

Avalon Students Design School of the Future

Four students from Avalon Junior High School were involved in the visioning, design and research behind a futuristic school as part of the 2011 Council of Educational Facility Planners International (CEFPI) School of the Future Design Competition. The grade 7 and 8 students started the project back in September, meeting with teacher Dan Tarney during the lunch hours. Over the following months, the students continued to refine their vision of what a school of the future would look like. It became a school complete with features that would make it better for students, teachers, and the community, as well as encompassing attributes that would minimize the impact on the environment.

The School of the Future competition, which involves students between the ages of 12 and 14, is organized across North America by the CEFPI members. This was the first year the competition included schools from Alberta and Canada. Claudia Alaeddine, who works with the firm ACI Architecture, moved to Edmonton from Washington State in 2009. She was eager to continue with the School of the Future program that she was heavily involved with in the Seattle area. She promoted the program to both the schools and architectural firms in Alberta to enlist participants and mentors.

Students worked with two mentors, Mumtaz Anwar and Byung-Hee Kang, who are also from ACI Architecture in Edmonton, to create a unique and functional school with various features. The mentors met with the students during lunch, after school, and over the holiday break to ensure students had their design ready to go for competitions in January. But through the work the mentors kept it fun so that the students enjoyed the learning process.

In the first stage of the competitions, Avalon students competed with student groups from Red Deer and Innisfail. Each school had to make a 15 minute presentation of their school design, along with drawings and a model. Students had to satisfy four criteria for the judges: Planning process, Community Environment, Learning Environment and Physical Environment of the school. Following a presentation the students answered questions by the judges on their design and project process. Feedback was provided by the judges to help each group learn more about their building designs, as well as ways to improve their presentations for the future.

The Avalon students' school design involved some unique concepts such as the attachment of the gym to both the school and a community centre to allow for more sharing by both students and community members. The students also envisioned a round school that would allow it to rotate enough to make additional use of the sun for capturing natural light in the classrooms and solar panels. The round design also allowed for the wind to sweep around the building and provide more wind for the two turbines that would supply renewable energy. In addition, the students included a large solar "pipe" that went through the centre of the building to bring more natural light down through all three floors of the building. The students also made use of various concepts like rainwater harvesting, solar photovoltaic panels and a green roof.

One of the students' truly unique design concepts was the use of "smart" lockers. Students thought of lockers with flat panel displays that would list the time of day, student timetables, messages, and any other information that students might need access to through the school day. The judges were extremely impressed with a realistic concept that they saw as definitely fitting the "school of the future" theme.

Throughout the entire process in the design and model building stages the students ensured that they were environmentally responsible, including building the model only with items from their home waste and recycling products.

After advancing to the regional division the Avalon students faced competition from Anchorage, Alaska and Tacoma, Washington. The judges flew into Edmonton to view the presentation before visiting the location of each of the other school competitors. The winners of the Regional competition were to advance to Washington, D.C. for the finals. The Avalon students came up just a bit short in this round finishing second to the team from Alaska. Teacher Dan Tarney stated it was a learning experience and that with the feedback from the judges they would be that much better prepared for the competition in the next year. They hope to return next year with an even stronger design and take it all the way to Washington.