Think, Build, Test Do it Again

That's the process engineers use when they tackle a problem. Engineers don't have official rules telling them to follow this set of steps. But, over time they've learned that they **get the best results this way**.

They think and brainstorm about a problem and factors they have to consider to solve it. They come up with an idea and **build** a prototype. They **test** the prototype. And, then they **repeat** the process to improve their results.
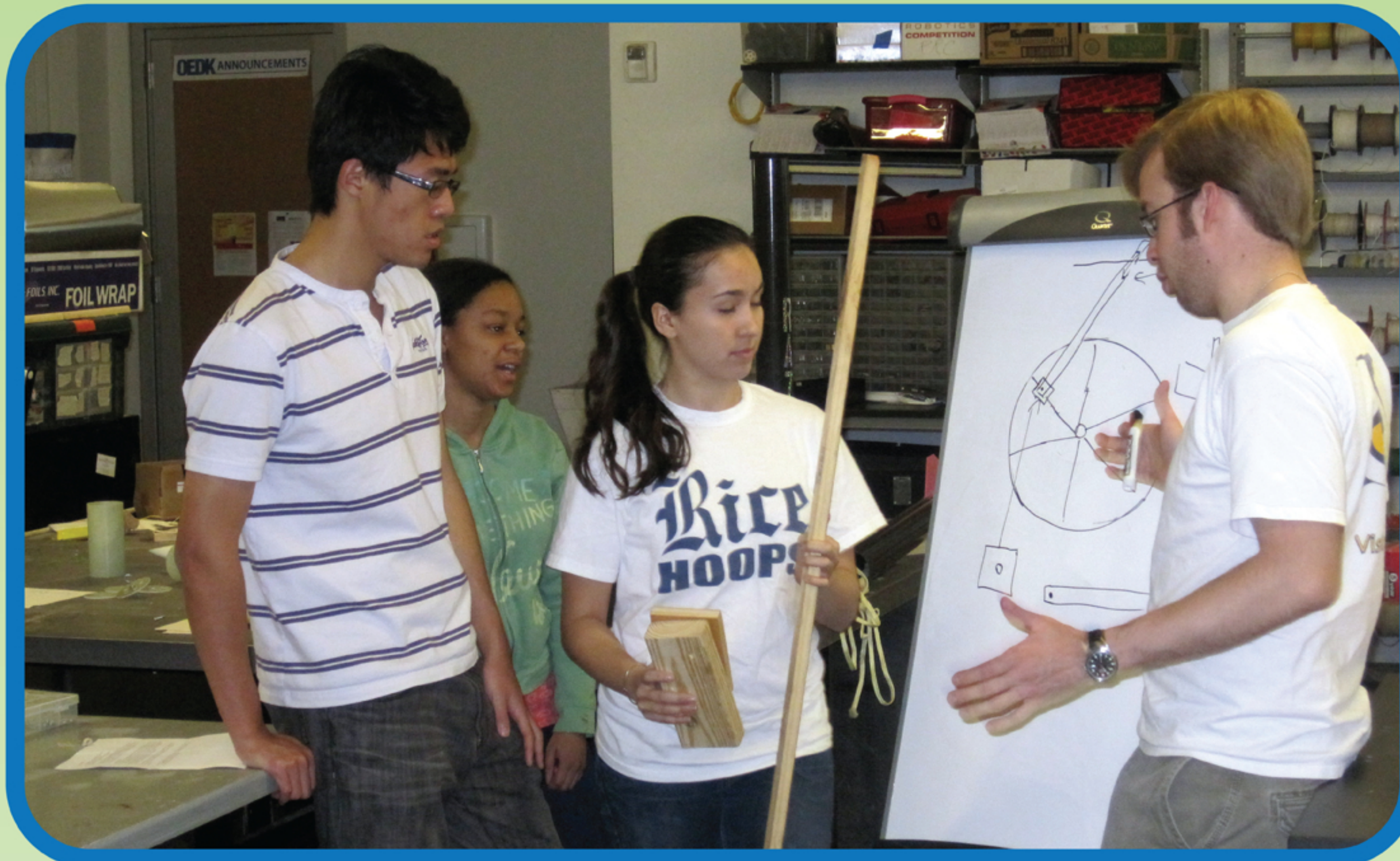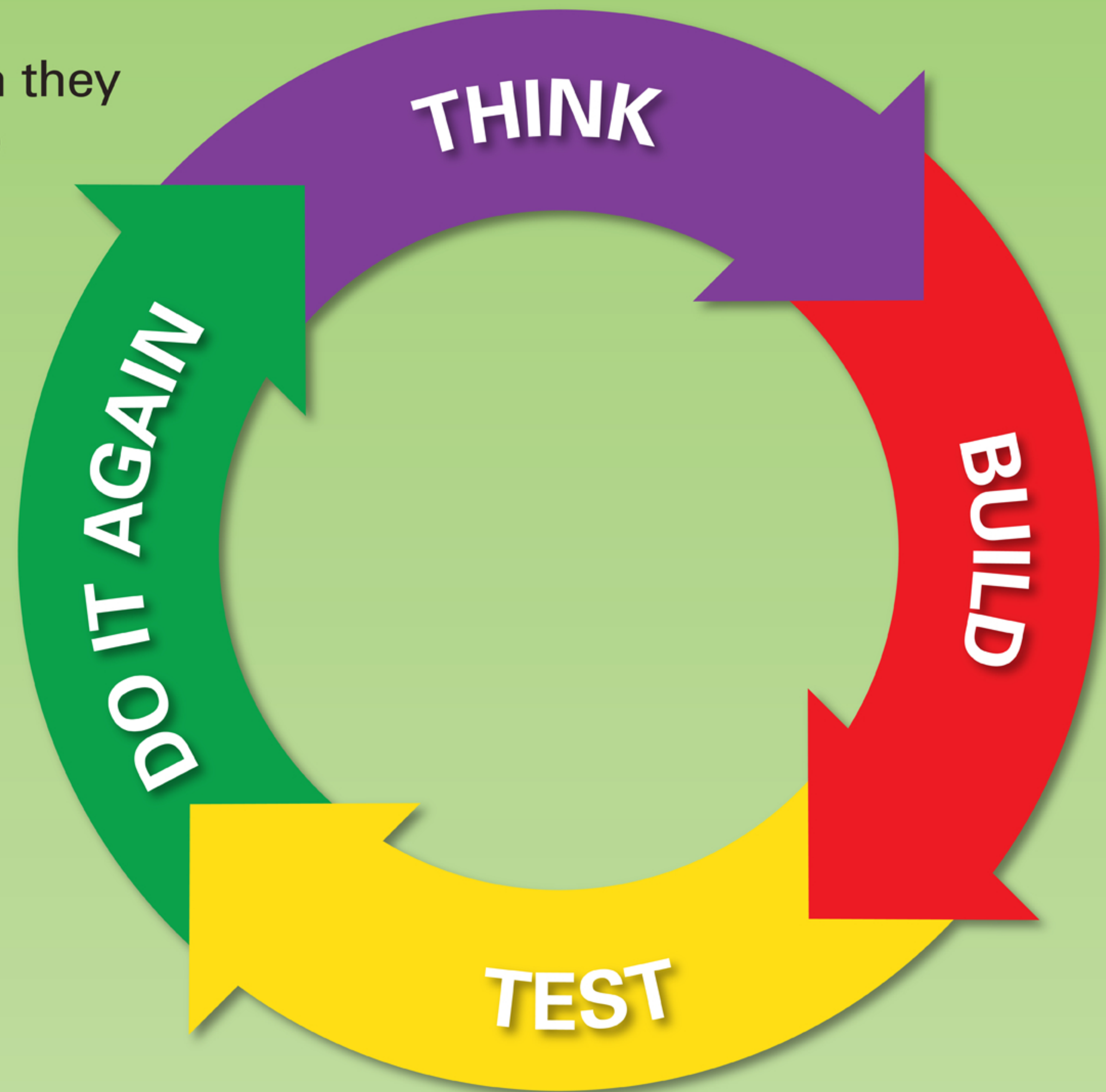
THINK

BUILD

TEST

DO IT AGAIN

Photo Credit: Rice

It Takes a Lot of Back and Forth

Engineers often **move back and forth within the loop**, repeating steps over and over again before moving forward. It's a key to engineering success. Sometimes, engineers will focus on one specific step, and when complete, pass the project off to another team with a different skill set.

Astronaut Barry "Butch" Wilmore experienced the design process firsthand, when he had to 3D print a necessary part for space station repair.

Photo Credit: NASA