



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY**

Name(s) Landon Fernald	Project Number J1304
Project Title Is It Possible to Build a Fireproof House?	
Abstract Objectives Is it possible to build a fireproof house? By using various fireproof materials I have chosen to make a fireproof house. My project is about materials used and how to build a fireproof house Methods I built two 1:32 scaled houses out of wood. One was left as is (wood) the other was surrounded by non-flammable materials (fireproof rapper sheet shields, fire-resistant fiber cement boards and fireproof shingles) and was able to test them both by lighting them on fire to see which house caught on fire and which house didn't. My independent variable is changing the structure and the dependent variable was measuring how many inches of flames. Testing controls included are temperature and lighter fuel. Results After building both houses to experiment on- The result was a good one as I was able to successfully gather and find materials that were fireproof and that particular house that I surrounded those non-flammable (fireproof) materials with did NOT burn. Yay! Testing controls included are temperature and lighter fuel. Wood = 3,6,8,inches Fireproof Raptor Heat Shields = 0 inches Fire Resistant Fiber Cement Shields = 0 inches This costing a homeowner: \$64,970 per 2,600 sq. ft. house \$38,970 to cover with Fireproof Raptor Heat Shield Sheets \$20,000 to cover with Fire Resistant Fiber Cement Boards About \$6,000 for the Fireproof Shingles Conclusions I was able to successfully build a fireproof house through my experiment and test and just the right materials. I think that this would be a VERY successful idea for contractors and developers for sure houses and communities based on how many houses catch on fire a year (374,000 a year in the U.S.) to be precise and 2,600 lives are lost from house fires a year.	
Summary Statement I was able to build a fireproof house which can possibly save lives	
Help Received I was able to Build a Fireproof House!	