How Cool Is This?

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Last year’s project, “Got Insulation?” was based on testing unconventional but readily available products that could be used as heat insulators in houses. As the experimenter progressed through chain of experimentation, most of the insulators were found to be impractical for a variety of reasons. This year the experimenter chose to use purpose-built home insulation to compare to last year’s insulation choices. The reason for this project is to find if the traditional home insulation out performs non-conventional heat insulations. A light fixture was mounted on a board. Each of variety of R-scale graded home insulations which are traditionally placed in homes and the non-conventional insulations used in year one was placed individually in a metal pipe end cap that was placed over the light fixture. Using a timer and a noncontact thermometer, the starting temperature before the light bulb was turned on was recorded. Then, the light was turned on, and the temperature was monitored every thirty seconds for three minutes, and the data recorded at each thirty-second interval. The light bulb was allowed to cool completely before each trial. From these findings the most energy efficient insulation was determined. The results showed that while some non-traditional insulations kept the temperature down lower than the lesser R-valued insulations, the higher R30-valued insulation perform the best of the traditional home insulations while unlike last year’s experimentation, the wood chips performed the best out of the non-conventional materials.

Awards Won: