

# High school homebuilding class constructs tiny homes for a big cause

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Traditional high school shop classes may be a relic of the past, but schools today are finding ways to teach young people how to build stuff. For the students of Tippecanoe High School in Tipp City, Ohio, it's through a homebuilding class. The students in the class aren't just building tiny homes, they're also building character and STEM skills. The class has also partnered with a veterans organization, where they will donate the finished homes.

Before classes were to begin in 2016 at Tippecanoe High School in Tipp City, Ohio, the Homebuilding students and teacher didn't know what to expect from the new school year. For Jim Kitchen, the new Homebuilding teacher at the school, it was an opportunity to do something different. It was a chance to reinforce the skills he thought would be helpful for anyone learning in today's educational environment. For some of the students, it wasn't just another class they had signed up for which they could earn an elective credit. More importantly it was an opportunity to work with their hands.



From 1997 to 2015, Jim Kitchen had taught just about every art class offered in most schools. Homebuilding was not one of them. “When I saw the job description I thought to myself that it was a little different. It piqued my interest because I’ve always loved building and constructing. The job was split between teaching arts courses such as art, graphic design, illustration, and animation and an unusual class called ‘Homebuilding’. To this day people look at me strangely when I tell them the name of the class.

Even though I spent most of my career teaching fine art classes, a good portion of my portfolio was filled with many home projects I had completed throughout my life. I started working with my hands at a young age and it continued throughout my studies in grade school and beyond. With a focus in sculpture while in college, I spent a lot of my time working with raw materials like wood, stone, metal, and concrete. Once I started teaching, I spent many of my summers working in the trades for local companies or construction contractors. It was really a continuation of what I had done my entire life while working for my dad in the offseason between

sports or in the summers as the 'maintenance man' at his grocery store.”

The youngest of five brothers, he took on the role as “maintenance man” at an early age working extensively around the store, inside and out. “The role was just handed down from brother to brother. I was the last one to come through so I had the opportunity to learn from and finally take it over for a much longer time it seemed. I loved the work and being able use my hands to complete projects. Often my dad wouldn't give us a blueprint or clear idea of how something should be done or fixed so we just had to figure it out by researching it or through trial and error.”

Fast forward to 2016 and those problem solving and research skills would become the focus of Tippecanoe High School's Homebuilding classes. “I knew I wanted to teach the students skills that went beyond just being able to hammer nails or cut pieces of 2x4s. The problem was that we didn't have the resources at the time to do much else. The idea of generating some type of funding or support seemed paramount to being able to offer the students an experience they could take with them the rest of their lives. Designing, building, and selling a tiny house on wheels seemed like the ideal project to do that.

I reached out to a number of local businesses and organizations and most of them responded with the utmost support for what we were doing. We even secured a few local grants which helped us immensely. The greater Tipp City school community has been so supportive of the classes and they have helped us tremendously. I imagine there aren't many school districts out there that would support the program like they have over the past few years.”

Tiny House building is now the focus of the Homebuilding program at the school. “It's no secret that if you sign up for Homebuilding that you will be working on building tiny houses. It is the perfect hands on project for our students. I believe many of the parents in the community like that their kids get this opportunity in their own backyard. It is a chance for their kids to learn and many of the STEM skills being championed by schools, organizations, and; businesses nationwide.”

**“Science, Technology, Engineering, and Mathematics (STEM) skills include creativity, inquiry skills, math skills,**

**engineering-design thinking, critical thinking, and collaboration. Designing and building our tiny houses promotes all of those skills and then some. When someone doesn't design, measure, or cut accurately it throws everything off and the students have to figure out how to solve the 'new' problems that are created."**

This year a new element has been added to the program. The idea of giving back to the greater good. Through one of our partners we were able to connect with Veteran's Ananda Inc., a 501(c)(3), independent, non-profit organization that will be utilizing traditional and non-traditional treatments and therapies; to assist with supporting, healing, and rehabilitating U.S. Armed Service Members, veterans, and first responders from across the nation. Students in the Homebuilding classes are leading the design and production of micro houses to be donated to this organization. Once completed, the micro houses will be transported to New York and placed on the property of Veterans's Ananda Retreat and Homestead. They will house individuals who take part in the short-duration, high impact retreats and long-term post traumatic growth programs.

The new partnership gives another focus that students must consider when designing and constructing the houses. One of the houses this year is going to be ADA compliant so that those with disabilities may be able to take part in Veteran's Ananda's programs. "We are still looking for support so that we can continue building these smaller tiny houses (micro houses). A number of businesses have helped us but we are in need of more materials. We've got the people to design and build them, we just need more resources."

There have been no shortage of students since the first year of the revamped Homebuilding program. "Three years ago we had 41 students in the classes. Last year there was a huge uptick in numbers as we had 191 students sign up. This year we needed to limit it to around 160 so that we could accommodate the numbers more effectively while keeping a safer and more manageable classroom environment." The number of girls taking the classes has risen steadily over the last few years as well. Across the nation the participation percentage by females in STEM related professions have traditionally been lower. "This class offers something for everyone and the skills are universal."

For more information about the Homebuilding program at Tippecanoe High School please go to:  
<http://tipptinyhouse.weebly.com/home.html>

For more information about the 501(c)3 nonprofit Veteran's Ananda Inc. please go their website  
at: <https://veteransananda.org/home/>

Jim Kitchen holds a B.S. in Art Education from Bowling Green State University in Ohio and a MEd in Administration from Lamar University in Texas. He began his teaching career in 1997 teaching art and coaching football at a middle school in Ohio. A few years later he moved to Texas and continued teaching art at the high school level. In 2014 he and his family returned to Ohio where he continues to teach students at the high school level in the Homebuilding classes at Tippecanoe High School.