ABSTRACT
This study focused on the mold problem in the bathroom of the house at 1740 East 25th Ave Eugene OR. It was hypothesized that the relative humidity and temperature conditions do not meet the standards as outlined in The Healthy House by Ray Ranson. To test this, temperature and humidity readings were taken in the bathroom. Data collected shows readings above 70% RH for more than 12 hours per day confirming our hypothesis.

INTRODUCTION
The house studied is an older home with a common problem of mold growth in the bathroom. There is one operable window which is left closed in the colder months as well as a fan. It was decided to investigate the relative humidity levels as well as temperature for an extended period of time.

CONCLUSION
Based on the data collected, Brita’s bathroom did not meet the relative humidity standards for mold. There are other factors that may also contribute to mold growth, including the following:

CONDENSATION
High levels of condensation were found in the bathroom after showers because of the water vapor in the air and the falling temperatures afterward.

VENTILATION
It is known, from talking to the occupants, that the window is rarely open in the winter. Replacing the current fan with one that has a larger capacity and can be operated independent of the light, could be helpful in reducing RH after showering.

INSULATION
There is thin insulation between the ceiling and the attic and none between the attic and the roof. Increasing the insulation in this bathroom would moderate temperature swings, and thus help the condensation problem.

HYPOTHESIS: The thermal environment in Brita’s bathroom does not meet temperature and relative humidity standards for residential bathrooms, according to The Healthy House, where relative humidity should not exceed 70% for more than 12 hours per day.

METHODOLOGY
Our team used two data loggers to measure temperature and RH in Brita’s bathroom. The data was recorded at two minute intervals between 8:00 AM on February 16th through 8:30 AM on February 18th. The data loggers were placed on the walls at a height of 7 feet in two locations (see plan below).

ACKNOWLEDGMENTS
Thanks to Brita’s house mates for putting up with our intrusion into their bathroom. Thank you to Britni Jesup for getting us set up with the heat flux transducer. And much thanks to Rachel Auerbach, our GTF, who has consistently given us thoughtful comments and suggestions to help us complete this study.

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