

**Dartmouth Engineering Design Process Model-** The Dartmouth process is a more complicated and detailed process that I imagine is great for older and more experienced students (high school and college). While it follows the same six essential steps as the other models, it breaks each of those six steps down even further.

Define the Problem	Restate the Problem	Develop constraints and criteria	Brainstorm ideas	Research alternatives	Analyze alternatives by a trade-off matrix	Identify a potential solution	Research in detail the potential solution	Design a potential solution (prototype)	Construct a prototype	Evaluate prototype	Reiterate if necessary	Simplify if possible
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**NASA Engineering Design Process Model-** In my opinion, the NASA model is the simplest model. This model could most likely be used for all ages of students and could fit and problem solving or design activity.

Ask	Imagine	Plan	Create	Experiment	Improve
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**PBS Design Squad and NASA Design Process Model-** Although the Design Squad model is simple and extremely similar to the NASA model, it adds the element of sharing final designs and clumps building, testing, and evaluating together.

Identify Problem	Brainstorm	Design	Build, Test and Evaluate, Redesign	Share Solution
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**Summary-** Every engineering model that I analyzed follows essentially six basic steps- identify the problem, brainstorm, plan, build, experiment, and redesign or improve. The differences between the models are simple wording and complexity. Working in the primary grades makes the Dartmouth model much too complex to use with my students. I do, however, like the emphasis on simplifying each design. My favorite model for the primary grades is the NASA model. It fits well with the design challenges we currently complete and the verbiage is five-year-old

friendly. However, I love the “share” piece in the Design Squad model. Thus being said, I have created my own model below to compile my favorite pieces of each model.

## Jenny’s New Engineering Design Model

