California Science Center

CALIFORNIA STATE SCIENCE FAIR
2001 PROJECT SUMMARY

Your Name (List all student names if multiple authors.)
Monica R. Ceravolo

Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9)
Building Materials from Recycled Paper

Science Fair Use Only

J0805

Division
_X_ **Junior (6-8)** _ **Senior (9-12)**

Preferred Category (See page 5 for descriptions.)
8 - Environmental Engineering

Abstract (Include Objective, Methods, Results, Conclusion. See samples on page 14.)
Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.

Experiments were performed to determine whether there is a low cost, low tech way to build homes out of recycled paper. The material that would was tested is an experimental material called papercrete which is a mixture of recycled paper, concrete, sand, and water. My hypothesis was that recycled paper can be made into homes in a low cost, low tech way. All of the tests performed were designed to find the maximum rate of stress that the material could withstand without failure and compare those results to the minimum standard for the rate of failure of the most comparable building material, which is adobe brick. If papercrete could exceed the minimum standards for adobe, then it could be or should be approved for use as a building material in place of other already accepted materials.

My results show papercrete passing the minimum standards for all of the tests made.

My conclusion is that papercrete bricks would most likely be a strong building material. It could also be used as a substitute for wood that would also provide good insulation.

Summary Statement (In one sentence, state what your project is about.)
Can recycled paper can be made into homes in a low cost, low tech way?

Help Received in Doing Project (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4.
My father helped me mix the papercrete mixture and showed me how to build the forms and cut out the backboard, used testing equipment at Testing Engineers of San Diego, for stress testing on the papercrete bricks, and got cost comparison data from local contractors David Neitzel and Ken Forsman.