineers do not use a linear process when solving problems. I then created a word cloud to illustrate the similarities between the models. The size of the word correlate to its usage. Each image is hyperlinked for more information.

## NASA BEST Engineering Design Process



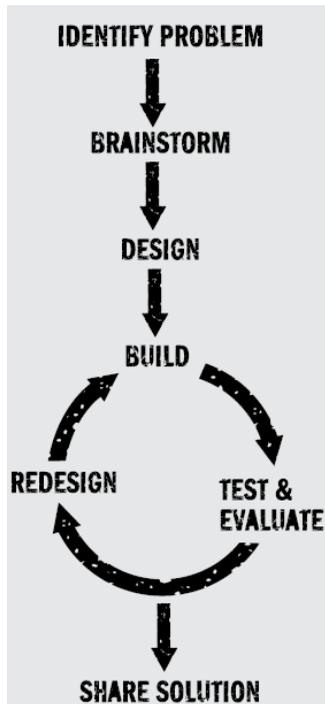
## Teach Engineering Design Process



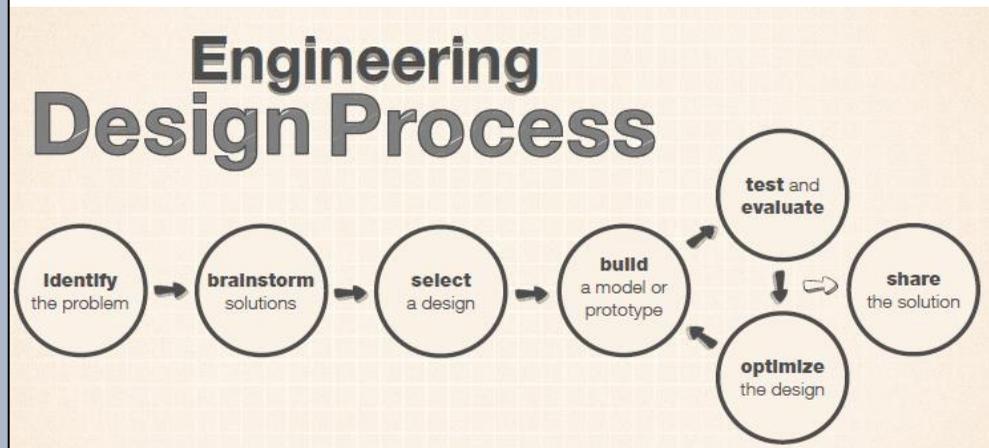
Word Cloud generated by [AnswerGarden](#)

All of these Engineering Design models are comprised of six or seven steps. The models list the steps in the same order; however, they are named differently. The list below synthesizes each of the models together using the most popular terms.

- 1. Ask/Identify**  
Gather more information about the problem.
- 2. Brainstorm/Imagine**  
Generate ideas to solve the problem.
- 3. Plan**  
Evaluate the pros and cons of each idea and sketch possible solutions.
- 4. Build/Create**  
Construct a possible solution.
- 5. Test and Evaluate**  
Determine the strengths and weaknesses of the solution.
- 6. Improve**  
Redesign and construct a better solution to the problem.
- 7. Share**  
Communicate the solution of the problem to others.



PBS Design Squad Engineering Design Process



NASA Jet Propulsion Laboratory