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Linganore seniors design ‘ideal high school'

Club uses real-life construction of new building to teach students about architecture, engineering

by Christian Brown | Staff Writer

Seven Linganore High School seniors are designing an "ideal school" for a national architecture, construction and engineering competition.

Photo courtesy of Linganore High School

Linganore High School students participating in the ACE program recently toured the new Linganore High School, which is under construction on Old Annapolis Road.

Giving Linganore High students the chance to design the ideal school is a perfect project, according to team member Matthew Newcomer.

Because the students on his team attended school in a 45-year-old building at Linganore High and two-year-old Oakdale High School, they have a unique perspective on school design, he said.

"Having gone through two schools, we found this project very appropriate," Matthew wrote in an e-mail to The Gazette.

The Architecture, Construction and Engineering Mentor Program — ACE — offers students an opportunity to do more hands-on projects in those fields, to decide if they would want to pursue them as careers. Membership is free, and students participate in the club as an extracurricular activity, club project manager John Lucas said.

Students on Team Linganore, the school's ACE team, are competing in the national Construction Industry Round Table CIRT-ACE design contest. From four possible projects, they chose "The Ideal School", a project which asks them to design a sustainable, environmentally friendly and secure school that would "expand the ability and desire of students to achieve their very best," according to the competition registration form.

John and the other members of Team Linganore have been involved with the program for two years, and this is the first time he has worked on a project for the national competition.

Last year, while designing a community park as a first-year member of the program, John said it was more difficult to be the project manager.

"We had no personal feeling about the project," John said. "We had trouble connecting with it."

Security plays a large part in the team's design, John said, as well as preventing the traffic jams that occur in overcrowded schools.

John said they would solve both of these problems by creating one main hallway, which would allow fewer places for students to hide from authority figures.

He said that hallways for each subject would branch off from the main hallway, which would cut down on congestion. The main hallway would have an area for people to sit and talk, so that they would not need to do so at the intersections between the main hallway and the subject hallways.

He said that these "traffic jams" are a problem at Oakdale High School, where Linganore High's students and teachers have been since August 2008, waiting for the completion of the new Linganore High on Old Annapolis Road.

"People aren't moving with intention," he said.

This decision was partly influenced by the team's field trip to Linganore High, John said, which they visited while on their winter break on Dec. 30.

Roger Fritz, a construction manager with Frederick County Public Schools, took students on a tour of the site, and showed them some of the methods used to build the school.

Fritz said the building has been designed for sustainability; that is using materials with a longer lifespan so that they will have to be replaced less frequently.

For instance, the floor is tiled with terrazzo, a flexible, durable material. Fritz said if vinyl tiles had been used, they would have to be replaced in 20 years, but terrazzo tiles will last about 50.

They are more expensive to install than vinyl tiles, but save money in the long run, he said.

The project requires students to research the newest technologies and ecologically friendly materials and techniques, according to team member Andrew Manny. He wrote in an e-mail to The Gazette that the tour helped to give the students some ideas along this line. "All in all, it was a really neat experience," he said.

Fritz said that the tour was important to the students in the program because it gave them the experience of seeing the principals they are learning about in action.

"It's pretty impressive to see that if you're not used to it," Fritz said.

Hannah Triebel, the only female member of the team, wrote in an e-mail to The Gazette that the project has allowed her to see some ways that men think differently from women.

"The guys on my team think of practical when they hear ideal and I think of outrageous," Hannah wrote.

She and Spencer Van Deusen are the architects for the ideal school.

She has found the project to be invigorating, but she still wishes more girls would join the team.

Bryan Burke, the chairman of the ACE Mentor Program in Frederick, said that there are 70 students participating this year throughout the county, although in the past there have been as many as 90. He said the program had been in Frederick County for about five years.

Students in the second year of the program typically get involved in the CIRT-ACE national competition, Burke said.

The team has to finalize its design by March 3, and then send in its project to the CIRT national office in Washington, D.C. by March 10.

Finalists will be selected and notified by March 24, and then they will be able to present their project to a panel of judges on April 26 and 27.

But even more than winning a national award, the point of the ACE Mentor program is to groom the next generation of architects, construction professionals and engineers. John said in that regard, it succeeds.

"It really piqued my interest," John said. "I've worked on engineering projects before, but nothing so grand."

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