



# BUILD-DESIGN (THEN LAUNCH!)

## Introduction:

Everyone has heard of Design-Build. It's the correct way of doing things. "Measure before you cut!" "Planning makes perfect!" "Use the 5-step design process!"

But what if you don't? Is that wrong?

Sometimes not. Sometimes you just have to "git-er-done". Sometimes you have to jump into the deep end and swim, sometimes you just have to **DO**.

A few reasons this method is interesting:

1. Design phases can be subjective. How can you design something if you don't know what you don't know? It can be drawn out. It can lead to one way thinking, and not allow for change.
2. It allows you to immediately start building. Who doesn't love to get right into it?
3. It forces you to be creative. We all heard stories about our grandparents doing without and having to come up with solutions on the spot, without unlimited resources or planning time. Building something first, and wanting it to work, will make you think of solutions as you encounter the problem verses "what the plan says".
4. The build phases educates you more than the design and drawing phases. You gain the "street smarts" first and then when it comes time to do design drawings, you can use that knowledge to develop well thought out, realistic designs.

## Challenge:

**Build a means of mechanical transportation for one person using found, recycled, or traded parts.**

## Final Requirements:

1. A working prototype.
2. CAD Working Assembly and Detail Drawings
3. Documentation (daily and summary) of your design process
4. Documentation of your project in your online portfolio.
5. Five minute (maximum) presentation on your design solution to give to a professional audience.
6. Project entered in the **MITES competition AT-3 Inventions/New Project Development**  
*This project must be an original invention by the student. The invention may be a new product or process for doing something useful and needed. Entrants should show the developmental work and problem solving that went into the creation of the invention. A model of the invention must be included. Judging will be based on creativity and originality. Any project that violates the intent of this category will be given an Honorable Mention. **OR***  
**OP-1 Transportation Vehicles** *Any vehicle capable of carrying a person or cargo and constructed in an Industrial Technology course. Examples: boat, canoe, mini-bike, go-cart, automobile, dune buggy, dragster, trailer. Gasoline must be removed. Projects in this category must be complete and in operating condition.*