



Charleston County News Release

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Charleston County Awards Students for Science Fair Projects on Hazard-Related and Environmental Quality Themes

Charleston County Council will present students with Charleston County's Project Impact Science Fair Awards during its Tuesday, May 5 meeting.

[Charleston County Council](#) will present local students with [Project Impact](#) science fair awards during its regular 7 p.m. meeting on Tuesday, May 5.

This year's winning students will display their projects outside of Council Chambers, beginning at 6:15 p.m., until after they receive their certificates of recognition during the May 5 meeting. Recipients of the awards will receive savings bonds ranging from \$100 to \$300 depending on whether the award is for first, second, or third place. The awards are funded by Project Impact.

Since the Lowcountry Science Fair in 2000, [Charleston County Government's](#) Project Impact initiative has given awards to the students who created the best projects on a hazard-related theme. Project Impact selects up to three projects annually for the award category, and gives recognition for first, second and third place students. For the first time, in 2008, Project Impact also selected students who created the best projects on environmental quality themes and awarded three additional projects with first, second and third place awards. Three projects have been selected for awards in this category again this year.

"Since the year 2000, projects selected to receive our awards have focused on earthquakes, hurricanes, tornadoes, fire resistance, hazardous materials, terrorism and strength of construction materials," said Joni Rennhack, Charleston County's Project Impact Coordinator. "The student projects selected for these Project Impact special awards for the 2009 Lowcountry Science Fair are on hurricanes, earthquakes, strength of bridge designs, proper disposal of recyclable materials, the effect of nitrates and nitrites on bacteria growth in waterways, and how worms in the soil enhance plant growth."

The award is one of the projects of the Charleston County Area, SC Project Impact Preventive Activities and Structural Projects Committees.

"We are pleased to offer these awards to encourage our youth to study about hazard events and air and water quality and to recognize students for their academic achievements," Rennhack said. "Each year our judges, who are members of our Project Impact committees, are impressed with the creativity and intellect of the young people who we select to receive our awards. This project is one of many ways the Project Impact initiative is working to make our community more resistant to disasters and to educate our residents about air and water quality."

Hazard-Related Theme Awards:

- **First place: "The Effects of SAL on Major Hurricanes" by Christopher Haufe, tenth grade student at Academic Magnet High School**
 - The student analyzed the effects of aerosols from the Saharan Air Layer (SAL) on the formation of major hurricanes in the Atlantic Basin. He studied data from the National Oceanic and Atmospheric Administration (NOAA) for 1986 to 2008 from July to September to determine if changes in aerosol levels affected the hurricane intensity. He determined that aerosol levels did not affect hurricane intensity, as he had predicted. Haufe said he wants to broaden the scope of his study to see if other factors may be influencing hurricane intensity.

- **Second place: “Quake and Break” by Ian Martin, seventh grade student at First Baptist Church School**
 - The student studied which type of building supports would better withstand an earthquake. He tested three types of structures and exposed them to an “earthquake” with a shaker board on four corner springs. Martin found that the tallest building stood the longest due to more flexibility of the construction type (the other buildings were smaller but more rigid).
- **Third place: “London Bridge is Falling Down” by Cole Shubert, sixth grade student at Charleston Day School**
 - The student tested three types of bridge designs (king post, queen post and trapezoidal truss) to see which is the strongest. He placed the same amount of weight on the middle of the span of his three bridge designs to determine which design could best hold the weight. The trapezoidal truss bridge design withstood the test but the other two bridges collapsed. Shubert’s results were consistent with his expectations.

Environmental Quality Theme Awards:

- **First place: “Papers, Bottles and Cans, Oh My” by Suzanne Long and Jasmine Benton, twelfth grade students at West Ashley High School**
 - This team of two students studied whether the placement of recycling bins for paper, bottles and cans together influenced recycling rates for these materials. They determined that placing the bins together in the classroom approximately doubled recycling rates compared with bins that were placed separately. Long and Benton were also instrumental in forming a recycling club at their school as a result of their work on this project.
- **Second place: “The Effect of Nitrates and Nitrites on the Growth” by Elizabeth Hendry, tenth grade student at Academic Magnet High School**
 - The student tested whether nitrates and nitrites affected the growth of E. coli bacteria in five different marine sites. Hendry compared the averages of the results to see if there is a significant difference in the level of nitrates and nitrites on the number of E. coli cultures in Petri dishes. She found that the levels of nitrates and nitrites affected the growth of E. coli bacteria in water bodies.
- **Third place: “The Dirt on Worms” by Jamie “McKala” Rhodes, sixth grade student at First Baptist Church School**
 - The student tested whether earthworms enhance plant growth by measuring the growth of plants with earthworms in the soil compared with plants without earthworms for a period of several weeks. The plants with the earthworms exhibited more growth than the plants without the earthworms, so Rhodes concluded that earthworms enhance plant growth.

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