

AMD CUSTOMER SUCCESS STORY:

The Environmental School Project: AMD and HP support innovation in education



Putting education in context

School District 42 is in the municipality of Maple Ridge and the District of Pitt Meadows in British Columbia, Canada. Public educators there have been working to complement their conventional school system with a revolutionary approach to teaching—one that doesn't rely on desks, chairs, blackboards, or even a classroom.

Local educator Clayton Maitland explains, "In the field of education there seems to be this shift in thinking. People want to do things differently. In the conventional system, we've moved further and further away from learning through real life experiences. They've removed experience from pedagogy."

Inspired to bring experiential learning into his local school system, Maitland helped develop a program for place-based learning in School District 42. In place-based education, learning is experiential and happens in context. It empowers students to participate in both civic life and the natural world while helping them develop concrete skills and a deeper understanding of the public school curriculum.

Maitland explains, "Instead of just doing mathematics, mathematics is attached to something in context. Instead of having to just read a book and write about a subject, they actually experience the subject in order to write."

After a few years of development, The Environmental School Project was launched in the fall of 2011, with Maitland serving as Principal. "We do not have a school or a classroom. We are outside in the woods or in different places 99% of the year. Our classroom is the park or the space in which we are in the moment. That's what's really important to us. As much of the curriculum as possible is mixed in with the themes, projects, and activities that we're doing within the different places."

Today, The Environmental School Project is fully enrolled at 88 students from grades K-7. Their substantial waiting list is a testament to its success and popularity. All students within BC are eligible, with priority given to local residents. "There's a complete range of kids, just like at any public school," says Maitland.

CUSTOMER:

British Columbia SD42/The Environmental School Project

<http://es.sd42.ca/>

IN COLLABORATION WITH:

HP

INDUSTRY

Education

Grades K-7

CHALLENGES

- Current laptop technologies out of date, ineffective
- Needed portability and efficiency for classroom-free curriculum
- Limited public school budgets

SOLUTION

- HP 3115m notebooks featuring AMD technology
- Ultra-portable, energy-efficient clients deliver a perfect solution for place-based learning

RESULTS

- Support contextual research throughout the school year
- Advanced graphics and processing enable powerful visual performance for online learning and student presentations
- Collaboration helped maximize school's technology budget

AMD TECHNOLOGY AT A GLANCE

AMD Dual-Core E-300 APU with Radeon™ HD 6310M graphics

"The Environmental School Project needed a powerful, cost-effective technology solution to create new learning possibilities for students. The HP 3115m notebooks deliver the speed, high performance and ultra-portability students need to collaborate and innovate. We're extremely pleased to see how HP solutions are enabling the next generation of innovators."

Leyland Brown, Vice President Enterprise Sales, HP Canada

Outdated technology, limited budgets

While the Environmental School Project differs in many ways from other public schools, it faces many of the exact same challenges in the current era—budget cuts, limited resources, and out-dated materials. In light of the school's peripatetic mission, their aging computing technologies were especially problematic.

"We had some old laptops that were very big that we usually kept for use when we were at the library. They were just too big and difficult to move to different places and the kids didn't seem to want to use them. They were slow and cumbersome," says Maitland.

Much as he did when he pitched the idea that founded the program, Maitland returned to the school district to brainstorm solutions that could better support his teachers' and students' technology needs.

"There was no doubt about it—we needed those tools. When I shared the idea, it started to build into collaboration with HP and AMD. None of the other computer companies seemed as interested in trying to get out here and help us do what we're doing," says Maitland.

School District 42 IT Manager Richard Eskandar and HP Education Solutions Specialist Shona Comisky worked with Maitland to figure out the best computing solution for the unique circumstances of The Environmental School Project.

The right tool for the job

Based on how, why, and (most notably) where the students would be using their computers, the right tool was the HP 3115m notebook featuring an AMD Dual-Core E-300 APU with Radeon™ HD 6310M graphics. A great choice for students, these notebook systems boast an ultra-portable design and outstanding performance.

"With HP and AMD, all the kids from grades 2-7 have the opportunity to use computers from the school. As soon as they come up with a question, they have the opportunity to get the computer out of their pack and use it for that purpose. It's a huge difference having them available for these kids.

"It's sort of like a shovel. If you need to dig a hole, then you need something to dig with. If you need to write something or you need to produce something or you need to investigate something, then you grab a hold of your computer. Having the laptops there expands possibilities—it doesn't shrink them. It adds all the dimensions of the experience that we can have," says Maitland.

Compared to their previous computers, the students are engaged and inspired to use and benefit from the capabilities of the HP systems with AMD technology. "They're fast. They're really user-friendly for the kids," says Maitland.

Research, presentations, and media

Environmental School students primarily use their AMD-powered HP notebooks for research, gathering supplemental information on daily lessons from different sources. They also use them for communicating between each other, the teachers, and people out in the community.

"It's extended learning. When we have a WiFi connection, if kids have a question and they can't answer it here and interpret their real experience, then they can go online and then share what they learn back to the community. It becomes a circle of learning, helping us provide direct access to answer their questions. They do the research and they follow through. Then they usually give an immediate presentation of what they know," says Maitland.

Students also make final presentations each year, typically with a video or PowerPoint component that they develop on their notebook system. Each HP 3115m notebook features an HD Webcam as well as powerful AMD graphics for responsive multimedia performance.

Maitland explains, "They usually have something that they've made or built—something that the other kids can touch and feel. Then they have a slideshow or video to detail the process, where they've gathered their information, and what they've learned."

Teachers have helped the students adapt to some of the more advanced functions of the notebooks, but fellow students often prove to be great technology teachers as well. "You get the little ones learning from older ones. We have this one girl who is a really phenomenal artist and she does a lot of animation. She's been teaching the other kids how to do that. They're more excited about doing presentations on the various activities that are self-learned," says Maitland.

Rugged performance and power efficiency

The physical circumstances of the Environmental School also presented some very unique challenges when it came to selecting an appropriate technology solution. With classes held almost completely out-of-doors year round in famously rainy and cold British Columbia, the notebooks would need to operate reliably under rugged conditions. Last winter, the HP 3115m notebooks proved their worth and showed that they descend from true pioneer stock.

"We've not had any problem with weather," says Maitland. "Once the kids figure out how to stay warm and dry themselves, then they're able to figure out how to keep their laptop dry. They sometimes take it out in the rain and they fix shelters or we have these pop-up tents that we can put up. So they're under the shelters working on their computers. If it rains too hard they just have to put it away and do that kind of work later."

Cold temperatures also don't seem to bother these AMD-powered HP systems. "I'm not using one of the HPs, those go straight to the kids. And mine freezes in cold weather- but the HPs didn't last winter. To me, that was an interesting difference," says Maitland.

Another serious consideration for the Environmental School model would be energy efficiency. No schoolhouse means no power outlets if notebook batteries run down in the middle of a lesson. A key feature of the HP 3115m notebooks would be AMD AllDay™ Power for outstanding energy efficiency.

"In a conventional classroom, you have plug-ins there all the time. We used to always have trouble with kids not charging up their computers. But here, I think it becomes more of a ritual, that they just take it home and plug it in and when they bring it here, the battery's fully charged.

"I haven't seen one child need to plug in their computer, because the battery usually lasts the full day for the amount they're using it," says Maitland.

Collaborators in 21st century education

HP and AMD are proud to support the Environmental School Project by providing its students with the technological tools they need. "Working with innovative and unique projects is what we do," says Shona Comisky, HP Education Solutions Specialist.

The 58 notebooks donated by AMD and HP have enabled The Environmental School to fully equip its program, providing systems for each student from grade 2-7. "In the public system, there's always pressure to provide something. In these times of budget cutbacks, we really appreciate the opportunity that we have here in order to try these systems out. Without that, I may have had enough computers for maybe the grades 5-7 this year. We'd only have 20 systems."

The close communication between School District 42's IT department and HP helped enrich the school's inventive approach to serving the educational and developmental needs of students in their region. "It is essential for our district to support this new model of learning with the proper tools. This collaboration is an example of organizations coming together to enable innovation in learning," says Richard Eskandar, SD42 IT Manager.

Maitland adds, "I feel privileged to have this opportunity. AMD and HP were willing to take that risk in working with our project - so it's pretty special for us. And all of the parents really appreciate it too."

"AMD has been a technology partner to HP for nearly twenty years, and together we're proud to bring innovative commercial solutions to education customers. It's rewarding when our innovations enable a school district to empower and better educate the next generation."

Hanif Mawji, North America Commercial Business Director, AMD

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