CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)

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Project Number

31646

Project Title

How Does Acid Rain Affect a Building?

Abstract

Objectives/Goals

To conduct my investigation, I will use multiple liquids (acids, bases, and neutrals) to simulate rain. The liquids will represent the independent variable as it will be changed. I will use a common brick to represent a building#s stereotypical exterior. The brick will be my dependant variable.

Investigative question: How does acid rain affect a building?

I hope to answer a few questions with this experiment:
1 Does acid rain erode buildings?
2 If so, how does it erode a building?
3 Does an acid erode faster?
4 Does a base help preserve buildings?

Methods/Materials

MATERIALS: 1 Stds bricks 10; 2 Med droppers 5; 3 Containers 5 - 20 oz; 4 Bleach 16 oz ea. liquid; 5 Milk; 6 Water; 7 Coke; 8 Vinegar; 9 Planter to house bricks.

PROCEDURES
1. Place bricks in planter vertically. 2. Fill ea glass w/ ea liquid. 3. Place 3 drops on brick to start. Add 3 drops on the next day (adding 3 more drops to amount ea. day). 4. Observe for 15 days. 5. Tally up your observations. 6. Chart how each liquid did using a point system.

Point System for effect & discoloration: 1st=5pts, 2nd=4pts, 3rd=3pts, 4th=2pts, 5th=1pt. Add up pts & make final rankings. Convert rankings into chart.

Results

TRIAL RESULTS - POINT SYSTEM

Trials	Brick 1	Brick 2	Tot	Ave
Bleach	10	10	20	10
Milk	6	4	10	5
Water	4	5	9	4.5
Vinegar	6	5	11	5.5
Coke	6.5	5.5	12	6

Summary Statement

Study the affects of acid rain by using multiple liquids to simulate acid rain on common brick.

Help Received

Dad helped buy materials and type this application. Mom reminded to do trials daily.

Preliminary